



# THE UNIVERSITY *of* EDINBURGH

This thesis has been submitted in fulfilment of the requirements for a postgraduate degree (e.g. PhD, MPhil, DClinPsychol) at the University of Edinburgh. Please note the following terms and conditions of use:

This work is protected by copyright and other intellectual property rights, which are retained by the thesis author, unless otherwise stated.

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge.

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the author.

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given.

# **Children's and Adolescents' Conceptualisations of Depression**

Niki Georgakakou-Koutsonikou

Doctor of Philosophy

Department of Clinical & Health Psychology

University of Edinburgh

2018



*To my parents*



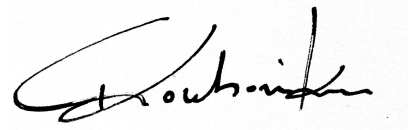
## **Declaration**

I hereby declare that this thesis:

(a) has been composed entirely by myself

(b) is my own original work

(c) has not been submitted for any other degree or professional qualification

A handwritten signature in black ink, appearing to read 'Georgakakou-Koutsonikou Niki', is centered on the page. The signature is fluid and cursive.

Georgakakou-Koutsonikou Niki



## Acknowledgments

The completion of this thesis has been a long journey and was accomplished with the help of many people along the way. I would like to express my gratitude and appreciation to the following people who supported me over the years.

First and foremost, I would like to express my greatest gratitude to my supervisors, Dr Joanne Williams and Dr Emily Taylor, for their valuable guidance, encouragement and constant support over the years. Jo, I am extra thankful to you for inspiring me to pursue a PhD in the first place. Emily, I am sincerely grateful for your extra guidance and support in clinical supervision. You have both been wonderful mentors.

A million thanks to all the children and young people who participated in this project, offered their time and shared their ideas. I am also thankful to all the teaching staff who showed an interest in the project and facilitated data collection.

I am grateful to the College of Humanities and Social Science for the Research Award that allowed me to undertake this project in the first place.

I also wish to thank Dr Cathy Richards for the permission to use material from the “Depression in Young People” project and the CAMHS North Edinburgh Outpatient Team for their consultation on material developed for this thesis. Thank you to Claire, John, Liz and Qwan for assisting in data entry for the second study of this thesis.

Next, I would like to thank my parents, Vasso and Stelios, and my sister, Stefania, for being an endless source of support, love and encouragement. I wouldn’t have made it without you.

To my Edinburgh “family”, Andriana, Olga, Hara and Sophia, thank you for always being there for me, for all the experiences we shared and all the memories we created. An extra thank you to Andriana and Olga for their support in the final steps of the writing.

To all my friends in the PGR space, thank you for sharing this journey, and for bringing enjoyment and humour to this experience. We are almost there!

Last but not least, I am very grateful to Nikos, who brought balance to this experience. Thank you for helping me achieve “*one step at a time*”.



## **Abstract**

While there is extensive research on adult conceptualisations of mental illness, as well as on children's understanding of physical health and illness, research on children's conceptualisations of mental illness is limited. The primary aim of this thesis is to provide a detailed account of children's and adolescents' conceptualisations of depression.

In the first study, individual semi-structured interviews with primary school pupils (N=105) from two age groups (mean ages: 8.9 and 11.8 years) were conducted, with the use of depression and control vignettes, to elicit children's depression concepts, help-seeking intentions and desired social distance. Children's depression conceptualisations were organised according to the common-sense model of illness representations (CSM). Quantitative content analysis was performed to allow for descriptive analysis; in turn, inferential statistics were used to examine age, gender and self-reported direct and indirect experience differences. Children differentiated between depression and control vignettes, however did not spontaneously label depression or recognised the mental health nature of difficulties. Children provided a wide variety of possible causes that reflected common risk factors for depression, primarily referring to interpersonal factors. Children considered negative consequences of untreated depression, and identified that depressed characters need help. They suggested numerous sources of help, which were mainly informal. Children considered depression to be curable and would seek help primarily from parents if depressed. Older children showed more sophisticated conceptualisations of depression. No substantial gender or experience differences were found.

Subsequently, a single session school-based mental health literacy intervention on adolescent depression, adapted from an intervention created by NHS mental health professionals, was developed, using the mental health literacy and CSM frameworks. The second study consists of a pilot evaluation of the intervention, using a controlled before and after design, to examine the effect of the intervention on young people's depression literacy, help-seeking and help-providing intentions as well as social distance. Young people's depression literacy was measured by the Adolescent

Concepts of Depression Questionnaire (ACDQ), developed for the purposes of this study. Exploratory factor analysis was conducted to indicate the factor structure of the ACDQ, which was in turn used to examine participants' baseline depression literacy and the effect of age, gender, current depressive symptomatology and direct/ indirect experience with depression and other mental illness (Study 2a). In turn, the effectiveness of the intervention is presented (Study 2b). 339 adolescents (mean age: 13.4 years, 168 female) were allocated to either the intervention (N=171) or a control group (N=168), and completed the ACDQ one week before and following the intervention. Mixed results were found for gender, depressive symptoms and experience differences. Mixed ANOVA was conducted between time and group; the results show that the intervention was effective in informing young people's depression literacy (ACDQ total score), and specifically in young people's knowledge of treatment options for depression (treatment subscale), perceived curability of depression (curability subscale), symptom recognition, help-seeking and help-providing intentions. No significant improvements were found for social distance, perceived helpfulness of sources of help, and two of the ACDQ subscales.

The contribution of this thesis lies upon the detailed examination of children and adolescent depression conceptualisations, adding to the limited evidence base, especially in children's mental health literacy. The pilot evaluation of the intervention is promising, and upon re-evaluation could be standardised and implemented in Scottish schools. Implications for clinical practice and mental health literacy are also discussed.

## **Lay summary**

Although there is a lot of research on adult understanding of mental illness and on children's understanding of physical illness, there is limited research on children's understanding of mental illness. The aim of this thesis is to examine children's and adolescents' understanding of depression.

In the first study, 105 primary school pupils from two age groups (mean ages: 8.9 and 11.8 years) were interviewed individually. Short stories were created and used to explore children's depression knowledge, their hypothetical behaviour if they experienced depression and their attitudes towards depressed children. The role of age, gender and experience with depression was examined to test whether these factors affect children's representations of depression. Children were able to distinguish between stories describing a depressed and a non-depressed character, however did not relate the difficulties presented with depression or mental health. Children offered various possible causes of depression, especially related to relationships with others. Children believed that a child with depression needs help and that depression is curable. If help is not received, children expected symptoms to worsen. Children reported various people who could help with depression, and especially referred to non-professionals. If experiencing depression, children would turn to their parents for help. Older children showed more complex understanding of depression. Gender and experience were not related to children's understanding of depression.

In turn, an educational session on depression was developed, adapted from a previous session developed by the NHS. For the second study, 339 adolescents completed a questionnaire that measures adolescent depression knowledge, hypothetical behaviour if experiencing depression and attitudes towards depressed individuals. One week later, approximately half of the adolescents took part in the session (N=171) and the remaining participants (N=168) had regular class. In turn, all the participants completed the questionnaire one week after, to test changes in their responses. First, the role of age, gender, current symptoms of depression and experience with depression/other mental illness was explored. Gender, depressive symptoms and experience were related to some aspects of participants' depression conceptualisations.

The intervention was effective in informing young people's depression knowledge, and specifically in informing young people's knowledge of available and effective treatments, their knowledge of the symptoms of depression, their belief that depression is treatable and their intention to seek help from other people. In some areas, the session did not affect adolescents' responses, including their hypothetical attitudes towards depressed adolescents and the degree to which they believed some professionals and non-professionals would be helpful.

Overall, the thesis adds to the research on children's and adolescents' understanding of depression. The findings were positive for the educational session; if confirmed in futures studies, the session could be used in Scottish schools more widely. The findings of this thesis can also help clinicians working with depressed children and young people, as well as researchers examining young people's understanding of mental health and illness.

# Table of Contents

Declaration.....	iii
Acknowledgments.....	v
Abstract.....	vii
Lay summary .....	ix
<b>1 Child and Adolescent Depression .....</b>	<b>1</b>
1.1 Aims of the Thesis .....	1
1.2 Thesis Overview .....	2
1.3 Prevalence of Depression.....	4
1.4 Gender Differences in Child and Adolescent Depression .....	5
1.5 Phenomenology of Childhood and Adolescent Depression.....	6
1.6 Developmental Aspects of Childhood and Adolescent Depression .....	8
1.6.1 Cognitive development and depression. ....	8
1.6.2 Peer relationships and depression. ....	10
1.7 Depression Increase in Adolescence.....	12
1.8 Developmental Psychopathology Models of Depression .....	14
1.9 Treatment Rates and Recovery .....	15
1.10 Outcomes of Child and Adolescent Depression .....	16
1.11 Early Intervention for Depression.....	18
<b>2 Children’s Understanding of Illness.....</b>	<b>21</b>
2.1 Children’s Understanding of Physical Illness.....	21
2.2 Health Literacy.....	23
2.3 Mental Health Literacy .....	24
2.4 The Rationale for Examining Children’s Understanding of Mental Illness ..	25
2.5 Children’s Understanding of Mental Illness .....	32
2.6 Children and Young People’s Concepts of Depression.....	35
2.6.1 Rationale for examining children’s and young people’s concepts of depression. ....	35
2.6.2 Literature review of children’s and adolescents’ concepts of depression..	39
2.6.3 Measurement of children and adolescents’ depression literacy.....	55
2.7 Theoretical Framework.....	58

2.8	Help-Seeking.....	61
<b>3</b>	<b>Study 1a: Children’s Depression Representations.....</b>	<b>67</b>
3.1	Introduction.....	67
3.2	Aim of the Study.....	70
3.3	Ethical Considerations .....	71
3.3.1	Ethical approval.....	71
3.3.2	Informed consent.....	71
3.3.3	Confidentiality.....	72
3.3.4	Safeguarding.....	72
3.4	Methodology.....	73
3.4.1	Study design.....	73
3.4.2	Participants.....	73
3.4.3	Recruitment.....	74
3.4.4	Material.....	75
3.4.5	Data collection procedure.....	80
3.4.6	Analysis plan.....	81
3.4.7	Coding scheme.....	82
3.4.8	Quantitative Analysis.....	90
3.5	Results.....	92
3.5.1	Preliminary analysis.....	92
3.5.2	Depression identity.....	93
3.5.3	Children’s perceived causes of depression.....	95
3.5.4	Children’s perceived consequences of depression.....	97
3.5.5	Children’s perceived curability of depression.....	99
3.5.6	Children’s perceived timeline to recovery.....	100
3.5.7	Card-sorting task.....	100
3.6	Discussion.....	107
3.6.1	Strengths, limitations and future research.....	112
3.7	Conclusion .....	113
<b>4</b>	<b>Study 1b: Children’s beliefs about depression treatment and help-seeking</b>	<b>115</b>
4.1	Introduction.....	115
4.2	Aim of the Study.....	118

4.3	Methodology .....	118
4.3.1	Ethical considerations and approval. ....	118
4.3.2	Participants.....	119
4.3.3	Materials. ....	119
4.3.4	Procedure. ....	122
4.3.5	Analysis plan.....	122
4.4	Results.....	124
4.4.1	Research question one: Perceived need for help.....	124
4.4.2	Research question two: Worry for depressed and control peers.....	125
4.4.3	Research question three: Sources of help for a depressed peer. ....	126
4.4.4	Research question four: Personal hypothetical sources of help.....	132
4.4.5	Research question five: Desired social distance. ....	137
4.5	Discussion.....	139
4.6	Conclusion .....	144
<b>5</b>	<b>School-Based Mental Health Literacy Interventions.....</b>	<b>145</b>
5.1	Mental Health Literacy .....	145
5.2	Health Literacy, Mental Health Literacy and Policies.....	146
5.3	School-Based Mental Health Literacy Interventions.....	147
5.4	Recent School Mental Health Literacy Studies .....	150
5.4.1	Depression literacy interventions.....	153
5.4.2	Measurement of depression literacy. ....	154
<b>6</b>	<b>The Development of the “<i>Depression in Young People</i>” Mental Health Literacy Intervention.....</b>	<b>157</b>
6.1	Introduction.....	157
6.2	Intervention Development .....	158
6.2.1	Symptoms of depression.....	158
6.2.2	Aetiology.....	159
6.2.3	Curability and treatment options for depression.....	159
6.2.4	Help-providing.....	161
6.3	Delivery.....	162
6.3.1	Videos. ....	162
6.3.2	Integrated intervention group activities. ....	163

6.3.3	Debriefing .....	164
6.3.4	Expected mechanisms of impact.....	164
6.4	Development of the Adolescent Concepts of Depression Questionnaire (ACDQ) Evaluation Tool.....	166
6.4.1	Depression knowledge.....	167
6.4.2	Help-seeking .....	168
6.4.3	Helpfulness of sources of help.....	169
6.4.4	Help-providing.....	169
6.4.5	Social distance. ....	170
6.4.6	Experience with depression. ....	170
6.5	Strengths and Limitations .....	171
6.5.1	Intervention.....	171
6.5.2	Evaluation questionnaire.....	171
<b>7</b>	<b>Study 2a: Adolescents' depression literacy and help-seeking: analysis of the baseline measurement.....</b>	<b>173</b>
7.1	Introduction.....	173
7.2	Research Aim and Questions.....	175
7.3	Ethical Approval.....	177
7.4	Methodology.....	177
7.4.1	Study design and procedure.....	177
7.4.2	Eligibility. ....	178
7.4.3	Participants.....	178
7.4.4	Measures. ....	179
7.4.5	Data analysis plan. ....	182
7.5	Results.....	183
7.5.1	Data preparation and preliminary analysis. ....	183
7.5.2	Main analysis. ....	189
7.6	Discussion.....	201
7.6.1	Depression literacy and help-seeking. ....	201
7.6.2	Age group differences.....	203
7.6.3	Gender differences.....	204
7.6.4	Depressive symptoms and depression conceptualisations.....	206

7.6.5	Experience and contact associations with mental health literacy.....	207
7.6.6	Methodological considerations.....	208
<b>8</b>	<b>Study 2b: Evaluation of the Depression in Young People Mental Health</b>	
	<b>Literacy Intervention.....</b>	<b>211</b>
8.1	Introduction.....	211
8.2	Aims of the Study.....	212
8.3	Ethical Considerations and Approval.....	214
8.3.1	Ethical approval.....	214
8.3.2	Informed consent.....	214
8.3.3	Confidentiality.....	215
8.3.4	Safeguarding.....	215
8.4	Methodology.....	216
8.4.1	Design.....	216
8.4.2	Sample size calculation.....	217
8.4.3	Eligibility.....	218
8.4.4	Allocation.....	218
8.4.5	Participants.....	219
8.4.6	Measures.....	219
8.4.7	Data analysis plan.....	222
8.4.8	Recruitment.....	225
8.5	Results.....	229
8.5.1	Preliminary analysis.....	229
8.5.2	Main analysis: intervention effectiveness.....	229
8.6	Discussion.....	244
8.6.1	Limitations.....	249
8.7	Conclusion.....	250
<b>9</b>	<b>General Discussion.....</b>	<b>251</b>
9.1	Summary and synthesis of main findings.....	252
9.1.1	Recognition of depression and its symptomatology.....	252
9.1.2	Depression treatment and informal sources of help.....	254
9.1.3	Group differences in conceptualisations of depression.....	257
9.2	Contribution of the Thesis.....	262

9.3	Implications for Clinical Practice and Education .....	264
9.3.1	Clinical practice.....	264
9.3.2	Mental health education and psychoeducation.....	266
9.4	Limitations of the Thesis .....	268
9.4.1	Theoretical limitations.....	268
9.4.2	Methodological limitations.....	269
9.4.3	Future research directions.....	271
9.5	Conclusions.....	274
	<b>References.....</b>	<b>275</b>
	<b>Appendices.....</b>	<b>303</b>
	Appendix A: Research Ethics Approval Study 1.....	304
	Ethics Approval from the City of Edinburgh Council.....	304
	Ethics Approval from the University of Edinburgh.....	305
	Appendix B: Consent Forms Study 1 .....	306
	Child Information Sheet and Consent Form.....	306
	Parent Information Sheet and Consent Form.....	309
	Appendix C: Study 1 Material .....	312
	Vignettes .....	312
	Questionnaire .....	313
	Card-sorting photos.....	317
	Debriefing Sheet .....	318
	Appendix D.....	321
	Appendix E: Intervention Material and Questionnaire.....	323
	Intervention Content .....	323
	Session Tasks.....	329
	Debriefing Sheet .....	330
	Adolescent Concepts of Depression Questionnaire.....	331
	Appendix F: Research Ethics Study 2 .....	340
	Ethics Approval from the City of Edinburgh Council.....	340
	Ethics Approval from the University of Edinburgh.....	341
	Appendix G: Study 2 Consent Forms.....	342
	Child Consent Form.....	342

Parental Consent Form.....	345
Appendix H: Additional tables .....	348



## List of Tables

<b>Table 1:</b> <i>Participant Demographics</i> .....	74
<b>Table 2:</b> <i>Coding of Depression Recognition</i> .....	84
<b>Table 3:</b> <i>Coding of Causal Categories</i> .....	86
<b>Table 4:</b> <i>Coding of Consequences Scale of Untreated Depression</i> .....	87
<b>Table 5:</b> <i>Quotes of Types of Negative Consequences of Untreated Depression</i> .....	88
<b>Table 6:</b> <i>Coding of Perceived Curability of Depression</i> .....	89
<b>Table 7:</b> <i>Coding of Timeline to Recovery</i> .....	90
<b>Table 8:</b> <i>Frequencies of Causal Categories by Age Group</i> .....	97
<b>Table 9:</b> <i>Frequencies of Consequences Scale by Age Group</i> .....	97
<b>Table 10:</b> <i>Frequencies of Negative Consequences by Age Group</i> .....	98
<b>Table 11:</b> <i>Frequencies of Perceived Curability by Age Group</i> .....	99
<b>Table 12:</b> <i>Developmental Trends in Children’s Depression Concepts</i> .....	103
<b>Table 13:</b> <i>Gender and Experience Differences</i> .....	105
<b>Table 14:</b> <i>Frequencies of Perceived Need for Help for the Depression and Control Vignettes by Age Group</i> .....	125
<b>Table 15:</b> <i>Coding of Sources of Help</i> .....	127
<b>Table 16:</b> <i>Frequencies of Sources of Help for Depression by Age Group</i> .....	128
<b>Table 17:</b> <i>Gender and Experience Differences on Reported Sources of Help for Depression</i> .....	129
<b>Table 18:</b> <i>Frequencies of Informal and Self-Help Treatment Options for Depression .....</i>	131
<b>Table 19:</b> <i>Coding of Informal Help and Self-help Strategies</i> .....	132
<b>Table 20:</b> <i>Age, Gender and Experience Differences</i> .....	135

<b>Table 21:</b> <i>Participant Demographics</i> .....	179
<b>Table 22:</b> <i>Rotated Factor Matrix</i> .....	187
<b>Table 23:</b> <i>Descriptives of the ACDQ Subscales</i> .....	189
<b>Table 24:</b> <i>ANOVA between Age and Gender on ACDQ Scores</i> .....	191
<b>Table 25:</b> <i>Paired Sample T-Tests for the Helpfulness of Sources of Help</i> .....	194
<b>Table 26:</b> <i>ACDQ Scores by Depressive Symptoms Group</i> .....	195
<b>Table 27:</b> <i>Direct Experience Differences on ACDQ Scores</i> .....	199
<b>Table 28:</b> <i>Participant Demographics</i> .....	220
<b>Table 29:</b> <i>Mixed ANOVA Between Group and Time on ACDQ Scores</i> .....	233
<b>Table 30:</b> <i>Group Differences in Help-Seeking/providing Intentions at Post-Test</i> ..	236
<b>Table 31:</b> <i>Chi-square between Groups for Personal Sources of Help at Post-Test</i>	237
<b>Table 32:</b> <i>McNemar Tests between Pre-test and Post-test in Personal Sources of Help</i> .....	238
<b>Table 33:</b> <i>Chi-square between Symptoms Groups in Help-Seeking Intentions</i> .....	242
<b>Table 34:</b> <i>Data Extraction</i> .....	321
<b>Table 35:</b> <i>Age Group Differences in Personal Sources of Help</i> .....	348
<b>Table 36:</b> <i>Gender Differences in Personal Sources of Help</i> .....	348
<b>Table 37:</b> <i>Mixed ANOVA Results for Covariates between Intervention Groups</i> ....	349
<b>Table 38:</b> <i>ANOVA Between Time and Group on Perceived Helpfulness of Sources of Help</i> .....	350
<b>Table 39:</b> <i>McNemar Tests on Help-Seeking Intentions for Symptoms Groups</i> .....	351

## List of Figures

<b>Figure 1:</b> <i>Recognition Percentages by Age Group</i> .....	95
<b>Figure 2:</b> <i>Hypothetical Personal Sources of Help for Depression</i> .....	134
<b>Figure 3:</b> <i>Social Distance for Depression and Control Vignette by Age Group</i> .....	138
<b>Figure 4:</b> <i>Flow Chart</i> .....	227
<b>Figure 5:</b> <i>Symptom Recognition at Baseline and Post-Test by Group</i> .....	230
<b>Figure 6:</b> <i>Change in Attitudes Scores for Depressed Participants by Age Group</i> ..	241



# **1 Child and Adolescent Depression**

## **1.1 Aims of the Thesis**

The primary aim of this thesis is to examine child and adolescent conceptualisations of paediatric and adolescent depression, the latter defined as major depressive disorder during childhood and adolescence. Although research on children's understanding of physical illness is extensive, literature on mental illness is scarce. Further, recent studies have sought to explore adolescent understanding of mental health and illness, typically under the mental health literacy framework. The latter presupposes that increasing knowledge about mental illnesses and their treatment will benefit young people experiencing such difficulties through timely help-seeking, engagement in appropriate self-help behaviours and reduction of stigma. Under this premise, mental health literacy interventions are increasingly being developed and implemented with young people, aiming to increase understanding and use of helpful strategies to facilitate recovery.

Additionally, recent policies, legislation and frameworks of child well-being and clinical practice promote children's meaningful participation with regard to their health and well-being. Meanwhile, it is evident that the respective evidence base in the development of children's understanding of mental health experiences is limited. Thus, the current thesis aims to add to that limited evidence base to facilitate our

understanding of child and adolescent concepts of depression, the latter being a prevalent mental illness among these age groups.

## **1.2 Thesis Overview**

To examine children and young people's understanding of paediatric depression, Chapter 1 examines scientific evidence on depression in childhood and adolescence, taking a developmental perspective. Although it is now widely acknowledged that depression affects children and young people, the developmental concomitants of the phenomenology of depression in children and adolescents are less clear. Historically, depression in childhood and adolescence was conceptualised as an extension of adult depression (Weiss & Garber, 2003). More recently, the field of developmental psychopathology has contributed to the incorporation of developmental viewpoints in the conceptualisations of the development, maintenance and treatment of depression. Therefore, Chapter 1 aims to provide a comprehensive overview of depression in childhood and adolescence, to set the scene for the empirical research on children's understanding of depression presented in this thesis. In particular, differences in the presentation and effects of depression on development are discussed.

In Chapter 2, research on children's understanding of illness is presented. First, research on physical health and illness is briefly discussed, aiming to introduce the reasons why research on children's understanding of health and illness, both physical and mental, is needed, as well as to familiarise the reader with conceptual frameworks within the field. In turn, a literature review of children's and adolescents' conceptualisations of depression is presented, to set the scene for the empirical studies

of this thesis. The first study of this thesis involves an interview study with children from a general population. The study involves semi-structured interviews and attempts to explore how children understand paediatric and adolescent depression, with the use of vignettes and age-appropriate tasks. In Chapter 3, a description of children's conceptualisations of depression is presented, structured according to the dimensions of the common-sense model of illness (CSM). In Chapter 4, help-seeking aspects are presented, including children's help-seeking recommendations and self-help/informal help suggestions, as well as personal help-seeking intentions and perceived sources of help.

The need for mental health education in schools has been acknowledged on a policy and research level, however the evidence base is currently limited. Recent evaluations of mental health literacy education studies are presented in Chapter 5, with a focus on identifying remaining gaps and limitations in the literature. Based on the literature and current state of knowledge, Chapter 6 presents the development of a psychoeducational session on adolescent depression, adapted from a session that has been developed and delivered in Scotland by the National Health Service (NHS). The intervention development was based on the CSM and mental health literacy frameworks, addressing both the dimensions proposed the CSM, as well as aspects related to help-seeking and depression treatment. A questionnaire measuring adolescent depression literacy was developed, to allow for the evaluation of the intervention. The second study of this thesis involves the delivery and evaluation of this intervention in secondary school pupils in Scotland. Chapter 7 presents the factor analysis of the evaluation tool, as well as the baseline scores of participants' depression literacy. In

Chapter 8, the effectiveness of the intervention is presented and main findings are discussed. Finally, a general discussion of the findings, the contribution of this thesis as well as future research directions are discussed in Chapter 9.

### **1.3 Prevalence of Depression**

Depression constitutes one of the most prevalent mental health disorders in adolescence. Depression rates in children are relatively low, affecting less than 1 to 2% of pre-pubertal children (Avenevoli, Knight, Kessler, & Merikangas, 2008). A sudden rise in depression during adolescence is documented, with prevalence rates estimated to be up to 8% (Costello, Erkanli, & Angold, 2006; Merikangas, Nakamura, & Kessler, 2009). A recent meta-analysis of 48 studies estimated the global prevalence of any depressive disorder in children and adolescents to be 2.6% and 1.3% for major depression (Polanczyk, Salum, Sugaya, Caye, & Rohde, 2015). In the UK, although no recent data were identified, depression prevalence is estimated at 1% (Green, McGinnity, Meltzer, Ford, & Goodman, 2005).

However, the point prevalence and cumulative incidence of depression varies significantly between studies. In one study conducted in the United States, the cumulative prevalence of depression was found to be 10%, indicating that one in every 10 young people will experience depression by the age of 16 years (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003). A prospective longitudinal cohort in New Zealand calculated a cumulative prevalence of approximately 24% by age of 18 years (Moffitt et al., 2007). A retrospective study of a representative U.S. adolescent sample (13 to 18 years) found a lifetime prevalence of 11% (Avenevoli, Swendsen, He, Burstein, &

Merikangas, 2015), however researchers suggest that retrospective studies underestimate the cumulative prevalence of depression (Moffitt et al., 2010).

#### **1.4 Gender Differences in Child and Adolescent Depression**

In childhood, there is no gender difference in the prevalence of depression. The onset of gender differences in depression during adolescence is well documented (Hankin et al., 1998; Wade, Cairney, & Pevalin, 2002). In adolescence, there is a preponderance of female depression in comparison to male, and differences remain stable throughout adulthood. Differences are consistent across different assessment tools in both clinical and general population samples. Thus, researchers conclude that a large difference in depression prevalence between genders, with a 2:1 ratio, is unlikely to result from differences in help-seeking and symptom reporting (Cyranowski, Frank, Young, & Shear, 2000; Thapar, Collishaw, Pine, & Thapar, 2012). A study of three national samples from Canada and the UK confirmed that the gender gap emerges by age 14 (Wade et al., 2002).

Although clear evidence is lacking to specify the reasons behind the observed gender gap, theories and models have highlighted three areas. Nolen-Hoeksema and Girgus (1994) hypothesised that gender differences in risk factors for depression (e.g. rumination instead of active coping, interaction style) exist in childhood between boys and girls, however, it is in interaction with the developmental challenges of adolescence that these factors result in the observed gender gap. Cyranowski et al. (2000) suggest an interaction amongst gender socialisation and affiliative intensification during adolescence, which in the presence of pubertal changes,

adolescent transitions and negative life events triggers depression in adolescence. In turn, Hankin and Abramson (2001) emphasise cognitive vulnerability in the presence of challenges of adolescent transition. More recently, Hyde, Mezulis and Abramson (2008) developed a model inclusive of all of the above factor areas: cognitive, affective and biological vulnerabilities that lead to depression in the presence of negative life events. Although further research is needed to explain the differential vulnerability to depression for adolescent boys and girls, it is evident in current research that an interaction of biological, cognitive, affective and social factors increases vulnerability for both genders during adolescence.

### **1.5 Phenomenology of Childhood and Adolescent Depression**

Theorists have questioned whether the presentation of depression varies according to developmental stages and specifically, whether children are developmentally capable of experiencing some of the symptoms of depression (Kovacs, 1986; Weiss & Garber, 2003). It is conceivable that children do not have the cognitive and emotional capacity to experience symptoms, such as hopelessness or helplessness, guilt or self-esteem (Weiss & Garber, 2003). As children progress into adolescence, the capacity to think abstractly about the self emerges. The self-concept becomes more complex, as self-understanding becomes more psychologically and socially characterised (Damon & Hart, 1982). Adolescents are more likely to ascribe more stable views of the self and to be more future-oriented than younger children.

Indeed, adolescents are significantly more likely to experience hopelessness than children (Ryan et al., 1987; Yorbik, Birmaher, Axelson, Williamson, & Ryan, 2004).

Yorbik et al. (2004) examined 201 children and 715 adolescents consecutively referred to an outpatient depression and anxiety clinic. Their findings suggest that adolescents are more likely to experience hopelessness and helplessness, fatigue, hypersomnia, weight loss, and suicidality. In line with their findings, Ryan et al. (1987) report that hypersomnia, weight changes and the lethality of suicidal attempts were more common amongst the adolescent group in their study. Conversely, Mitchell, McCauley, Burke and Moss (1988) found only the frequency of hypersomnia to differ between child and adolescent presentations of depression. However, methodological limitations in the recruitment process are acknowledged; using a mixed inpatient and outpatient child sample compared to an outpatient adolescent sample, the authors recognise that the recruitment process might have accounted for the differences found. That is, the inpatient child sample is expected to be experiencing a higher severity of depressive episode than the outpatient adolescent group.

Regarding comorbidity, adolescents are more likely to have comorbid substance or alcohol abuse, while children are more likely to present with separation anxiety, somatic complaints and behavioural problems (Birmaher et al., 1996; Ryan et al., 1987; Yorbik et al., 2004). From a similar viewpoint, it has been argued that there might be evident differences in the expression of symptoms (Weiss & Garber, 2003). The authors use the example of anhedonia, which might be expressed through crying in children, irritability in adolescence and verbally in adulthood. Indeed, emotional states characterised by irritability and anger are prominent in adolescence (Carr, 2005; Midgley et al., 2015) and have been added to diagnostic manuals since DSM-III (American Psychiatric Association, 1980).

In conclusion, phenomenological research suggests that childhood and adolescent depression are characterised by the same overall symptomatology (Kolvin & Sadowski, 2001; Yorbik et al., 2004). However, certain symptoms (e.g. hopelessness) related to psychosocial development are expectedly different between the two groups, as well as between young people and adults. Therefore, when examining public understanding of paediatric depression, it is essential to take into consideration differences in the presentation of depression related to development. It is possible that children, adolescents and adults are likely to hold different conceptualisations of depression based on the age of the depressed person.

## **1.6 Developmental Aspects of Childhood and Adolescent**

### **Depression**

To understand both the presentation of depression in children and adolescents, as well as how depression is perceived in these age groups, it is important to first understand developmental aspects that are likely to affect the development, expression, treatment and prognosis of depression.

#### **1.6.1 Cognitive development and depression.**

Cognitive distortions are associated with depression in adulthood. Beck's cognitive theory (Beck, 1964) suggests that depressed people make cognitive errors which result in negative views of oneself, the world and the future. The learned helplessness theory proposes that negative, stable and global explanations of events are related to the development of depression (Abramson, Seligman, & Teasdale, 1978). The response

style theory suggests that the reaction of the individual to depressive symptoms with either rumination or distraction defines the duration and severity of depression (Nolen-Hoeksema, 1991). As such, cognitive vulnerability theories conceptualise cognitive responses as maintaining factors of depression, as well as vulnerability factors for its development.

Less is known about the applicability of such theories in child and adolescent depression and in turn about the role of cognitive distortions. A five-year longitudinal study with participants of eight years of age at the beginning of the study examined cognitive explanatory style in relation to depressive symptoms. The researchers conclude that for younger children (eight years of age) cognitions did not predict depression, however negative life events did. For older participants, the increasing cognitive capacity and more stable explanatory style appear to have a stronger association with the development of depression (Nolen-Hoeksema, Girgus, & Seligman, 1992). Conversely, a three-year longitudinal study with children from fourth to sixth grade suggested that children's negative self-perceptions did not predict increased depressive symptoms. Depressive symptoms predicted more negative self-evaluations in social competence, academic performance and self-worth (McGrath & Repetti, 2002). A comparative study of inpatient children (mean age of 13 years) with depression, inpatient children with other disorders, and non-referred children examined differences in negative distortions. Depressed children presented with more cognitive errors and negative attributions than the other two groups; however, after remission, no significant difference was present (Tems, Stewart, Skinner Jr, Hughes, & Emslie, 1993). A meta-analytic review testing the cognitive vulnerability theories

of depression found a small association between cognitions and life events in the development of childhood depression and a larger effect during adolescence, indicating developmental differences in the role of cognitions (Lakdawalla, Hankin, & Mermelstein, 2007). However, the authors emphasise the paucity of research, which in combination with the numerous methodological and statistical limitations restrict our understanding of cognitive mechanisms in the development of depression.

To conclude, the evidence suggests that as children age, cognitions commence to be related to the development and maintenance of depression. In adolescence, thinking becomes more complex and abstract. Adolescents are in a stage where identity development is an important task (Steinberg & Morris, 2001), and thus are expected to be preoccupied with self-schemas and attributions about oneself, the future and the world. Finally, they are more likely to engage in rumination (Jose & Brown, 2008), which is considered to be both a risk factor for depression development as well as to contribute to gender differences in depression prevalence (Nolen-Hoeksema & Girgus, 1994).

### **1.6.2 Peer relationships and depression.**

Peer relationships become increasingly valuable during adolescence. Adolescence is characterised by increased time spent with peers compared to childhood. Peer relationships become more complex; different levels and forms of relationships arise (Brown & Larson, 2009). Peer relationships (including close friendships, romantic relationships and wider peer acceptance) can have a positive but also a negative influence on adolescents (Steinberg & Morris, 2001). It is acknowledged that peer and

romantic relationships contribute to the development of self-concept, social skills, self-regulation and self-esteem (Brown & Lohr, 1987; Farley & Kim-Spoon, 2014; Steinberg & Morris, 2001). Simultaneously, peer relationships can also constitute significant stressors and potentially have a negative impact on the individual's development (La Greca, Davila, & Siegel, 2008).

The role of peer relationships in the development and maintenance of depression is complex and remains unclear. In general, there appear to exist bidirectional associations (La Greca et al., 2008). In a study examining peer relations, friendships and romantic relationships, negative qualities in friendships and romantic relationships predicted depressive symptoms. Moreover, peer crowd association (indicating social status) and victimisation were the highest predictors of depressive symptoms (La Greca & Harrison, 2005). A meta-analysis of cross sectional studies including both children and adolescents concluded that peer victimisation is strongly related to depression, while weaker associations for anxiety were found (Hawker & Boulton, 2000). At the same time, it has been reported that depressed adolescents have fewer close friends (Field, Miguel, & Sanders, 2001) and both depressed adolescents and pre-adolescents are more rejected by their peers than non-depressed youth (Connolly, Geller, Marton, & Kutcher, 1992; Zimmer-Gembeck, Waters, & Kindermann, 2010). In a prospective study, closeness in friendships was associated with lower depressive affect while depressive symptoms predicted greater peer rejection after a six month period (Vernberg, 1990).

In conclusion, there appears to be a vicious cycle between depressive symptoms and dysfunctional peer relationships: negative peer experience contributes to depressive states, which in turn are likely to result in greater rejection. As such, child and adolescent understandings of depression, both in personal experience and in their peers, are of central importance for understanding depression stigma, peer acceptance, as well as young people's experiences of the disorder and their help-seeking behaviour. Research on child and adolescent stigmatising beliefs for depression is further discussed in Chapter 2. Although stigma does not constitute a primary aim of this thesis, beliefs about depression are central to stigmatising beliefs, negative attitudes and discrimination (e.g. Swords, Heary, & Hennessy, 2011). Thus, desired social distance is explored in both studies of this thesis, alongside children's and adolescents' depression conceptualisations.

## **1.7 Depression Increase in Adolescence**

Adolescence constitutes a period of significant changes and challenges. Faced with biological, cognitive, and emotional development, together with transitions and pressure in academic, social and family life, adolescence signifies a period of increased life stresses (McCauley, Pavlidis, & Kendall, 2001). The entrance into puberty as well as brain and body maturation are considered to be related to body image and self-esteem (Coleman, 2011). Brain and cognitive development enable adolescents to think more abstractly about oneself, the world and the future. Additionally, identity development is a central task in adolescence (Erikson, 1968), facilitated by increased cognitive and emotional capacity. The self-concept becomes more abstract and multifaceted, involving distinct categories under which adolescents evaluate

themselves, whilst psychological attributions are more evident (Damon & Hart, 1982; Steinberg & Morris, 2001). Adolescents are also better able to understand other people's views of themselves. Socially, adolescents strive for autonomy and individualisation, with peer relationships and peer influences becoming more important (Steinberg & Morris, 2001).

Under these circumstances, diathesis stress models propose that the increased life stresses adolescents undergo during this stage, in combination with predisposing factors, including emotion regulation skills, dysfunctional coping skills and attachment difficulties, result in the increased rates of depression during this stage (Cyranski et al., 2000; Nolen-Hoeksema & Girgus, 1994). Additionally, the pathways leading to depression appear to be different for girls and boys, an aspect that is assumed to explain the differences in the ratio between the two genders (McCauley et al., 2001).

The increase of depression prevalence in adolescence, the importance of peer relationships, as well as cognitive and emotional development are likely to facilitate adolescents to have a more comprehensive understanding of depression, in comparison to children. Firstly, adolescents are more likely to have a direct experience of and/or contact with a person with depression. Secondly, depressed adolescents are more likely to rely on their peers for support and confide in their friends about depressive experiences. In turn, increased cognitive capacity is likely to facilitate understanding of the depressive experience. However, the role of age in depression conceptualisations has not been systematically examined.

## **1.8 Developmental Psychopathology Models of Depression**

Various models and theories have described how depression develops in childhood and adolescence (for a comprehensive summary, see Carr, 2005). In this thesis, the perspective of developmental psychopathology is adopted, as such models incorporate a variety of factors on different levels of children's development. Under the premise of equifinality and multifinality, developmental psychopathology models emphasise the interaction of environmental and individual factors that over the course of development might result in positive adaptation, depressive disorders or other mental health difficulties.

Cicchetti and Toth (1998) describe an inclusive model of depression development, in which depressive disorders and depressotypic organisation are conceptualised as emerging from the interaction of psychological, biological and ecological risk factors, the latter described according to Bronfenbrenner's ecological systems theory (1977). Children of different ages face developmental challenges; the quality of the resolution of these challenges affects the organisation of psychological (cognitive and socioemotional) and biological systems. Thus, depressotypic organisation is seen as a result of maladaptive resolution of developmental challenges. As such, the model proposes a continuity in development that overtime can result in an accumulation and strengthening of depressotypic representations, resembling the cognitive theory of depression (Beck, 1964). Similarly, Hammen (1992) has proposed a model focusing on the transaction between cognitive vulnerabilities, stressful life events and interpersonal functioning in the development and maintenance of depression.

## **1.9 Treatment Rates and Recovery**

Without treatment about 10% of depressed children and young people recover spontaneously within three months. However, at 12 months, approximately half of the children and young people remain clinically depressed (National Institute for Health and Care Excellence, 2015). In a meta-analysis including studies with samples of both children and adults, spontaneous remission from major depression was calculated to be at 53% within a year (Whiteford et al., 2013). Spontaneous remission was associated with younger age, although the authors caution on the small number of five studies with children and young people (total of 124 cases). Remission among the sample of children and young people was up to 48% (Whiteford et al., 2013).

Clinical guidelines recommend psychological treatments for paediatric and adolescent depression as the first line of treatment, including Cognitive Behavioural Therapy (CBT), Interpersonal Psychotherapy for Adolescents (IPT-A), family therapy and psychodynamic psychotherapy (National Institute for Health and Care Excellence, 2015; Schwannauer & Taylor, 2015). Combined treatment (pharmacological and psychological) is recommended if a psychological approach alone is not effective. The average time to recovery is 7 to 9 months (Kovacs, 1996). However, at the same time, young people are at a high risk of recurrence, estimating a recurrence of at least one episode in 70% of the young people after 5 years (Kovacs, 1996).

Untreated, depression is associated with significant social, psychological and economic burden. At the same time, it is estimated that 56% of people with depression do not receive treatment (Kohn, Saxena, Levav, & Saraceno, 2004). In a national UK

study, 77% of parents reported that they had sought any type of help for their depressed child in the last year (Green et al., 2005). Moreover, less than half of depressed children and young people receive professional help (Ford, Hamilton, Meltzer, & Goodman, 2008; Wu et al., 1999). The necessity to increase early and appropriate help-seeking for children and young people with depression is indisputable. Help-seeking processes are further discussed in Chapter 2.8. Below, adverse effects of untreated depression are discussed.

### **1.10 Outcomes of Child and Adolescent Depression**

In childhood and adolescence, depression is related to a plethora of adverse effects, including: educational underachievement, difficulties in social relationships, substance and alcohol abuse, physical health problems, unemployment and increased risk of suicide (Birmaher et al., 1996; Fergusson & Woodward, 2002; Horowitz & Garber, 2006; Weissman et al., 1999). However, researchers caution on the role of antecedent social, family and personal factors which constitute risk factors for the development of depression initially, and in turn for negative outcomes (Fergusson & Woodward, 2002). A recent prospective longitudinal study aimed to examine the role of confounding factors in the outcomes of adolescent-onset depression at age 30 and 35 years, including mental health problems, economic and educational status, family circumstances and interpersonal relationships (McLeod, Horwood, & Fergusson, 2016). Confounding factors involved childhood adversity and child abuse, childhood personality factors, comorbid conduct disorders and parental adjustment problems (alcohol and substance abuse, criminal offending and parental depression, anxiety and suicidality). The study reports that, after controlling for confounding factors,

depression in adolescence was significantly associated with increased mental health problems in adulthood, reduced academic attainment, lower economic circumstances and more negative partnership relationships (e.g. conflict and violence). However, Bonferroni corrections reduced the significance of associations to increased anxiety disorders and increased other mental health problem in adulthood. Moreover, the authors identified that adolescents with subclinical depressive symptoms that did not meet criteria for major depression were at an intermediate risk of the abovementioned outcomes, highlighting the need for further research in long-term outcomes of subclinical depression (McLeod et al., 2016).

Hence, although various studies have provided evidence of the negative long-term outcomes of depression in later functioning, further longitudinal research is needed to specify the pathways from adolescent depression to impairment in adulthood. Although methodological limitations might overestimate some of the impaired areas, there appears to be a tendency of early onset depression to be associated with greater negative consequences. More importantly, there is a consensus between studies that childhood and adolescent depression is associated with a high risk of recurrence in adult life, with estimate rates ranging between 40% and 70% (Birmaher et al., 1996; Fombonne, Wostear, Cooper, Harrington, & Rutter, 2001; Rutter, Kim-Cohen, & Maughan, 2006; Weissman et al., 1999). Even after controlling for possible confounding variables and comorbidity, the link between adolescent-onset and adulthood depression remains significant (Fergusson & Woodward, 2002). Earlier age of onset is associated with more chronic course, greater comorbidity, greater impairments in social functioning, increased severity of episodes and suicidality

(Hammen, Brennan, Keenan-Miller, & Herr, 2008; Zisook et al., 2007). Depressive disorders constitute the second leading cause of disability, as measured by years lived with disability (YLD) in 2010 (Ferrari et al., 2013).

Considering the significant effects of depression on the individual's life as well as the substantial recurrence rates, burden of disease and economic costs (Lynch & Clarke, 2006), there is wide consensus on the necessity for prevention and early intervention (Horowitz & Garber, 2006).

### **1.11 Early Intervention for Depression**

During the last twenty years, the importance of prevention and early intervention is recurrently emphasised in research and on a policy level (Horowitz & Garber, 2006). Early intervention and prevention are identified as main priorities and challenges in mental health globally (Collins et al., 2011). In Scotland, initiatives are evident in health policies (The Scottish Government, 2017b) education (e.g. Curriculum for Excellence, Scottish Executive, 2006a) and practice (The Scottish Government, 2017a). Within the mental health strategy, due to the significant burden of mental illness, the rationale for early intervention is highlighted. Specifically, early intervention for children and adolescents is identified as one of the main foci for the next ten years (The Scottish Government, 2017b). To promote early intervention, the Government has identified the need to improve emotional support through schools, adapt mental health education (Personal and Social Education, PSE) and provide mental health training to staff in educational settings.

To summarise, depression constitutes one of the most frequent mental illnesses, followed by a significant burden of disease, more so than any other mental illness. Although not as prevalent in pre-pubertal children, depression rates rise significantly in adolescence. Paediatric depression is likely to have a longer course, with subsequent episodes in later life. If untreated, it has numerous negative consequences on a personal and societal level. Thus, prevention and early intervention constitute primary aims of recent mental health policies.

In the next chapter, the rationale for exploring child and adolescent understandings of depression is presented. First, the need to explore children's understanding of mental illness is analysed, followed by the rationale for focusing on their understanding of paediatric and adolescent depression. In turn, a literature review of research on children and young people's depression conceptualisations is provided, to set the scene for the first study of the thesis.



## **2 Children's Understanding of Illness**

### **2.1 Children's Understanding of Physical Illness**

During the 1970s and 1980s, a focus on children's understanding of physical illness is evident, mainly deriving from a cognitive developmental approach examining how children conceptualise illness throughout cognitive development (Burbach & Peterson, 1986). The aim of early studies in the field of children's concepts of physical illness was to facilitate communication between health professionals and children, in order for effective treatment of paediatric illnesses to be achieved (Bibace & Walsh, 1980; Rushforth, 1999). Early studies explored children's reasoning about the causes of illness, especially related to contagion and contamination (Kalish, 1999; Siegal, 1988; Solomon & Cassimatis, 1999). More recently, studies have examined additional aspects of illnesses, as for example prevention or perceived timeline to recovery (e.g. Myant & Williams, 2005).

On a theoretical level, children's understanding of illness adds to the literature on children's cognitive development (Burbach & Peterson, 1986; Kalish, 1999). Early theoretical perspectives reflect a long-standing debate within cognitive psychology between stage approaches, influenced from a Piagetian perspective supporting that children's understanding follows generic stages (Bibace & Walsh, 1980), and the conceptual change approach that supports the notion of the sophisticated child, who can develop advanced concepts in some areas based on both sophisticated cognitive processes and experience (Carey, 1985). In an early review of studies with children

approximately four to 12 years, Burbach and Peterson (1986) conclude that older and more cognitively mature children, in comparison to younger and less mature, present a more sophisticated conceptualisation of physical illness and they associate illnesses with specific symptoms and diseases. Older children use internal cues to determine whether they are healthy or ill. They tend to associate illness to germs and infection, and are better able to define contagious illnesses. Conversely, younger children draw more from immanent justice theory to reason about illness. More recently, a Vygotskian approach to cognitive development appears to offer a middle ground explanation; that is, although there is a limit to what children can understand depending on age, they are able to exceed basic understanding with knowledge and support (Rushforth, 1999). Raman and Winer (2002) conducted three studies to test the ongoing debate between the two approaches, finding evidence supporting both perspectives; although there is evidence to support the domain-specific approach, general age trends were also found.

More importantly, studies show that health professionals are not necessarily aware of children's level of understanding, this can lead to either over or under-estimating what children can understand (Perrin & Perrin, 1983; Rushforth, 1999; Vacik, Nagy, & Jessee, 2001). At the same time, studies in children's experiences of communication and involvement in decision-making about their illness show that, although children express a wish to be included, they are often marginalised and their opinions are not heard (Coyne, 2008; Coyne & Gallagher, 2011).

## 2.2 Health Literacy

In parallel with cognitive developmental research on children's understanding of illness, another stream of research derives from the health literacy framework. From this perspective, health literacy is associated with a focus on the link between knowledge and health behaviour. Health literacy had initially been related with literacy and numeracy, with regard to one's ability to understand medical information (World Health Organization, 2013). The construct has evolved over the years and a variety of definitions of health literacy have been proposed (Sørensen et al., 2012). A shared aspect of these definitions is described by Ratzan and Parker (2000) as "*the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions*" (p. 6). Health literacy is therefore linked to empowerment, allowing the individual to have control and take responsibility over one's health and to be able to seek and understand health-related information (Kickbusch, 2001; World Health Organization, 2013). Thus, health literacy is crucial for the improvement of health outcomes on an individual and societal level.

A recent systematic review of health literacy studies with children and young people indicated that the majority of research has been conducted in the last decade (Ormshaw, Paakkari, & Kannas, 2013). Amongst the reviewed studies, three out of the 16 studies involve mental or emotional health. Although the selection criteria of studies in the review have resulted in various studies in the field being excluded, the authors importantly demonstrate that diverse foci exist within the field, interpreting this finding as a result of the variety of definitions and measurement methods used.

Mental health literacy, as a derivative of health literacy, has been introduced to fill this gap in health literacy research and to draw equal attention to mental health. Mental health literacy similarly supports the notion that an understanding of mental health and illness is a prerequisite for the prevention and treatment of mental illness (Jorm, 2000; Jorm et al., 1997).

### **2.3 Mental Health Literacy**

The introduction of the mental health literacy term (Jorm et al., 1997) signifies the research shift towards a better examination and understanding of the public's understanding of mental health and illness. Mental health literacy was initially defined as "*knowledge and beliefs about mental disorders which aid their recognition, management or prevention*" (Jorm et al., 1997, p.182). More broadly, the rationale of the construct, although open to simplified misinterpretations, does not merely consist of being knowledgeable about mental illness. Conversely, it refers to knowledge linked to: (i) maintenance of mental health and prevention of mental illness, (ii) timely recognition of the development of a mental illness, (iii) appropriate help-seeking, as well as (iv) self-coping strategies for mild mental health difficulties (Jorm, 2012; Kutcher et al., 2016). Jorm (2012) additionally emphasises skills and knowledge to support others with mental health difficulties, whereas Kutcher et al. (2016) have expanded the definition to include strategies to decrease stigma. Integral to current definitions of the mental health literacy construct is the assumption that increased knowledge in the above areas is related to "*a possibility of action to benefit one's own mental health or that of others*" (Jorm, 2012, p.1). Jorm (1997) also emphasised that public beliefs might differ from the respective beliefs of clinicians, thus resulting in a

difficulty in implementing evidence-based interventions, if there is no consensus between the evidence base of effective treatments and the patient's beliefs. Additionally, discrepancies might result in higher drop-out rates, if the patient is not engaged and does not consider the allocated treatment as effective (Jorm, 2000). From this viewpoint, knowledge is inherently linked to effective behaviour, in terms of self-care, appropriate help-seeking and help-providing behaviour as well as non-stigmatisation.

Therefore, similar to research on physical health and illness, the rationale for examining public understanding of mental illness is based on the association between illness understanding and health behaviour. That is, understanding how the public conceptualise health and illness is related to prevention, help-seeking, treatment preferences and adherence to treatment. However, research in children's understanding of mental illness is disproportionately small in comparison to the amount of research in children and young people's understanding of physical illness (Hennessy, Swords, & Heary, 2008) as well as in comparison to research on adult understanding of mental illness.

## **2.4 The Rationale for Examining Children's Understanding of Mental Illness**

Within the health and mental health literacy frameworks, there exists a strong focus on the link between public mental health literacy and early identification of mental illness as well as help-seeking behaviour (Jorm, 2012; Kutcher et al., 2016). While the first studies on mental health literacy focused on adult populations, theorists in the

field of mental health literacy have identified the need to expand the focus to adolescent populations. Similarly, researchers advocate for the need to improve mental health education for young people, under the premise that improved mental health literacy benefits help-seeking and is likely to reduce stigma, the latter being a key barrier to seeking help (Gulliver, Griffiths, & Christensen, 2010; Kelly, Jorm, & Wright, 2007; Kutcher et al., 2016).

Adolescents, in comparison to children, are more autonomous with regard to their health care and are likely to individually (without the involvement of parents) make decisions about their physical and mental health. Similarly, they are more likely to refer to and confide in peers for emotional difficulties (Rickwood, Deane, Wilson, & Ciarrochi, 2005); hence, universal mental health education is likely to improve help-giving responses from peers (Byrne, Swords, & Nixon, 2015). In that way, mental health education is likely to provide young people with the knowledge to i) identify mental health problems early on, considering that half of the cases of mental illness commence before the age of 14 years and three quarters before the age of 25 years (Kessler et al., 2005) and ii) prepare young people for adulthood, when health decisions and responsibilities are gradually transferred to the individual (Kutcher et al., 2016).

From this perspective, the rationale for examining younger (pre-adolescent) children's concepts of mental illness, or child mental health literacy, is less intuitive. As children are dependent on parents for their well-being and for decisions involving their health (including mental health), reducing parental barriers to seeking and adhering to

treatment would improve access to mental health care for children in need. Indeed, research on barriers to children's mental health care has identified parental barriers to service use, including parental perceived need for services, parental experience of the burden of the child's difficulties and parental perception of mental illness (Owens et al., 2002; Zwaanswijk, Verhaak, Bensing, Van der Ende, & Verhulst, 2003). However, it could be argued that exploring younger children's (before adolescence) mental health conceptualisations would inform our understanding of how mental health conceptualisations and stigma develop, and could also benefit clinical practice and mental health education. Below, each area is discussed in more detail.

Within the mental health literacy field, research appears to follow a top-down process, expanding from adult populations to young people. There is still limited research and understanding of how children's concepts of mental illness develop, as well as which factors contribute to their understanding of mental illness (e.g. Wahl, 2002). Research on children's conceptualisations of mental health and illness could also inform our understanding of the development of peer acceptance or exclusion (Hennessy et al., 2008). Stigma research consistently shows that children's attitudes towards people with mental health problems commence at a young age (Hinshaw, 2005; Wahl, 2002). Children are able to identify deviant behaviour and attribute causes to this behaviour from the early years of primary school (Hennessy & Heary, 2009; Hennessy et al., 2008). Thus, a focus on children's stigmatising attitudes is proposed, to identify how attitudes and stereotypes develop and in turn to allow for intervention to be conducted at a young age, before these stereotypes and attitudes are established (Heary, Hennessy, Swords, & Corrigan, 2017; Wahl, 2002).

A study reviewing communications to children aged seven to eleven years about mental illness, unsurprisingly, found very little research on the topic; moreover, no studies are reported on communication about mental illness when the child is experiencing mental health problems (Mueller, Callanan, & Greenwood, 2016). Synthesising research on communications from parents, peers, school and media, Mueller et al. (2016) conclude that mental illness continues to be a taboo topic, characterised by stigmatising messages and silence. In a grounded theory approach, Mueller et al. (2014) found that parental communication with children about mental illness is dichotomised, between mental health and well-being associated with “us” and mental illness affecting “them” (others). This distinction has significant implications for both stigma development, as well as clinical practice; regarding the latter, the distinction between “us” and “them” perpetuates self-stigma for the individual affected by mental illness (Mueller et al., 2014). Interestingly, the authors identified parental avoidance to talk about mental illness, which was contrary to parents’ intention to be open and avoid stigmatisation. This finding is especially interesting, considering that in middle childhood, children’s conceptualisations are likely to be largely affected by information provided by the family environment, rather than other social contexts (school, peer group or media). At the same time, Moses (2010) found that parental concealment of child’s mental health difficulties to others constituted one of the three factors contributing to adolescent self-stigma. Illness perceptions were also associated with self-stigmatisation (Moses, 2010). Therefore, illness perceptions, of both children and parents, merit further examination, in order for unhelpful beliefs that contribute to self-stigma to be addressed.

Further, children's understanding of mental health and illness is related to clinical practice. Paradoxically, while current policies, clinical guidelines and treatment models call for an incorporation of the patient's perspective in treatment planning and while recent treatment models emphasise empowerment and collaborative care, clinical research has yet to capitalise on children's conceptualisations of mental health and illness.

Psychoeducation is a key ingredient of evidence-based treatment models for childhood mental illness (for example, CBT). NICE guidelines recommend that psychoeducation, in the form of providing information to the young person and family about the nature, course and treatment of depression, is provided by health professionals who are involved either in the assessment or treatment of depression (NICE, 2015). Moreover, the guidelines emphasise the need to provide age-appropriate information and further suggest the provision of self-help material, including psycho-educational leaflets.

Drawing upon the self-determination theory (Ryan & Deci, 2000), the collaborative recovery model (Oades et al., 2005) conceptualises treatment as an individualised process for which collaboration and autonomy support are required, thus acknowledging the patient's perspective as a prerequisite. For young people, autonomy is particularly important, in line with developmental tasks within the adolescent years (Steinberg & Silverberg, 1986). Additionally, empowerment as a means to facilitate recovery has recently been emphasised in clinical research. Empowerment is associated with more positive mental health outcomes, mediating

the relationship between certain psychological processes (e.g. thinking style) and recovery (Grealish et al., 2017). It is also associated with lower levels of self-stigma in people with depression and bipolar disorder (Brohan, Gauci, Sartorius, & Thornicroft, 2011). From young people's perspectives, empowerment involves being listened to and provided with choices over their treatment; moreover, young people view empowerment as crucial to their recovery, management of symptoms and quality of life (Grealish, Tai, Hunter, & Morrison, 2013).

Despite shared decision-making being recommended in clinical guidelines (NICE, 2015; Zuckerbrot, Cheung, Jensen, Stein, & Laraque, 2007), young people and carers consider that the information shared with them is limited and that they are not involved in treatment planning to their desired level (Simmons, Hetrick, & Jorm, 2011). Not being valued and listened to by health providers was highlighted as a barrier to treatment in qualitative research with depressed adolescents (Wisdom, Clarke, & Green, 2006). Therefore, understanding how children and young people perceive mental illness is likely to facilitate communication with health-professionals and collaborative decision-making.

Similarly, psychoeducation also constitutes a component of effective preventive interventions (e.g. Horowitz & Garber, 2006) and has also been found in itself to be an effective treatment in adult populations (Donker, Griffiths, Cuijpers, & Christensen, 2009). It is argued that both preventive programmes as well as the implementation of evidence-based therapeutic interventions would benefit from an evidence base on children and young people's existing perceptions of depression, in order for

misconceptions and distorted illness beliefs to be targeted. For example, a recent systematic review on stigma suggests that psycho-education needs to be provided to children and their family following a diagnosis, as belief in personal responsibility results in higher self-stigma (Kaushik, Kostaki, & Kyriakopoulos, 2016). To date, treatment manuals and material have largely been based on clinical expertise, rather than capitalising on research evidence on children's understanding or misconceptions of their illness.

From a similar viewpoint, while mental health education is part of a number of educational curricula, including the UK (e.g. Australian Government, 2009; Department for Education, 2016b), the respective evidence base of how children understand mental health and illness is limited. As such, research on children's understanding would inform respective mental health education and mental health literacy education. Mental health literacy interventions are discussed in detail in Chapter 5.

Finally, children's understanding of parental mental illness has received little research attention. Children of parents with mental illness request further information about the illness (Cogan, Riddell, & Mayes, 2005; Garley, Gallop, Johnston, & Pipitone, 1997; Meadus & Johnson, 2000). Having limited understanding or knowledge of the parental mental illness adds to the child's worry and distress; while being more knowledgeable aids children to interpret behaviours as symptoms of the illness and thus make sense of parental behaviour (Mordoch & Hall, 2008). Research on children's perception of mental illness is likely to enrich our understanding of misconceptions children of

different ages might hold when mental illness affects a parent, as well as contribute to the limited evidence base of the role of experience or contact on perceptions of mental illness.

In conclusion, research on children's understanding of mental health and illness is emerging, influenced by a combination of research fields with varied aims, namely the field of (mental) health literacy, developmental cognitive psychology and stigma research. In turn, research findings on children's understanding of mental illness are likely to contribute to: healthcare for affected children (communication with professionals, involvement in decision-making), mental health treatment (developmentally tailored and evidence-based material), mental health education (evidence base of what children already know and what misconceptions should be targeted), help-seeking (especially for adolescent groups), and anti-stigma interventions (through a better understanding of children's attributions of behaviour and a specification of the age groups that anti-stigma programmes should target). In the next section, a brief review of children's understanding of mental illness is presented, followed by an elaborate literature review of child and adolescent conceptualisations of depression.

## **2.5 Children's Understanding of Mental Illness**

Research in children's understanding of physical health and illness is disproportionate to research on children's understanding of mental health and illness. While children's understanding of physical illness has been extensively examined, the respective research on mental illness remains limited. Researchers have identified this gap since

the mid 1980's (Burbach & Peterson, 1986), however more recent reviews of the literature reiterate that there is paucity of research in the field (Georgakakou-Koutsonikou & Williams, 2017; Hennessy et al., 2008; Wahl, 2002).

Early research has examined to a great extent the general term of mental illness (Adler & Wahl, 1998; Poster, Betz, McKenna, & Mossar, 1986; Royal & Roberts, 1987), in part, in relation to stigmatising beliefs or attitudes towards people with mental health problems. In a review of early literature (between 1980 and 1995), Wahl (2002) reports a consensus between the literature regarding developmental trends in children's understanding of mental illness; younger children in the first years of primary school do not have a clear knowledge of mental illness and appear to confuse mental illness with physical illness and learning disabilities. Older children, in the last years of primary school, show a more sophisticated understanding of mental illness, which is conceived as originating from difficulties with thoughts and emotions. Further, older children are more aware of causes and treatment options. However, as evident in Wahl's review (2002), which includes twelve studies on children's knowledge, the research in the first two decades was limited.

However, as mental illness does not constitute a unified concept, it is essential for research to explore separate mental health problems/illnesses. More recent studies demonstrate that children and adolescents develop distinct beliefs and attitudes for different mental illnesses. Differences between the mental health conditions described in children and young people's responses are found for identification of the illness described (Coles et al., 2016; Melas, Tartani, Forsner, Edhborg, & Forsell, 2013),

intentions to offer support to a peer with mental health difficulties (Kelly, Jorm, & Rodgers, 2006), perceived need for help (Melas et al., 2013; Swords, Hennessy, & Heary, 2011a), suggested sources of help (Swords, Hennessy & Heary, 2011a), perceived causes (Coleman et al., 2009) and attitudes (Bellanca & Pote, 2013; Kaushik et al., 2016; Swords, Heary & Hennessy, 2011; Walker, Coleman, Lee, Squire, & Friesen, 2008).

Under the mental health literacy framework, greater interest in adolescents' lay beliefs about mental illness is evident in recent years. Various recent studies have utilised the mental health literacy framework to examine specific mental health problems, including depression (Burns & Rapee, 2006; Lam, 2014), anxiety disorders (Coles & Coleman, 2010; Coles et al., 2016), eating disorders (Mond et al., 2007), schizophrenia (Loureiro et al., 2013; Melas et al., 2013) and alcohol misuse (Lubman et al., 2017).

For depression, most studies examining public depression literacy (in childhood, adolescence and adulthood) have focused on the ability to recognise depression, the perceived need for and sources of help. It could be argued, that an elaborate conceptual framework including a variety of dimensions would provide further insight into (young) people's understanding of mental health problems. For example, in the initial definition of the "mental health literacy", Jorm (1997) emphasised the relevant knowledge to recognise, prevent and manage mental health problems, specifically referring to risk factors and causes; however, little research has been conducted on aspects of aetiology or prevention of mental illness.

In more recent studies, the need for further investigation of children's views and especially in younger age groups has been emphasised, in relation to the development of stigma and exclusion (Hennessy et al., 2008). Children recognise "abnormal" behaviour and have beliefs about its causes from the age of seven to eight years (Hennessy et al., 2008). Yet, little research to date has focused in preadolescent populations.

## **2.6 Children and Young People's Concepts of Depression**

### **2.6.1 Rationale for examining children's and young people's concepts of depression.**

A recent interest in young people's concepts of depression is becoming evident in the literature, with an increasing number of studies examining children's and adolescents' beliefs (Georgakakou-Koutsonikou & Williams, 2017), help-seeking and barriers to treatment (Gulliver et al., 2010), stigma (Kaushik et al., 2016), treatment preferences (Jaycox et al., 2006) as well as the effectiveness of psycho-educational interventions (Wei, Hayden, Kutcher, Zygmunt, & McGrath, 2013).

The fact that depression has received research interest more so than other mental health disorders is not surprising. Depression is a common mental illness, prevalent in adolescence (Merikangas et al., 2009; Polanczyk et al., 2015) as well as adulthood (Kessler et al., 2005; Steel et al., 2014). As such, studies have sought to explore how the public (Prins, Verhaak, Bensing, & van der Meer, 2008) and people with a diagnosis understand and experience the disorder (Dundon, 2006). Due to the

significant burden of disease (Ferrari et al., 2013) and treatment gap (Neufeld, Jones, & Goodyer, 2017), understanding barriers to help-seeking and improving timely access to professional help constitute key priorities. Indicatively, Neufeld et al. (2017) conducted a longitudinal study following fourteen-year-old adolescents with depression. The study found that depressed adolescents who had contact with mental health services at age 14 had a greater decrease of symptoms by the age of 17 years, while those who did not have contact were more likely to have a diagnosis of depression at the same age.

Regarding young people, there is a possible difficulty in recognising between depressive symptoms and “normal” adolescent mood changes, by both the young people themselves as well as by adults. Some symptoms of depression in young people might be initially misinterpreted as characteristics of their developmental stage. Adolescence is characterised by an increase of negative affect (Allen & Sheeber, 2008). Although it is less confirmed by research, it is stereotypically believed that mood changes increase in adolescence (Steinberg & Morris, 2001). Steinberg and Morris (2001) conclude that mood changes are more common than in adult samples, however not less common than in children. Nonetheless, these changes might be disregarded by gatekeepers, or by the adolescents themselves, as signs of development, rather than symptoms of depression, resulting in prolonging the help-seeking process (Dundon, 2006).

Research evidence echoes the difficulties young people face in recognising depression symptoms. Adolescents with an experience of depression report struggling to

understand and “make sense” of their symptomatology (Meadus, 2007). In a public stigma study with adults in the US, 59% of the public were able to identify depression in a vignette portraying a depressed adolescent character (Pescosolido et al., 2008). A study in Scottish schools measured teachers’ ability to identify depression in students, the latter measured by depression screening questionnaires. The study reports that teachers were able to recognise depression in almost half (49%) of the depressed students (Moor et al., 2007). These findings indicate the difficulty that adults encounter in identifying depression in young people, and further support the need for education, not only directed to young people but also adults that could enhance early recognition and intervention (i.e. parents, teachers, general practitioners).

Moreover, as hopelessness and negative attributions are integral symptoms of the disorder (Carr, 2005; World Health Organization, 1992), the very nature of depression is related to its representation, affecting aspects such as perceived helpfulness of treatment or curability of the illness. Fortune, Barrowclough and Lobban (2004) conducted one of the first studies examining representations of depression in relation to depressive symptoms in a sample of adult women. Depressed participants had a more pessimistic view of depression, reporting more perceived symptoms and more severe consequences, as well as a longer perceived recovery timeline and less perceived control over depression. A similar study reports that depressed people consider depression to be more severe and they are less optimistic about treatment (Vollmann et al., 2010). Based on such differences, Fortune et al. (2004) wondered whether depressive symptoms affect representation of the illness or vice versa; concluding that longitudinal research is needed in this area. Nonetheless, examining

current levels of depressive symptoms in cross-sectional studies of depression literacy in the general population might provide initial results regarding the role of depressive symptoms in depression conceptualisations.

Research has principally focused on adolescents' perspectives; research examining children's views (below 12 years of age) is scarce. Although paediatric depression is less common than adolescent-onset depression, with estimates varying significantly between less than one 1% to 2% (Avenevoli et al., 2008; Polanczyk et al., 2015) the estimated percentages reflect a considerable number of children who experience depression during childhood. Mental health and other professionals working with this population would benefit from understanding how younger children conceptualise their mental health difficulties.

Similarly, children are also expected to be in contact with depressed people in their family or environment. Indicatively, in a study estimating the prevalence of parental mental illness in Australian families, percentages varied between 14.4% to 23.3% for any mental illness excluding substance-use disorders (Maybery, Reupert, Patrick, Goodyear, & Crase, 2009). Similarly, in Canada, 4.4% of children under 12 have a parent with major depression (Bassani, Padoin, Philipp, & Veldhuizen, 2009). Research on children's perspectives of parental depression has systematically highlighted children's request for more information about the parental illness (Garley et al., 1997; Mordoch, 2010; Reupert & Maybery, 2007).

Thirdly, although anti-stigma interventions have been found effective in reducing stigma in adolescent and adult groups, research with children under the age of 12 years is scarce (Corrigan, Morris, Michaels, Rafacz, & Rüsçh, 2012; Griffiths, Carron-Arthur, Parsons, & Reid, 2014; Schachter et al., 2008). Hinshaw (2005) highlights that although knowledge about mental health problems increases during middle childhood, stigmatising attitudes do not appear to improve with age. Few interventions targeting younger children have been evaluated to date, based on the rationale that early intervention in stigma reduction would be more effective in changing attitudes. Although these initiatives yielded significant improvements in reducing stigma, the development of such interventions is based on programmes designed for adult or adolescent groups (Pitre, Stewart, Adams, Bedard, & Landry, 2007; Ventieri, Clarke, & Hay, 2011). It is proposed that anti-stigma interventions would benefit from an evidence base on children's knowledge and beliefs about mental illness, in order for tailored programmes to be developed.

### **2.6.2 Literature review of children's and adolescents' concepts of depression.**

Existing research on child and adolescent concepts of depression derives from diverse research fields, whose aims and methods vary significantly. To indicate, some of the topics covered include: young people's experiences of depression (Midgley et al., 2015; Wisdom & Green, 2004), young people's depression literacy from the perspective of mental health literacy (Burns & Rapee, 2006), developmental changes in children's concepts of depression (Fox, Buchanan-Barrow, & Barrett, 2010), children's understanding of parental depression (Meadus & Johnson, 2007) and young people's attitudes towards peers with depression (Dolphin & Hennessy, 2014). Mental

health literacy studies have mostly used vignette methodologies to elicit participants' views on the described condition. In studies of the general population, examined areas involve: recognition and labelling of depression, causal attributions, perceived need for help, suggested sources of help and expected recovery period. A literature review of child and adolescent conceptualisations of depression is provided below.

### ***2.6.2.1 Depression recognition.***

Recognition of depression consists of identifying symptoms of depression presented in a vignette and labelling the described difficulties as depression. Under the mental health literacy rationale, correct recognition is considered to facilitate appropriate help-seeking (Jorm, 2012). However, it has also been suggested that recognising the existence of a problem, rather than the ability to label the problem, is the essential first step in help-seeking (Leighton, 2009). While one study found that recognition predicts appropriate help-seeking processes (Wright, Jorm, Harris, & McGorry, 2007), other studies have not found such associations (Byrne et al., 2015). Finally, one study found that recognition predicted help-seeking for depression, but not for social anxiety (Coles et al., 2016).

Recognition of depression in studies with non-depressed adolescent populations varies significantly between 23 and 74%, with an average of approximately 41% (Georgakakou-Koutsonikou & Williams, 2017). This finding echoes research with depressed adolescents, who report a difficulty recognising that their difficulties reflect a depressive disorder (Meadus, 2007; Wisdom & Green, 2004). In one study, depressed adolescents reported that the duration and "abnormality" of symptoms (i.e.

suicidal ideation), compared to symptoms or feelings experienced by their peers, differentiated them from others and made them start considering that they were experiencing a depressive disorder (Wisdom & Green, 2004). Similarly, in the general population, characters in vignettes described as having suicidal ideation are more easily recognised as depressed. Burns and Rapee (2006) report that double the number of participants categorised a character with suicidal ideation as depressed, in comparison to the vignette with no presented suicidality. Similar findings are reported by subsequent studies using the same vignettes (Bruno, McCarthy, & Kramer, 2015; Byrne et al., 2015; Marshall & Dunstan, 2013). In all studies, approximately 70% of participants report suicidal ideation as the symptom leading them to consider depression as a label for the difficulty presented. In one study examining age differences in depression recognition, older participants (15-17 years) in comparison to younger ones (12-14 years) were significantly more likely to recognise depression in a vignette (Essau, Olaya, Pasha, Pauli, & Bray, 2013). No study examining recognition of depression in a vignette with children below the age of 12 years has been identified.

#### ***2.6.2.2 Perceived aetiology of depression.***

Children and young people adopt primarily psychosocial explanations (including social, relational, and individual factors) over biological models (Georgakakou-Koutsonikou & Williams, 2017). In an interview study using open-ended questions with children between the ages of 8 and 14 years, participants reported internal (e.g. physiological, comparison to others) and external (e.g. parenting, bullying in school) causes with the same frequency, regardless of their age (Hennessy & Heary, 2009).

Essau et al. (2013) examined perceived causes of depression in a sample of adolescents between the ages of 12 and 17 years. The most frequently endorsed categories include “normal ups and downs in life”, “stress” and “the way s/he was raised”, while biological and genetic factors were the least endorsed causes. In a focus group study with 8-9 year-olds, children’s attributions of the causes of depression and anxiety were primarily socio-environmental and related to family, peer, educational and socio-economic factors (Dixon, Murray, & Daiches, 2013).

Causal beliefs are particularly important, as it has been proposed that they are related to treatment preferences (Goldstein & Rosselli, 2003; Khalsa, McCarthy, Sharpless, Barrett, & Barber, 2011) and stigma (Botha & Dozois, 2015; Goldstein & Rosselli, 2003). According to attribution theory, stigma towards people with mental illness is related to the perceived causes and attributed responsibility for the behaviours (Weiner, 1985). Dolphin and Hennessy (2014) tested this hypothesis amongst a sample of adolescents, revealing that little attributed control over depression aetiology was associated with more positive emotional responses (sympathy and pity) and in turn with greater acceptance. Similar findings are reported by other studies; higher perceived responsibility is associated with lower acceptance or increased stigma (Coleman et al., 2009; Corrigan et al., 2005; O’Driscoll, Heary, Hennessy, & McKeague, 2015; Peterson, Mullins, & Ridley-Johnson, 1985; Swords, Heary & Hennessy, 2011). Therefore, examining causal beliefs, together with perceived control over depression is particularly important for understanding how stigmatising beliefs and attitudes develop.

### ***2.6.2.3 Depression treatment.***

Numerous studies have examined adolescents' perceived need for help and sources of help for depression. Overall, adolescents recognise that depressed characters in vignettes require help, with percentages ranging between 69 to 99% (Burns & Rapee, Bruno et al., 2015; 2006; Byrne et al., 2015; Coles et al., 2016; Marshall & Dunstan, 2013). Coles et al. (2016) found that young people are more likely to suggest help is needed for a depressed (68.8%) than an anxious character (59.2%). Swords, Hennessy & Heary (2011a) report that a character presented with Attention Deficit Hyperactivity Disorder (ADHD) was considered to be more in need for help than the one with depression.

In turn, studies have explored which sources of help adolescents suggest for depression. Most frequently, young people refer to professional help (43.5%), help from the family (43%) and from friends (41%) (Georgakakou-Koutsonikou & Williams, 2017). Other categories include doctors and teachers/school staff, someone with the same experience (e.g. Burns & Rapee, 2006), or dealing with depression alone, the latter only suggested by a minority of participants (Essau et al., 2013; Jorm et al., 2006). Dealing with depression alone is more common in boys and young people that are less knowledgeable about depression (Jorm et al., 2006).

While in adolescent years seeking help or support from a friend is a common strategy, little focus has been paid on adolescents' help-providing responses to a peer with depression. Indicatively, help-providing responses involve listening, comforting and reassuring, distracting, suggesting to seek help, engaging an adult, providing advice

from own experience, suggesting physical exercise, suggesting avoidance of stressful situations, recommending contact with family and friends, avoiding alcohol and drugs and engaging in relaxing activities (Byrne et al., 2015; Essau et al., 2013). Unhelpful strategies were suggested by a minority of 22% of participants in a study examining adolescents' help-providing intentions (Kelly & Jorm, 2007). Unhelpful responses (such as alcohol or drug use, ignoring him/her) were even less common in a study with Iranian adolescents, with percentages within the range of 5 to 6% (Essau et al., 2013). However, in the same study, talking to the depressed person in a firm way was the second most common response, following the helpful option of listening in an empathetic way. Therefore, although adolescents suggest primarily positive and helpful strategies to help a depressed peer, some misconceptions regarding which are the appropriate and helpful reactions are prevalent. Moreover, very little research in this field has been conducted to date; the factors that shape young people's help-providing responses are unclear. Nevertheless, studies in help-seeking and help-providing systematically recommend the need to educate young people in depression literacy and help-seeking options (Burns & Rapee, 2006; Byrne et al., 2015; Coles et al., 2016; Kelly & Jorm, 2007).

In clinical samples of depressed adolescents, their treatment preferences for depression have recently been explored. Preliminary results confirm adult preferences, as depressed young people prefer psychotherapy (50%) over medication (22%) or watchful waiting (28%) (Jaycox et al., 2006). More interestingly, perceived social support for the particular treatment option (i.e. perceived social support from family and friends for psychotherapy or medication) was the highest predictor of preference

for both psychotherapy and medication (Bradley, McGrath, Brannen, & Bagnell, 2010). In a qualitative study with depressed adolescents, Wisdom and Green (2004) found that causal attributions and response to the diagnosis (as a helpful label, a chronic medical problem, or a significant part of their identity) impacted on young people's participation in treatment and perceived control over depression. In the general population, treatment preferences confirm those of depressed young people. Psychotherapeutic approaches are viewed as more acceptable than combination of psychotherapy and medication, while medication alone is the least acceptable (Caporino & Karver, 2012). Further, adult studies show that treatment preferences have been associated with prognosis, suggesting that when patients are matched to preferred treatment, they have more positive outcomes (e.g. Lin et al., 2005). However, some studies failed to report a correlation (e.g. Dunlop et al., 2012). A recent meta-analysis examined the relation between treatment preference (psychotherapy versus medication) and treatment outcome for a variety of clinical conditions, reporting a significant effect of preference on treatment outcome and thus indicating that being matched to treatment preferences was advantageous. Despite the small effect size, the review further found that matched patients were less likely to drop out from treatment (Swift, Callahan, & Vollmer, 2011). However, due to the fact that patients with strong preferences might refuse to be randomly assigned, sampling bias might occur, questioning the validity of results (van Schaik et al., 2004).

Regarding children and young people, no study measuring correlations between conceptualisations of depression, treatment preferences and outcomes has been identified. Understanding at what age children develop preferences for treatment and

which factors are associated with their preferences would be beneficial for mental health professionals working with children and young people. For example, Fox et al. (2010) found that it is at the end of middle childhood that mental illness starts to constitute a distinct concept; until then, younger children tend to rely on physical illness to explain mental health problems. Thus, it would be expected that their understanding of psychotherapeutic approaches is limited. Similarly, Hennessy and Heary (2009) suggest that children would benefit from more information regarding the role of mental health professionals. Developmental trends in children's conceptualisation of depression are discussed in more detail below, focusing on existing research with child and adolescent populations (Chapter 2.6.2.5).

#### ***2.6.2.4 Perceived curability and recovery timeline.***

Studies have not directly examined perceived curability of depression, which is surprising considering that numerous studies have explored perceived timeline to recovery. When timeline is examined, young people on average consider that recovery from depression requires a period of three to four months (Burns & Rapee, Bruno et al., 2015; 2006; Byrne et al., 2015; Coles & Coleman, 2010; Coles et al., 2016; Marshall & Dunstan, 2013). Fox et al. (2010) found that 10 to 11-year-olds were more likely to suggest a recovery period of one to six months, while 6-7 and 8-9 year-olds were more likely to choose a period of less than a month.

#### ***2.6.2.5 Age differences.***

Few studies have examined developmental trends in children's (below the age of 12 years) conceptualisations of depression. Age differences in conceptualisations of

depression have been explored mainly in depression recognition, aetiology, perceived sources of help and helpfulness of treatments. Two studies that focus exclusively on children (below the age of 12 years) were identified, the remaining studies include a combined child and adolescent population or examine age differences between younger and older adolescents. In turn, age trends have been examined in relation to attitudes and acceptance of depressed peers.

Fox et al. (2010) interviewed children between the ages of six and eleven years on their understanding of a variety of physical and mental illnesses (depression, anorexia nervosa, dementia, chicken pox, broken arm, common cold). The study used vignettes portraying an adult female character with each condition and used a card selection task to elicit children's responses. The study found that younger children rely on their knowledge of physical illness to explain mental illness, in terms of causes, consequences, curability and timeline, a tendency which decreases with age. By the end of middle childhood, mental illness is no longer conceptualised in the same way as physical illness, concluding that children's understanding of mental illness follows a naïve theory approach. Their findings are supported by an exploratory study conducted by the same authors (2008). Fox et al. conclude that as children age, their concepts of mental illness become more sophisticated and accurate, in terms of considering both internal and external causes, suggesting more appropriate treatment options and a longer timeline to recovery.

Hennessy and Heary's (2009) study focused on children's and adolescents' understandings of three common mental illnesses, namely conduct disorder,

depression and ADHD. The authors conducted individual interviews and focus groups with children of three age groups (8.4 years, 11.5 years and 14.3 years) to explore their perceived aetiology and sources of help for each mental illness. Children were able to provide a variety of possible explanations for each behaviour and all age groups endorsed both internal and external causes. For depression, no significant differences between age groups were found in the frequency of reporting each category. Children were aware of a variety of sources of help, reporting primarily family and friends, whereas professionals and teachers were less frequently endorsed. Friends as a source of help were more frequently endorsed with increasing age, which is in line with the importance of peer support in help-seeking. Their findings were echoed in their second study on adolescent perceived sources of help for depression and ADHD (Swords, Hennessy & Heary, 2011a). For depression, 16 year-olds endorsed that the character was significantly more in need for help than did twelve and 14 year-olds. Similarly, 16 year-olds suggested significantly more sources of help and were more likely to differentiate between the vignettes in terms of the help needed. Essau et al. (2013) found that older participants (15-17 years) were more likely to recognise depression and attribute its causes to “the normal ups and downs in life” and “the way s/he was raised”. Older participants were more likely to consider relaxation training as helpful and to suggest not using substances as a preventive strategy. Younger participants (12-14 years) suggested a physical illness and “God’s will” more frequently as causes of depression and they were more likely to believe that ignoring the problem or distracting the person would be helpful. Further, younger participants were more likely to report a teacher as a helpful source of support.

In turn, age differences in acceptance of peers with depression have been explored. Peterson, Mullins and Ridley-Johnson (1985) conducted the first study examining children's reactions to a depressed peer, using videos of depressed and control female characters. The study found that depressed peers were rated more negatively than non-depressed characters. Further, external reasons for depression (increased life-stress in comparison to low life-stress) was associated with higher liking and attractiveness. Age and gender also influenced children's attitudes, young participants (mean age of 9.3 years) and girls showed more favourable attitudes towards the depressed peer than the older participants (mean age of 11.2 years) and boys. In turn, ratings of the perceived need for therapy was higher for depressed characters than non-depressed. This difference was significant between younger boys and girls of both age groups; older boys rated depressed and non-depressed characters equally.

Bellanca and Pote (2013) examined children's cognitive and conative attitudes towards depression, ADHD and learning disabilities (LD), in a sample of 273 children aged seven to 11 years (mean age 9.2 years). Cognitive attitudes refer to attributes ascribed to people with mental health difficulties, while conative attitudes involve the desired level of social distance. Children showed more negative conative attitudes (higher social distance) for ADHD than depression and LD, the last two rated equally. Cognitive attitudes were more negative for ADHD and depression than LD. Age differences in both cognitive and conative attitudes are reported; younger children (7-9 years) showed more positive attitudes than older ones (9.1 to 11.4 years). Swords, Heary and Hennessy (2011) examined acceptance of children with depression and ADHD in a sample of 595 participants between the ages of six and 16 years. The

authors report that perceived responsibility over the behaviour was associated with levels of acceptance of the character when the gender of the character was male. Additionally, acceptance levels were associated with the age and gender of the participant as well as the gender of the character. Older participants were less accepting of a male depressed character than younger ones, however age was not associated with the acceptance of the female depressed character. On the contrary, for the ADHD condition, older participants demonstrated greater acceptance for both the male and female vignette. This study shows the complex pathways of peer acceptance or rejection, highlighting factors that had not been previously examined (i.e. gender of the vignette), and demonstrates that acceptance is different depending on the mental illness explored.

In conclusion, little research has examined age differences in child and adolescent conceptualisations of depression. The diverse age groups of participants and foci of the studies do not allow for robust conclusions to be drawn. Additionally, the age of the character presented as depressed varies, with some of the above studies using adult rather than child or adolescent characters. Overall, previous research also indicates that children's conceptualisations of mental (Adler & Wahl, 1998; Wahl, 2002) and physical illness (Burbach & Peterson, 1986; Myant & Williams, 2005) become more sophisticated and precise with age. More research is needed to confirm age differences in depression conceptualisations, and especially research focusing on children before the adolescent years.

#### **2.6.2.6 Gender differences.**

The role of gender in the conceptualisations of mental illness has been studied in more detail. When significant gender differences are found, girls show “higher” mental health literacy or a more sophisticated understanding of depression. First, studies show that girls are more likely to label depression from symptoms described in a vignette (Burns & Rapee, 2006; Coles et al., 2016; Cotton, Wright, Harris, Jorm, & McGorry, 2006; Marshall & Dunstan, 2013; Melas et al., 2013). One study found no differences in depression recognition in Irish adolescents aged 15 to 19 years (Byrne et al., 2015). When asked to rate their worry for a depressed vignette character, girls show more concern than boys (Burns & Rapee, 2006; Byrne et al., 2015; Marshall & Dunstan, 2013). Girls also suggest longer periods needed to recover (Burns & Rapee, 2006; Coles et al., 2016; Marshall & Dunstan, 2013) and rate the need for professional help higher than boys (Lubman et al., 2017). Finally, girls are more likely to offer help than boys (Byrne et al., 2015; Melas et al., 2013; Olsson & Kennedy, 2010) and show more confidence in providing support (Lubman et al., 2017). In one study, gender differences were overall minimal (Fox et al., 2010), leading the authors to suggest that gender does not substantially differentiate children’s conceptualisations of mental illness between the ages of six to eleven years.

Regarding stigmatising attitudes, girls are more positive towards a depressed peer (Dolphin & Hennessy, 2014; Kelly & Jorm, 2007; O’Driscoll, Heary, Hennessy, & McKeague, 2012; Peterson et al., 1985; Reavley & Jorm, 2011; Swords, Heary & Hennessy, 2011). A recent systematic review on the stigma of mental illness in children and adolescents concludes that boys are more stigmatising but also more

stigmatised than girls (Kaushik et al., 2016); nonetheless, they note that some of the included studies report no gender differences and others find mixed results.

Findings are not consistent on the role of gender in children and young people's depression conceptualisations; however, where significant differences are reported, girls show "higher" depression literacy. Similarly, in adult studies, findings are not cohesive. In a systematic review of studies examining adult concepts of mental illness, gender differences were found in aspects of treatment, including help-seeking and acceptance of different types of treatment. While in informal help there are no evident gender differences, women are more likely to suggest professional treatment, and accept psychotherapy more than men. Similarly, in approximately half of the included studies, women are more likely to adopt psychosocial conceptualisations of mental illness than men (Holzinger, Floris, Schomerus, Carta, & Angermeyer, 2012).

#### ***2.6.2.7 The role of experience.***

Experience in relation to mental health conceptualisations is defined as either direct experience of the target disorder or through exposure, that is through contact with people who have experienced the disorder. Regarding indirect experience, it has been suggested that it is possible that people with a family member or friends with mental illness have increased chance of having searched information about the disorder, its symptoms and treatment (Cutler, Reavley, & Jorm, 2017).

Earlier research in children's understanding of physical illness reports mixed results regarding the role of personal experience in children's conceptualisations. While some

studies show that children with experience have more sophisticated views of illness, other studies show opposite results and some show no correlation with experience (Burbach & Peterson, 1986). In their studies examining children's understanding of chronic illness (cystic fibrosis and cancer), Crisp, Ungerer and Goodnow (1996) report that experienced children were more knowledgeable than non-experienced groups and both experienced groups, regardless of age, had similar levels of understanding of causes of illness. Paterson, Moss-Morris and Butler (1999) examined the role of experience in children's concepts of asthma. The study found that experienced children had more sophisticated views regarding the causes, timeline and cure/control dimension, however not in consequences and prevention.

Studies examining children and young people's understanding of mental illness have not –in their large majority- controlled for participants' past or current experience with depression. This limitation has led to suggestions for future studies to examine the relationship between experience (including contact) and mental health concepts (Byrne et al., 2015) or attitudes (Hennessy et al., 2008). In adult studies, results are mixed. In one study, experience or contact with people with mental illness was associated with increased mental health literacy (Cutler et al., 2017). Another study reports that experience was associated with increased chance of categorising depression as an illness, however a similar pattern was not found for schizophrenia (Lauber, Nordt, Falcató, & Rössler, 2003). Similarly, one study found no association between experience and recognition of the illness, however experience impacted upon treatment recommendations and expectations of recovery (Dahlberg, Waern, & Runeson, 2008). In a systematic review of adult concepts of anxiety and depression,

Prins et al. (2008) report that depressed adult patients have a more biological model of depression, more pessimistic views of recovery and a longer timeline, in comparison to non-patients.

Wright et al. (2007) found that previous experience was associated with endorsing appropriate sources of help for depression, in their study with young people aged twelve to 25 years. In a qualitative study with adolescents between twelve and 15 years, Leighton (2010) suggests that participants with an experience were more flexible in their responses, in relation to the type of endorsed sources of help and the perceived benefits of each type of help for mental health problems. Research with younger children (below 12 years) is even more limited. In a study examining children's conceptualisations of ADHD, including children with and without ADHD as well as younger (7-8 years) and older (11-12 years) age groups, age and experience were associated with more sophisticated views (McMenamy & Perrin, 2008). In contrast with younger children with ADHD, those without ADHD attributed control to the character with ADHD. Older children with ADHD demonstrated more complex aetiological explanations of ADHD, incorporating both biological and psychological aspects, in comparison to those without experience and to the younger groups (McMenamy & Perrin, 2008).

For depression, very little research has been conducted to date with children and young people. In a systematic review of children and young people's depression concepts, the diverse study designs and research questions did not lend themselves to robust conclusions. Although the study indicates that experience is associated with young

people's understanding, it is suggested that further research is needed, directly examining different levels of experience in association with depression concepts (Georgakakou-Koutsonikou & Williams, 2017). To date, no study was identified that has directly sought to measure the role of experience in children's conceptualisations of depression.

### **2.6.3 Measurement of children and adolescents' depression literacy.**

Cross-sectional surveys have frequently used vignette methodologies to explore children's and adolescents' knowledge about mental illness, help-seeking intentions/behaviour and stigma. Vignette methodologies use a short story describing a character with a specific mental illness (e.g. depression or ADHD) to introduce the examined illness. The use of vignettes has been increasingly popular, because of their advantages when examining sensitive topics. Vignettes allow for a depersonalisation that facilitates eliciting participants' perceptions of sensitive issues (Schoenberg & Ravdal, 2000). Especially for children and young people, the story-telling format is familiar and engaging, while it allows for an examination of participants' perceptions and views (Hughes & Huby, 2002).

Limitations in the use of vignette methodologies are evident. While the hypothetical nature of the vignette characters might prompt participants to express personal views, the responses do not reflect reality and real-life behaviour (Hughes & Huby, 2002). Studies have shown that children respond differently according to the level of severity in a vignette (Burns & Rapee, 2006; Byrne et al., 2015) and the means of presentation (video or written vignette) (Marshall & Dunstan, 2013). Moreover, the gender of the

vignette character is likely to differentiate participants' responses (Swords, Heary & Hennessy, 2011). Gender has been counterbalanced in approximately half of the studies; in the remaining studies, female characters are predominantly used (Georgakakou-Koutsonikou & Williams, 2017). Similarly, most of the studies focusing on adolescent samples have understandably used adolescent characters. There is dearth of studies presenting a child character and thus examining children's understanding of paediatric depression. Only two studies were identified that used child characters, to explore children's understandings of depression (Dixon et al., 2013) and attitudes towards a depressed peer (Peterson et al., 1985). Other studies with children have used adult characters (e.g. Fox et al., 2010).

A commonly used questionnaire in surveys is the "Friend in Need Questionnaire" (Burns & Rapee, 2006) which assesses adolescents' understanding of depression in the following areas: recognition of depression in vignettes, worry for a depressed character, perceived timeline to recovery, perceived need for help and perceived sources of help. The questionnaire has since been used by other researchers (Bruno et al., 2015; Byrne et al., 2015; Coles et al., 2016; Marshall & Dunstan, 2013). Additionally, the "mental health literacy questionnaire" (Jorm et al., 1997), initially used in a public study of adult mental health literacy, has been used in more recent research with adolescents and young adults (Essau et al., 2013; Hernan, Philpot, Edmonds, & Reddy, 2010; Jorm & Wright, 2008; Yap, Wright, & Jorm, 2011). The questionnaire measures: symptom recognition, perceived sources of help, perceived prognosis, knowledge of risk factors and stigmatising attitudes.

In a recent scoping review of 401 studies, Wei, McGrath, Hayden & Kutcher (2015) provide a comprehensive list of measures developed to assess mental health literacy in the three following areas: knowledge, help-seeking and attitudes towards people with mental illness. The authors report 69 measures of knowledge of mental illness, of which approximately one third report psychometric properties. Similar trends are found for help-seeking (35 measures, of which 10 validated) and stigma (111 studies, 65 validated). The authors note the imbalance between the number of measures developed for stigma in comparison to those developed for knowledge and help-seeking. More recently, a systematic review of knowledge measures was conducted, with the aim to review the psychometric properties of included questionnaires (Wei, McGrath, Hayden, & Kutcher, 2016). From the 17 included studies, only four tools address young people's mental health knowledge, of which one measures depression literacy. The lack of measurement tools specific to young people is emphasised, as is the need to develop and evaluate tools that are specific to young people.

It is evident that, although the mental health literacy field is growing rapidly, variability in the operationalisation of the term of mental health literacy exists. Studies with young people examining aspects of knowledge address diverse areas of the construct, most commonly the ability to recognise depression and aspects of treatment, namely perceived need for help, sources of help and less often help-providing responses. It is argued that a more comprehensive framework is needed, to broaden the areas of illness conceptualisations explored. Below, the framework adopted in this thesis is presented.

## **2.7 Theoretical Framework**

For a holistic examination of children and young people's beliefs and attitudes, a social cognition framework that examines representations of and experience with the illness is adopted as an organisational framework. Social cognition models have been primarily used to explain children's knowledge of physical illness (Bibace, Schmidt, & Walsh, 1994; Peltzer & Promptussananon, 2003) and recently applied to adult mental health (e.g. Baines & Wittkowski, 2013). It is expected that adopting a social cognition model will provide a detailed insight into children and young people's conceptualisations of depression and its treatment.

The self-regulation model of illness representations (or Common Sense Model, CSM) (Leventhal, Meyer, & Nerenz, 1980), based on adult conceptualisations, suggests that the cognitive representation of an illness has five dimensions: identity (including the label of the illness and its symptoms); timeline (referring to whether the illness is acute, cyclic or chronic); causes (referring to the perceived aetiology of the illness); consequences (referring to physical and social impact of the illness); and cure/control (perceived effectiveness of treatment and personal control), the latter defined and added to the model by Lau and Hartman (1983). In a meta-analysis, Hagger and Orbell (2003) confirmed both the interrelations of different dimensions, as well as significant relationships between each dimension and problem-focused coping behaviours. The model further proposes the formation of an emotional representation in addition to the cognitive one, which are both activated when appraising a threat to health, and thus guide coping procedures. In turn, an appraisal of the coping strategies and outcomes shape the illness representation, with the integration of new information and

experiences (Leventhal, Diefenbach, & Leventhal, 1992; Leventhal, Leventhal, & Contrada, 1998). Thus, the theory strongly emphasises the dynamic nature of the model, which relies upon experience with the illness. Based on the self-regulation theory, the Illness Perceptions Questionnaire (IPQ) (Moss-Morris et al., 2002; Weinman, Petrie, Moss-Morris, & Horne, 1996) has been widely used to measure patient's beliefs of physical (for a review, see Hagger & Orbell, 2003) and, recently, mental illness (e.g. Fortune et al., 2004; Lobban, Barrowclough, & Jones, 2003; Wittman, Bolks, & Hutschemaekers, 2011).

The CSM appears to be suitable for the examination of children's and young people's depression representations. The model has been used in research examining children's understanding of: physical health and illness (Myant & Williams, 2005), obesity (Babooram, Mullan, & Sharpe, 2011), asthma (Paterson et al., 1999), rare neurodevelopmental disorders (Vatne, Helmen, Bahr, Kanavin, & Nyhus, 2015) and mental illness (Fox et al., 2010). In comparison to the mental health literacy literature, using the CSM broadens the spectrum of illness dimensions examined. For example, few studies have explored perceived causes, curability and consequences of depression. These dimensions are promising in providing the basis of how children and adolescents understand depression, upon which the links between knowledge and health behaviour or stigma can be drawn. For example, in one study that examined illness representations of adolescents with mood disorders in relation to professional help-seeking intentions (Munson, Floersch, & Townsend, 2009), cure/control was associated with help-seeking. Specifically, the more participants believed that depression could be controlled through treatment, the more positive they were towards

seeking help. Additionally, the use of the CSM brings together dimensions that have been examined in isolation in previous studies. Thus, adopting the CSM as an organisational framework, this thesis aims to provide a holistic examination of children's and young people's concepts of depression.

Prins et al.'s (2008) conducted a systematic review of research examining adults' conceptualisations of anxiety and depression, according to the CSM. The study revealed that both experience and demographic factors (age, gender and ethnicity) influence health beliefs about depression. People from the general population tend to conceptualise psychological or environmental rather than biological causes of depression, thus preferring psychotherapy to medication. Conversely, depressed people tend to stress biological factors and show a preference for treatment by medication. In addition, the proportion of patients admitting a need for help varied significantly (from 49% to 84%) among studies, while participants expected benefits from treatment in less than one month. In addition, the less distressed patients as well as the general population frequently supported a preference to self-coping strategies.

Similarly, Georgakakou-Koutsonikou and Williams (2017) used the CSM framework to organise a mixed methods systematic review of 36 studies on children's and adolescents' concepts of depression. The authors conclude that young people's conceptualisations resemble aspects of adult concepts, however misconceptions are evident. Age and gender differences are evident; older children and girls demonstrate a broader understanding of depression. Experience is associated with more complex concepts of depression, although the evidence is limited to make robust conclusions.

## 2.8 Help-Seeking

Despite the high rates of depression in adolescence, a small percentage of depressed young people are treated (Wu et al., 1999). Few studies have examined professional help-seeking for depression in young people. Although different samples, methodologies and definitions for mental health service use are used, studies consistently report that approximately a quarter to a third of young people seek professional help for mental health problems.

In a study using three national samples in the US, findings show that 19.5% of children and 23% of adolescents with a need for mental health evaluation, had used services within the last 12 months (Kataoka, Zhang, & Wells, 2002). In Germany, only 23% of 12-17 year-olds reported seeking help for depression in a 15-month period (Essau, 2005). In an Australian study with both children and adolescents (4-17 years) examining depression, anxiety and ADHD, 25% of participants over the clinical cut-off for their conditions had attended services in the last 6 months (Sawyer et al., 2001). Expectedly, service use increases with severity of the condition. However, services are used by less than half of the young people with the highest evaluated severity of difficulties. In a study using a national Norwegian sample ( $N = 11,154$ ) of young people aged 15-16 years, only 24% of young people in the highest 10<sup>th</sup> percentile of anxiety and depression scores reported seeking professional help in the last 12 months, a percentage which increased to 34% for those in the single highest percentile (Zachrisson, Rödje, & Mykletun, 2006). Data from the Great Smoky Mountain Study with children aged 9-13 years reveal that even in the highest severity of emotional difficulties, only 40% had received any kind of mental health care in the last three

months (Burns et al., 1995). A more recent study with an adolescent and young adult population (16-24 years) in Australia reports 50% of participants with an affective disorder had used the services in the last year (Reavley, Cvetkovski, Jorm, & Lubman, 2010). It is, however, possible that the percentages are higher due to the older age of participants and the inclusion of all affective disorders. Moreover, in Australia, there is a large national mental health strategy, including psycho-education in schools, promotion of early intervention, and anti-stigma programmes.

A number of models explaining mental health help-seeking have been suggested, indicating factors that either facilitate or impede approaching professional services. Models have diverse foci, explaining different levels of factors. A variety of models of child and adolescent mental health help-seeking have been proposed, specifically focusing on parental facilitators and barriers (Logan & King, 2001; Sayal, 2006; Srebnik, Cauce, & Baydar, 1996; Zwaanswijk et al., 2003). Indeed, a systematic review reports that seven parental factors were associated with adolescent service use: parent-report of burden, parental problem perception, parental perception of need, parental psychopathology, household status (single-parent), family structure changes, ethnic group (non-minority) (Ryan, Jorm, Toumbourou, & Lubman, 2015). Although the parental role is pivotal for help-seeking for children, adolescent help-seeking is expected to be different to child help-seeking pathways. With no intention to disregard parental influences and factors, it is argued that adolescents' knowledge, beliefs and attitudes should be incorporated in help-seeking models, in order to further understand the processes that facilitate or impede treatment seeking.

A literature review conducted by the World Health Organisation (WHO) proposes a comprehensive model, encompassing individual, interpersonal and societal levels of barriers and facilitators in a step-based model (Barker, 2007). According to the model, help-seeking starts with the individual's consideration of the problem and of the need for external help. The person's motivation to seek help depends on intrapersonal factors, including amongst others: knowledge, internalised gender norms, self-efficacy and coping skills. If the person is motivated to seek help, sources of social support are either informal (including friends and family), or formal (e.g. mental health services, school, community or youth organisations). In this level, structural factors, service factors and policy factors are involved.

Rickwood et al. (2005) focused on the micro-level between considering the problem and deciding to seek external help, conceptualising help-seeking "*as a process whereby the personal becomes increasingly interpersonal*" (pg. 8). The process includes four stages, initiating with an awareness of symptoms and their appraisal as having a problem requiring intervention, which is in line with the first step of the WHO model (Barker, 2007). Indeed, a meta-analysis of surveys conducted by the WHO with adult populations confirm that the most common factor in not initiating treatment is low perceived need for help (Andrade et al., 2014). The study further highlights that attitudinal barriers are more important than structural barriers (e.g. cost, time) in initiating and continuing treatment. No meta-analysis has been identified with adolescent populations.

In a systematic review of adolescent help-seeking barriers and facilitators for depression and anxiety, low perceived need for help, perceived stigma and preference to cope alone were the primary barriers to seeking help (Gulliver et al., 2010). This finding is especially important for depression for two reasons. Firstly, negative attributions about the future and emotional states of increased hopelessness and helplessness, as integral to a depressive disorder, might interfere with the individual's judgment of the need of external help and the motivation to seek help. For young people with suicidal ideation, help-negation has been found to be a significant barrier to help-seeking. Help-negation is defined as "*the refusal to accept or access available helping resources*" (Rudd, Joiner & Rajab, 1995, p.499). As suicidal ideation increases, intentions to seek help decrease, an association which holds true in sub-clinical levels of suicidality (Carlton & Deane, 2000). Although the mechanisms that lead to help-negation are unclear, help-negation was higher for participants with higher depressive symptoms and hopelessness in a study with university students (Wilson & Deane, 2010). Secondly, both adolescents (Dundon, 2006; Meadus, 2007) and adults (Moor et al., 2007; Pescosolido et al., 2008) encounter difficulty in recognising symptoms of depression; therefore, the need for education is emphasised, not only directed to young people but also to adults that could enhance early recognition and intervention (i.e. parents, teachers, general practitioners).

The service gap and help-seeking models described above demonstrate the importance of the beliefs the individual holds about one's illness for effective and timely access to care. While this thesis focuses on children and adolescents, the importance of adults' understanding of mental health and illness is highlighted.

In conclusion, this chapter provided a review of literature on children's and adolescents' conceptualisations of depression. In comparison to physical illness and adult conceptualisations, there is lack of focus in children's understanding of mental illness. The gaps in current research and thus the need for further and more detailed investigation of children's conceptualisations of depression, and of other mental illness, are highlighted. Insights from research on children's concepts of mental health and illness are relevant to clinical practice, mental health education and anti-stigma interventions. The next two chapters present a study on children's conceptualisations of depression. In Chapter 3, children's concepts, organised according to the CSM are presented. In Chapter 4, children's knowledge and beliefs about depression treatment as well as help-seeking are discussed.



### **3 Study 1a: Children's Depression Representations**

In Chapter 2, a review of the literature on children and young people's concepts of depression was presented, indicating the gap of research in pre-adolescent children. The first study of this thesis is presented in the current and next chapter. In this chapter, children's representations of depression are presented, according to the CSM of illness representations, including depression recognition, causes, consequences, curability and timeline to recovery. In the next chapter, results on children's knowledge related to help-seeking for depression and personal hypothetical help-seeking intentions are described.

#### **3.1 Introduction**

As discussed in Chapter 2, the body of research on children's concepts of mental health and illness is disproportionately little in comparison to both research on adolescents' respective concepts (Fox et al., 2010; Hennessy & Heary, 2009) as well as research on children's understanding of physical health and illness (Hennessy et al., 2008). A research base on children's understanding of mental illness would contribute to effective communication with health professionals, children's involvement in decision-making and health education (Bibace & Walsh, 1980; Rushforth, 1999).

The importance of prevention and early intervention for mental health problems are central priorities on a global level (Collins et al., 2011). Efforts to improve early

intervention and prevention for mental health problems are evident in the UK through education (e.g. Curriculum for Excellence, Scottish Executive, 2006a) and health policies (Department of Health, 2015; The Scottish Government, 2017b). The development of relevant educational programmes presupposes an understanding of young people's existing perception of mental health and illness. Currently, research on what information would be relevant and appropriate to include in mental health education for children is scarce (Hennessy et al., 2008). Similarly, psychoeducation constitutes a key component of effective treatment for mental illness, and has been found effective as a sole intervention for adults (Donker et al., 2009) and as part of preventive interventions for children and young people (Horowitz & Garber, 2006). Research evidence can thus inform both preventive and therapeutic interventions on how children view mental illness and what components of mental health education children would benefit from the most. Finally, studies show that children's stigmatising attitudes towards peers with mental health difficulties commence at a young age (Hennessy et al., 2008). Understanding how children conceptualise mental health difficulties is likely to inform how negative attitudes and stigma develop (Hennessy et al., 2008). For example, Peterson et al. (1985) found that attributing depression aetiology to life stress was associated with higher levels of acceptance than when low stress was attributed. Therefore, research on children's conceptualisations of mental illness is needed for effective interventions to be delivered before negative attitudes are established (Heary et al., 2017).

To date, studies including children have not provided a comprehensive account of children's understanding of specific mental illness. Some studies have simultaneously

incorporated physical and mental health to explore differences in how children's conceptualisations develop (Fox et al., 2010), while others have examined the general term of mental illness (see Wahl et al., 2002). As mental illness does not constitute a unified concept, it has become evident that children develop distinct understanding and attitudes for specific mental illness (Bellanca & Pote, 2013).

The focus of the current study is on children's conceptualisations of depression, the latter being a prevalent mental illness in childhood and adolescence. Depression prevalence estimates in preadolescent children vary between less than 1% to 2% (Polanczyk et al., 2015); however little research on children's understanding of paediatric depression has been conducted to date, in comparison to adult (Prins et al., 2008) and adolescent depression concepts (Georgakakou-Koutsonikou & Williams, 2017). Therefore, little is known on how children's depression concepts develop, and which factors are associated with their understanding.

The role of age and gender in children's concepts is unclear. Research reports developmental differences in children's understanding of mental illness (e.g. Fox et al., 2010), suggesting that their understanding becomes more sophisticated with age (Wahl, 2002). Regarding gender, adolescent studies have inconsistently reported gender differences in mental health literacy. Where significant differences are reported, female adolescents appear to have "higher" mental health literacy (e.g. Coles et al., 2016). Among children, minimal differences are evident (Fox et al., 2010; Georgakakou-Koutsonikou & Williams, 2017). Finally, the potential role of experience and contact with people with mental health problems is under-examined

(Hennessy et al., 2008) although there are indications that experience is associated with more sophisticated views (Georgakakou-Koutsonikou & Williams, 2017).

Adopting Leventhal et al.'s CSM (1980) of illness representations allows for a thorough examination of children's beliefs about the symptoms, causes, consequences, curability and timeline to recovery for depression. Although the model derives from adult literature and has been introduced as a conceptual framework under which to examine the experiences of affected populations, it is argued that using it as an organisational framework would contribute to our understanding of children's conceptualisations of depression. The framework allows researchers to broaden the focus from aspects previously examined in the mental health literacy field, to incorporate perceived aetiology, consequences and curability of depression.

### **3.2 Aim of the Study**

The primary aim of the study is to provide an in-depth account of children's conceptualisations of depression, structured according to the CSM. The specific questions are:

**Research Question 1:** Do children recognise depression in a vignette? What are the main symptoms they recognise for a depressed hypothetical peer?

**Research Question 2:** What are children's perceived causes, consequences, curability and timeline to recovery for depression?

**Research Question 3:** Are there age differences, gender differences or differences based on experience in children's depression concepts?

### **3.3 Ethical Considerations**

#### **3.3.1 Ethical approval.**

The study adheres to the Code of Practice for Research followed by the University of Edinburgh (UK Research Integrity Office, 2009) and the British Psychological Society's (BPS) code of conduct (2009). The study was approved by the University of Edinburgh (School of Health in Social Science, Level 2/3 ethics application, approval date: 22.08.2014) and the City of Edinburgh Council Research Ethic Committees, approval date 2.10.2014) (see Appendix A). Additionally, approval from the Head Teacher of each participating school was obtained.

#### **3.3.2 Informed consent.**

The study required child and parental informed consent. Information sheets and parental opt-out consent forms (Appendix B) were distributed to students in class and sent home to parents. Further, to ensure that parents obtained the forms, parents were contacted through each school's parent-teacher communication platform (e-mails or text messages) by teaching staff on at least one occasion, reminding them of the deadline to return forms. At least one week was permitted between distribution and return date to allow appropriate amount of time for all families to consider participation and respond. Thus, it was ensured that parents had the opportunity to consider and discuss participation with their child, contact the research team if they had any questions and to opt-out on the child's behalf.

Informed consent from the child was also required. The study was explained by teachers to each classroom, child information sheet and opt-in consent forms were

distributed. In turn, to ensure that each child understood the research aims, content and his/her rights as a participant, the information sheet and consent were re-examined at the beginning of each interview. Especially, anonymity, confidentiality, the right to withdraw at any point and the voluntary basis of participation were highlighted.

### **3.3.3 Confidentiality.**

Steps to ensure confidentiality involved: conducting the interviews in a separate space within the school, using a password-protected audio-recorder, anonymising transcripts and data by assigning a unique code for each participant.

### **3.3.4 Safeguarding.**

The duty of confidentiality may in exceptional circumstances be breached, in the extreme case that a participant reveals information that raises concerns about the safety and well-being of the individual or others. The Head Teacher of each school was consulted in advance about safeguarding procedures that the school follows, and a person of contact was identified for each school. This procedure was explained to participants, who were also informed that if the researcher wished to breach confidentiality due to concern, this would be discussed with the child first. Further, the researcher is a member of Scotland's Protecting Vulnerable Groups (PVG) Scheme, which further ensures safeguarding processes.

It was anticipated that the study would not cause any discomfort to participants. However, it was explained to participants that if they felt distress during the interview,

they could withdraw at any stage. In turn, debriefing sheets were administered at the end of the interview, including points of contact in case of discomfort (Appendix C). No incentives were used and no participant withdrew from the study. Each participant received a certificate of participation and a small gift (e.g. pencils, stickers) to show appreciation for their time.

### **3.4 Methodology**

#### **3.4.1 Study design.**

The study followed a mixed-methods cross-sectional design, as it aims to provide a descriptive account of children's concepts of depression as well as to examine factors related to children's concepts, thus using both qualitative and quantitative analysis (Tashakkori & Creswell, 2007).

#### **3.4.2 Participants.**

Participants were 105 primary school pupils ( $M = 10.76$  years,  $SD = 1.47$ ) in Year 4 ( $M = 8.86$ ,  $SD = 0.32$ ) and Year 7 ( $M = 11.84$ ,  $SD = 0.32$ ) from three schools in Midlothian (Scotland), two state schools ( $N_1 = 41$ ,  $N_2 = 12$ ) and a private school ( $N_3 = 52$ ). The age groups included are considered to correspond to cognitive developmental stages in understanding of health (Bibace & Walsh, 1980; Siegal, 2008; Siegal & Peterson, 1999). There were equal numbers of boys ( $N = 52$ ) and girls ( $N = 53$ ). The scores of the younger (8-9 years) and older (11-12 years) age groups did not differ significantly on the Family Affluence Scale (FAS) ( $t(103) = .975$ ,  $p > .05$ ), or the Short Moods and Feelings Questionnaire (SMFQ) ( $t(103) = 1.865$ ,  $p > .05$ ). There was a significant difference on the FAS between schools,  $F(2, 104) =$

29.10,  $p < .001$ . Post-hoc tests revealed that participants from state school 1 ( $M = 5.12$ ,  $SD = 1.68$ ) scored significantly lower than participants from state school 2 ( $M = 7.08$ ,  $SD = 1.51$ ) and than those in the private school ( $M = 7.25$ ,  $SD = 1.05$ ),  $p < .001$ . There was no difference between state school 2 and the private school,  $p > .05$ . Participant information are presented in Table 1.

**Table 1:** *Participant Demographics*

		<b>8-9 year-olds</b>	<b>11-12 year-olds</b>	<b>Total</b>
<b>Gender</b>	Male	18 (47.4%)	34 (50.7%)	52 (49.5%)
	Female	20 (52.6%)	33 (49.3%)	53 (50.5%)
	Total	38 (36.1%)	67 (63.8 %)	105 (100%)
<b>Experience</b>	None	26 (68.4%)	56 (83.6%)	82 (78.1%)
	Indirect	5 (13.2%)	8 (11.9%)	13 (12.4%)
	Direct	2 (5.3%)	2 (3%)	4 (3.8%)
	Both	5 (13.2%)	1 (1.5%)	6 (5.7%)
<b>Age (8.33-12.45)</b>	(M, SD)	8.86 (.32)	11.84 (.32)	10.76 (1.47)
<b>SMFQ (0-17)</b>	(M, SD)	3.71 (3.93)	2.46 (2.88)	2.91 (3.33)
<b>FAS (2-10)</b>	(M, SD)	6.18 (1.67)	6.52 (1.72)	6.40 (1.71)

*Note.* SMFQ: Short Moods & Feelings Questionnaire, FAS: Family Affluence Scale

### 3.4.3 Recruitment.

The recruitment process was as follows: following a telephone conversation with eligible schools, a meeting with the head teacher/senior staff of schools that showed interest in the study took place to arrange for dates of data collection and discuss the procedure. In total, 13 schools were contacted, of which three responded positively in the invitation (23%). Schools that were contacted were chosen based on the type of school (state or private) and socioeconomic status of their catchment area, the latter indicated by the Scottish Index of Multiple Deprivation (Scottish Executive, 2006b),

with the aim to improve generalisability of the sample. The teacher of each class explained the consent form, aims and procedure of the study and distributed the information sheets and consent forms to pupils. Parental information letters and consent forms were sent home and emailed to parents of eligible pupils. Both parental and child consent forms were required for participation. The procedure of the study was again briefly explained to each participant at the beginning of the interview. The average response rate was 66.3% within the participating schools. Response rates by school were 47.4% in state school 1, 24.5% in state school 2 and 94.6% in the private school.

#### **3.4.4 Material.**

The study adopted a semi-structured individual interview approach using vignettes. The interview schedule, vignettes and a card-sorting task were developed for this study to elicit children's concepts of depression.

##### ***3.4.4.1 Interview schedule.***

The interview schedule was developed using the dimensions of the self-regulation model of illness representations (recognition, causes, consequences, cure/control and timeline to recovery) as an organisational framework (Leventhal et al., 1980), while incorporating additional areas of focus deriving from the mental health literacy literature (see also Chapter 4). Where relevant, previous research was used to phrase the questions, in order for results to be directly comparable with findings from previous studies. As the field of children's understanding of mental illness is in its infancy, no standardised questionnaires are available. As a result, a major barrier in

this emerging field of study is, to date, the diversity of methods and measurement tools used to assess children's knowledge (Georgakakou-Koutsonikou & Williams, 2017). In the last few years, a tendency to use the "Friends in need questionnaire", developed by Burns and Rapee (2006) is evident, allowing for results from different populations and age ranges to be comparable (e.g. Byrne et al., 2015; Melas et al., 2013). To that end, the current study used questions of the questionnaire that reflected the dimensions of the CSM model, where relevant. All questions were adjusted to be developmentally appropriate for the participants' age to facilitate participants to express their views. The questionnaire uses open-ended questions, with multiple-choice options provided when the participant was not able to provide an answer. Participants were encouraged to provide multiple answers (e.g. "*can you think of anything else?*") to reach saturation of their responses.

Children were asked "*do you think there is something the matter with [character's name]*" (problem recognition) and asked to identify what it is (depression recognition). Children were then asked whether they thought the character had a mental health problem ("*do you think [character's name] could have a mental health problem?*") (mental health problem agreement) and in turn given the prompt "*some people would suggest that [character's name] might have depression*" and asked whether they agreed (depression label agreement). This procedure allowed examination of whether participants consider the problem to be related to mental health and their agreement with depression label. The questions that followed reflect the remaining four dimensions of the common sense model: causes ("*What might be the reason for [character's name]'s problems?*"); consequences ("*What might happen*

*if [character's name] doesn't get help*"); curability (*"do you think [character's name] can recover"*); and timeline (*"how long do you think it might take for [character's name] to recover?"*). Participants were asked to identify the main symptom (*"what was the hint that there is something the matter with [character's name]"*) of depression. At the end, participants were asked if they knew somebody or had a personal experience with depression (*"do you know someone who has had depression?"* and *"have you ever had depression?"*).

For the question on causes, if the participant could not provide an answer, s/he was offered choices. The prompts were based on previous research examining causal factors for depression in young people (Swords, Hennessy, & Heary, 2011b). The prompts included: problems in the family, problems at school, problems with friends, something that has to do with the way the brain works, something that has to do with the way she was brought up, something that was passed on from her parents. For causes, 13 (12.4%) children used the prompts for one vignette and 3 (2.8%) children used the prompts for two of the vignettes. 8 children were from the younger age group (21.1% of the younger group) and 8 children were from the older age group (11.9% of the older group). Their responses were included in the content analysis of separate aetiological categories, however not included for the measurement of the number of total causes suggested by the participant. Additional questions related to help-seeking, perceived need for and sources of help were included and are presented in Chapter 4. The complete interview schedule is included in Appendix C.

#### **3.4.4.2 Vignettes.**

Vignettes were designed to capture key elements of depression as it is experienced by children of different ages. Four vignettes were developed for this study, three of which portray a hypothetical child of different ages (8, 11 and 14 years) with clinical levels of depressive symptoms. The vignettes were developed according to DSM-IV (American Psychiatric Association, 2000) and ICD-10 (World Health Organisation, 1992) criteria for major depressive episode. All vignettes present an equal number of depressive symptoms. The fourth vignette was a control vignette portraying a child of the same age as the participant (either 8 or 11 years) without depressive symptoms. The control vignette allowed to explore whether children are able to separate between clinical levels of depression and common emotional variations experienced by children in this age group. The vignettes are of equal length and reflect the reading capacity of the younger age group (7-8 years). The gender of the vignette characters was counterbalanced between same age depression and control vignette (one male and one female) and between the remaining two depression vignettes, as gender of the characters has been found to elicit different responses (Swords, Heary & Hennessy, 2011). Thus, each participant was presented with two male and two female vignettes, and the same age vignettes were always one male and one female character.

Vignettes are often used in mental health literacy studies. They allow participants to distance themselves from the topic examined, which facilitates eliciting participants' perceptions of sensitive topics (Schoenberg & Ravdal, 2000). Especially for children, the story-telling format is familiar (Hughes & Huby, 2002). However, due to their hypothetical nature, vignettes fail to capture the complexity of real-world situations,

presenting a fragmented view of the context. Therefore, results from vignette methodologies are not directly translated to real-world scenarios (Hughes & Huby, 2002, 2004).

To improve internal validity of the vignettes, the following steps were taken, as suggested in the literature (Gould, 1996; Hughes & Huby, 2004): vignettes were first constructed based on diagnostic manuals (American Psychiatric Association, 2000; World Health Organization, 1992). Previous research using vignettes depicting a depressed character was also consulted for the development of the material (Burns & Rapee, 2006; Dixon et al., 2013; Hernan et al., 2010; Jorm et al., 2006; Loureiro et al., 2013; O'Driscoll et al., 2012). In turn, a group of mental health professionals from a local Child and Adolescent Mental Health team ( $N = 8$ ) reviewed the vignettes to ensure that each vignette described developmentally relevant symptoms. The vignettes, as well as the interview schedule, were discussed with reference groups and individual children and young people (aged seven to seventeen years) prior to the study data collection, to test clarity of the material.

#### ***3.4.4.3 Card-sorting task.***

A modified card-sorting task was developed, asking children to categorise photos of children and adolescents in two categories, one category with the cards that the child/young person in the picture might portray a possible symptom of depression and one category for cards where the child/young person did not appear to have a possible symptom. A third pile was optional, including cards that participants could not tell from the picture. The task was developed to measure children's explanations of their

decision to sort each card in each pile and to provide depth in the exploration of most recognisable symptoms.

The task involves 32 photos, 16 illustrating a child/young person with a possible symptom of depression (e.g. low mood, social withdrawal). The other 16 images are control photos, showing children and young people with no obvious symptoms of depression (e.g. participation in activities, interaction with peers). The gender and age of characters (child or adolescent) have been balanced. The task was developed to measure children's explanations of their decision to sort each card in each pile and thus provide another way of measuring identification of common symptoms. After completing the task, the child was asked "*what was the main hint to put these pictures in this group*" for each group, followed by a question about the difficulties of sorting the pictures in the third pile, where relevant.

#### **3.4.5 Data collection procedure.**

Each child was individually interviewed within the school setting during school hours. The interview lasted for approximately 25 minutes, however time varied depending on the child's elaboration on their responses (20 to 44 minutes). At the beginning of the interview, the consent form was explained again to ensure participants understood the nature of the study and their agreement to participate. Participants were asked demographic information, including date of birth and school class. The Family Affluence Scale (FAS) (Currie et al., 2008) and the Short Moods and Feelings Questionnaire-child report (SMFQ) (Angold et al., 1995) were then administered verbally. The vignettes were read to the participant in a random order,

followed by the questions in a set sequence after each vignette. A list of all possible vignette sequences was generated by a web-based tool, which was used to provide a randomised order for each participant. At the end of the interview, the participant was asked to complete the card-sorting task.

#### **3.4.6 Analysis plan.**

The categories were theory-driven and thus predefined, according to the CSM (recognition, causes, consequences, cure/control, and timeline). The interview schedule reflected the research questions, including: the recognition of depression and symptoms, perceived causes, consequences, timeline to recovery and curability. As such, for each of these categories (hereafter referred to as dimensions to avoid confusion with coding categories), coding categories was inductively developed from the data. As participants were presented with four vignettes, the coding was repeated four times for each participant.

Content analysis was performed to analyse the interview data (Krippendorff, 2004; Neuendorf, 2002). First, interviews were audio-recorded and transcribed. The participant's response to the respective question, as well as any prompt or follow-up questions and responses, were considered the unit of analysis (or sampling unit) for each research dimension. The recording unit varied from a word to a phrase that described a unified idea. Children were prompted to give as many answers as possible to reach saturation, where relevant (e.g. causes). Although a single utterance was not coded into more than one category, multiple answers from each participant were coded for each dimension. That is, one participant could provide multiple answers for

depression causes, and was prompted to do so to reach saturation. This process allowed us to explore children's concepts in detail, in accordance with the main aim of the study. Next, the coding scheme was inductively developed and included the categories, operational definitions for each category and examples of units coded within the category (stage of categorisation). Categories were either hierarchical (including main categories and subcategories) or single-level, depending on the research questions to be answered. Inter-rater unitisation reliability check was performed between two raters. Changes were made accordingly, and recoding of relevant categories was conducted. Inter-rater reliability on the coding was conducted on 10% of the data, performed by a second blind-rater (Hodson, 1999; Neuendorf, 2002). Cohen's kappa coefficient was 0.84 for causes and 0.94 for consequences. Disagreements were resolved through discussion.

Finally, the coding was conducted, with the aid of the Dedoose software for mixed methods research (2016). Quantitative variables were created to reflect children's responses and to allow for statistical analysis to be conducted. The IBM SPSS Statistics software, version 22, was used for the quantitative analysis. The coding scheme is presented in the next section.

### **3.4.7 Coding scheme.**

The categories for the coding scheme were developed according to the interview schedule, responding to each dimension. Below, the coding for each category is explained, providing quotes for each category.

### ***3.4.7.1 Identity.***

Identity includes recognition of depression and main symptoms. Apart from depression recognition, three additional categories are used: problem recognition, mental health problem agreement and depression label agreement, corresponding to the interview questionnaire. In this study, a binary category for depression recognition was used, similar to previous research. In previous research using binary categorisations, accepted words for recognition include “depression”, “depressed”, “suicide” and “suicidal” (e.g. Byrne et al., 2015; Essau et al., 2013; Marshall & Dunstan, 2013), following the method originally used by Burns and Rapee (2006). Other studies have only used the words “depression” or “depressed” (Hernan et al., 2010; Melas et al., 2013), and one study has used forced choice answers, accepting “mental health problem” as correct identification of depression (Olsson & Kennedy, 2010). In this study, correct recognition includes responses that reflect a mood disorder. Acceptable responses include “depression”, “depressed”, “sadness”, “feeling low”, “mood swings”. Examples are presented in Table 2. For the remaining recognition categories (problem recognition, mental health problem recognition and depression label agreement) considering numerous responses that showed uncertainty (e.g. “a little bit”, “in the middle”) a three-level coding was used including no recognition/disagreement, partial recognition/agreement and full recognition/agreement.

**Table 2: Coding of Depression Recognition**

Examples of response	
<b>No recognition</b>	<p>“Interviewer: <i>Do you think there is something the matter with Jamie?</i>  Child: <i>No, I don't think so</i>  Int.: <i>No. Okay. Do you think he could have a mental health problem?</i>  Ch.: <i>Um, no.</i>  Int.: <i>No, okay. Some people would suggest that he might have depression. Would you agree or disagree for Jamie?</i>  Ch.: <i>I would disagree.</i>” (Boy, 8-9 years, AV)</p>
<b>Depression Recognition</b>	<p>“<i>That she doesn't get enough sleep and that she doesn't, she thinks her friends, I think she's depressed?</i>” (Boy, 8-9 years, CV)</p> <p>“<i>Um, he may be a bit depressed?</i>” (Girl, 11-12 years, PV)</p> <p>“<i>She might have depression I think...because it's hard to like, concentrate and things and maybe that's why her schoolwork is poorer.</i>” (Girl, 11-12 years, AV)</p> <p>“<i>I think he's, he definitely suffers from depression.</i>” (Boy, 11-12 years, AV)</p> <p>“<i>Mood problems.</i>” (Boy, 8-9 years, AV)</p>

*Note.* CV: Child Vignette, PV: Preadolescent Vignette, AV: Adolescent Vignette

### 3.4.7.2 Causes.

The following six aetiological categories derived from the data: physiological factors, individual factors, family factors, peer factors, school factors and loss. Each category is described below, and quotes are presented in table 3.

*Peer relationships* include bullying, disputes with friends, loneliness due to falling out with friends and peers, and devaluing behaviours of peers.

*Family factors* are defined as aetiological explanations related to the family, including parents, siblings and other family members. Most common references to parental factors include parental divorce and parental disputes. Less common factors include: non-optimal parenting (unsupportive parents, physical neglect or physical abuse), arguments between parents and child, as well as being unloved by parents/family.

*Individual factors* included explanations that reflect the character's internal state, personality or temperament. The category includes worrying, preoccupation with negative thoughts and references to low self-esteem.

*Physiological factors* include explanations related to physical health and illness, biological development and genetic factors. The most common codes include fatigue, sleep difficulties, eating problems, and physical illness or injury. Puberty is also included in this category, which was more frequently reported for the adolescent character. Inheritance and explanations related to how the brain works were very rare.

*School factors* include exam stress, stress for school workload, school performance and achievement, transition to secondary/high school and negative relationships with teaching staff.

*Loss/bereavement* of a loved one was also reported. When specified, children frequently refer to a grandparent, and less often to a parent, sibling or loved pet.

A final category consisted of *tautological explanations*: children used symptoms from the vignette as causes for depression (e.g. he has sleeping problems). It should be noted that, as similar but not identical symptoms are used for each vignette, the same response might be considered as tautological in one vignette and not in another. For each category, responses are recorded as binary (present or absent) and coding is conducted for each vignette.

**Table 3: Coding of Causal Categories**

Type of Cause	Examples of Causes (Gender, Age group, Vignette)
Family factors	<p>“His mum and dad argued” (Girl, 8-9 years, AV)</p> <p>“Maybe his parents aren’t treating him right, or aren’t supporting him” (Girl, 11-12 years, CV)</p>
Peer factors	<p>“Maybe his friends are being a bit mean to him.” (Girl, 8-9 years, PV)</p> <p>“Maybe she’s feeling quite lonely ‘cause she got no friends” (Boy, 11-12 years, CV)</p>
School factors	<p>“She didn’t feel happy, because she’s not doing that well in school” (Boy, 11-12 years, AV)</p> <p>“Probably worrying about next year because in year 7 usually it’s the end, then you’re going to senior school” (Boy, 8-9 years, PV)</p>
Individual factors	<p>“She doesn’t trust in herself, she doesn't think she can do things. She doesn't think that, like, people love her and acknowledge her.” (Boy, 11-12 years, AV)</p> <p>“Um, maybe, she just has low self-esteem” (Boy, 11-12 years, CV)</p> <p>“Um, he thinks he’s not like that good at stuff, he doesn’t really like himself for that” (Boy, 8-9 years, PV)</p>
Physical factors	<p>“He’s not got a lot of sleep” (Boy, 8-9 years, PV)</p> <p>“I think he might have an illness or something, or an ache” (Girl, 11-12 years, CV)</p>
Loss	<p>“I think maybe someone’s died in her family, and she’s getting all sad about it” (Girl, 8-9 years, CV)</p> <p>“Probably something bad, like losing a family member” (Boy, 11-12 years, AV)</p>

Note. CV= Child Vignette, PV= Preadolescent Vignette, AV= Adolescent Vignette

### 3.4.7.3 Consequences of untreated depression

Consequences were coded as an ordinal variable: positive outcome (1), maintenance of depression (2) and deterioration of depression (3). Examples are presented in Table 4. Due to the predominant frequency of negative outcomes, further analysis was performed to identify subcategories of the negative consequences of untreated depression.

Negative consequences were coded into seven variables. Emotional consequences include deterioration of sadness, increased worry, anger and loneliness. Social impact involves disputes with friends, being bullied, losing friends and purposefully withdrawing from the peer group. School consequences refer to decline of school performance, school refusal or absenteeism. Behavioural consequences involve disengaging from activities and sports, as well as changes in appetite and sleep. Long-term consequences (adult life) include negative career prospects, being a bad parent or person, having financial difficulties and not achieving in life. Self-harm includes self-harming behaviour/thoughts and suicidal ideation/attempts. Finally, cognitive consequences include negative thinking and self-beliefs. Quotes for each category are presented in Table 5.

**Table 4:** *Coding of Consequences Scale of Untreated Depression*

<b>Category of consequence</b>	<b>Code</b>	<b>Quote (Gender, Age group, Vignette)</b>
Positive outcome	1	<i>"I think that he'll slowly get better."</i> (Girl, 11-12 years, PV)
Maintenance of Depression	2	<i>"She will stay the same."</i> (Girl, 11-12 years, AV) <i>"She might keep on worrying."</i> (Girl, 8-9 years, CV)
Deterioration of Depression	3	<i>"He said in his last statement that he might as well be dead, so some sort of suicidal attempt when he gets older."</i> (Boy, 11-12 years, AV) <i>"Again, it will just build inside and the he like, maybe losing more sleep and get more worried, and then he might move school or choose to stop something."</i> (Boy, 11-12 years, CV)

*Note.* CV= Child Vignette, PV= Preadolescent Vignette, AV= Adolescent Vignette

**Table 5: Quotes of Types of Negative Consequences of Untreated Depression**

Type of Consequence	Quote (Gender, Age group, Vignette)
School	<p>“She might, um, get really depressed, and maybe not even go to school” (Girl, 8-9 years, AV)</p> <p>“I think his schoolwork would probably get lower and lower” (Girl, 11-12 years, CV)</p>
Adult life	<p>“Might end up having a very poor job or be homeless” (Boy, 8-9 years, PV)</p> <p>“He might not get into any university or college” (Boy, 11-12 years, AV)</p>
Self-harm	<p>“He might decide that he wants to kill himself one day” (Girl, 8-9 years, AV)</p> <p>“She could attempt suicide” (Boy, 11-12 years, PV)</p>
Emotional	<p>“He might get too angry ... And he’ll just feel sad and worried” (Boy, 8-9 years, PV)</p> <p>“She’s not like, showing her feelings and she’ll just keep it into herself, like, keep hurting her and stuff” (Girl, 11-12 years, AV)</p>
Behavioural	<p>“She might start like pushing people around” (Boy, 8-9 years, CV)</p> <p>“It might get even more and he could start hitting people if he gets too angry” (Girl, 11-12 years, AV)</p>
Cognitive	<p>“She’ll probably just keep thinking that she doesn’t matter” (Girl, 8-9 years, AV)</p> <p>“Thinking that she’s not as good as other people and then just get worse and worse” (Boy, 11-12 years, PV)</p>
Social	<p>“She’ll probably not have friends anymore” (Girl, 8-9 years, PV)</p> <p>“She might not be able to get friends in high school” (Boy, 11-12 years, CV)</p>

Note. CV= Child Vignette, PV= Preadolescent Vignette, AV= Adolescent Vignette

#### 3.4.7.4 Curability.

Responses to the question “do you think [character’s name] can recover” were coded in the curability dimension. Responses were coded as zero (not able to recover), 1 (possibility of recovery) and 2 (definite recovery). Examples are presented in Table 6.

**Table 6: Coding of Perceived Curability of Depression**

Category	Code	Quote (Gender, Age group, Vignette)
Not curable	0	"I don't think so." (Girl, 11-12 years, CV)
Possibly curable	1	"Possibly. Cause it's really serious." (Boy, 11-12 years, AV)
Curable	2	"Definitely." (Boy, 8-9 years, PV)

*Note.* CV= Child Vignette, PV= Preadolescent Vignette, AV= Adolescent Vignette

#### **3.4.7.5 Timeline to recovery.**

For timeline, the initial plan for coding was to record the exact period the child reported, in days or months, allowing for an interval variable that could then be parametrically tested. However, due to the wide range (from half an hour to one and a half years) and vagueness of responses (e.g. "three or four weeks"), categories were divided according to common responses. As such, the child's response could take a number from 1 to 7, with higher numbers representing a longer period, according to Table 7. Previous research has used scales with typically four predefined options ranging from "one or two days" to "longer than a few months" (Burns & Rapee, 2006). In this study, similar time periods derived from the data, however more categories were used to reflect the specificity of responses.

**Table 7: Coding of Timeline to Recovery**

<b>Coding Category</b>	<b>Code</b>	<b>Quote (Gender, Age group, Vignette)</b>
Up to one day	1	“ <i>Maybe about half an hour, an hour.</i> ” (Girl, 8-9 years, CV)
1 day to < 2 weeks	2	“ <i>Five days or so</i> ” (Boy, 8-9 years, AV)
2 weeks to < a month	3	“ <i>Like, maybe like, two or three weeks.</i> ” (Boy, 8-9 years, PV)
1-2 months	4	“ <i>Probably a couple of months, depends how many times she visits the psychologist.</i> ” (Boy, 11-12 years, AV)
> 2 months to less than year	5	“ <i>Maybe three or four months</i> ” (Boy, 8-9 years, CV)
One year	6	“ <i>Um, about a year</i> ” (Girl, 11-12 years, PV)
More than a year	7	“ <i>A year and a half</i> ” (Boy, 11-12 years, AV)

*Note.* CV= Child Vignette, PV= Preadolescent Vignette, AV= Adolescent Vignette

### **3.4.8 Quantitative Analysis.**

Quantitative variables were created to reflect children’s responses and to allow for the differences between groups to be studied. Descriptive and frequency analyses were conducted first to provide an overview of children’s depression concepts. To provide frequencies for questions 1 and 2, responses from the three depression vignettes were combined, thus resulting in a maximum total number of 315 responses, following a previously used methodology in a study using multiple vignettes (Burns & Rapee, 2006).

To answer question 1, the first depression vignette presented before the introduction of the prompt was analysed first (“unprompted recognition”), as the prompt could affect recognition in subsequent vignettes. Recognition percentages and percentages in the “depression label agreement” category should be treated with caution, as the introduction of the prompt during the first vignette could affect recognition in

subsequent vignettes. In turn, to examine whether children label depression more frequently than a control condition, a McNemar test was performed between unprompted recognition and control vignette recognition.

To answer question 2, frequency analysis of coding categories on combined vignettes was conducted for each dimension (causes, consequences, curability, timeline). To measure whether there were differences in the complexity of children's responses, a mean number of perceived causes was calculated for each participant. Independent sample t-test was used for age, gender and experience on the mean score. As few participants reported an experience of depression (approximately 22%), a binary category was created (no experience, any experience/contact) and used to examine differences between the two groups.

To answer question 3, total scores for each participant in each category were created, to allow an examination of age group, gender and experience differences. For depression recognition, a total score for each participant was calculated, creating a scale from 0 to 3, with higher scores indicating depression was more frequently recognised by the participant. Total scores for the other three recognition variables (problem, mental health problem and depression label agreement) were calculated, creating categories ranging between 0 and 6. Mann Whitney U were used to explore age, gender and experience differences.

For each causal category (family, peers, school, individual, physiological, loss and tautology), a total score was calculated, thus a scale from 0 to 3 was created, with

higher scores indicating that the cause was more frequently endorsed by the participant. The same process was followed for each separate category of negative consequences (school, adult life, self-harm, emotional, behavioural, cognitive and social). Independent sample t-tests were conducted for each category between age groups, gender and experience. For the consequences scale (positive outcome to deterioration of symptoms), the timeline scale (from less than a day to more than 1.5 years) and curability (not curable to curable) Mann-Whitney test (U) was performed as categories are ordinal. Effect sizes are calculated using Pearson's correlation coefficient ( $r$ ) or Odds Ratio ( $OR$ ) (Field, 2009).

### **3.5 Results**

The results are organised according to the five dimensions of the CSM: identity, causes, consequences, curability and timeline to recovery. In each dimension, descriptive results are presented first, followed by age, gender and experience differences.

#### **3.5.1 Preliminary analysis.**

Order of presentation of vignettes was randomised to avoid order bias (Perreault, 1975). One-sample chi-square tests were conducted to confirm that the vignettes were randomly presented. Although order of presentation of vignettes was randomised, the child vignette was presented first (58%), the preadolescent vignette second (61%) and the adolescent vignette was presented third more often than would be expected (62%), ( $p_{CV} < .05$ ,  $p_{PV} < .05$ ,  $p_{AV} < .05$ ). Chi-square tests were used to examine whether order of presentation of each vignette was associated with recognition of depression in the

respective vignette. There was no significant association for the child vignette ( $\chi^2(2) = 3.40, p > .05$ ), preadolescent vignette, ( $\chi^2(2) = 3.31, p > .05$ ) or adolescent vignette, ( $\chi^2(2) = 1.43, p > .05$ ).

### **3.5.2 Depression identity.**

#### ***3.5.2.1 Problem identification and depression recognition.***

The vast majority of participants (94%) were able to recognise that the characters had a problem (problem recognition); however, 17% ( $N = 18$ ) of the participants recognised depression (unprompted recognition). When asked if the problem could be mental health-related, 20.6 % considered that the problem was mental health-related, 32% responded “maybe” and 47.3% responded negatively. Depression recognition was 22.2% in combined vignettes ( $N = 315$ ). Percentages for each category are presented in figure 1. Interestingly, some children did identify a mental health-related problem, however could not specify it. When they did, some children confused depression with anger problems, anxiety problems, phobia, and autism (“*She could have... she could have the same as John, like a little bit of, um, autism.*” [girl, 11-12 years, CV], “*Well, I think he could have an anger problem, or ADHD.*” [girl, 11-12 years, AV], “*I think she might have anxiety, or she might be depressed.*” [girl, 11-12 years, AV], “*Like maybe she has a fear of arachnids or something.*” [boy, 8-9 years, CV]).

A comparison between unprompted recognition and control vignette recognition was carried out, using the McNemar test, to examine whether children can differentiate between clinical depression and common emotional difficulties. Children’s

recognition was significantly higher in the depression condition than for the control condition (4.7% of participants),  $p < .05$ ,  $OR = 3.6$ . There was a statistically significant difference in depression recognition depending on vignette as measured using the Cochran's Q test,  $\chi^2(2) = 21.96$ ,  $p < 0.01$ . Post-hoc tests using the McNemar test showed that there were no significant differences between the child vignette and preadolescent vignette ( $p > .05$ ). However, recognition of depression was significantly higher for the adolescent than the child condition ( $p < .001$ ) and than the preadolescent condition ( $p < 0.01$ ). It is worth noting that the adolescent condition is the only one introducing suicidal ideation.

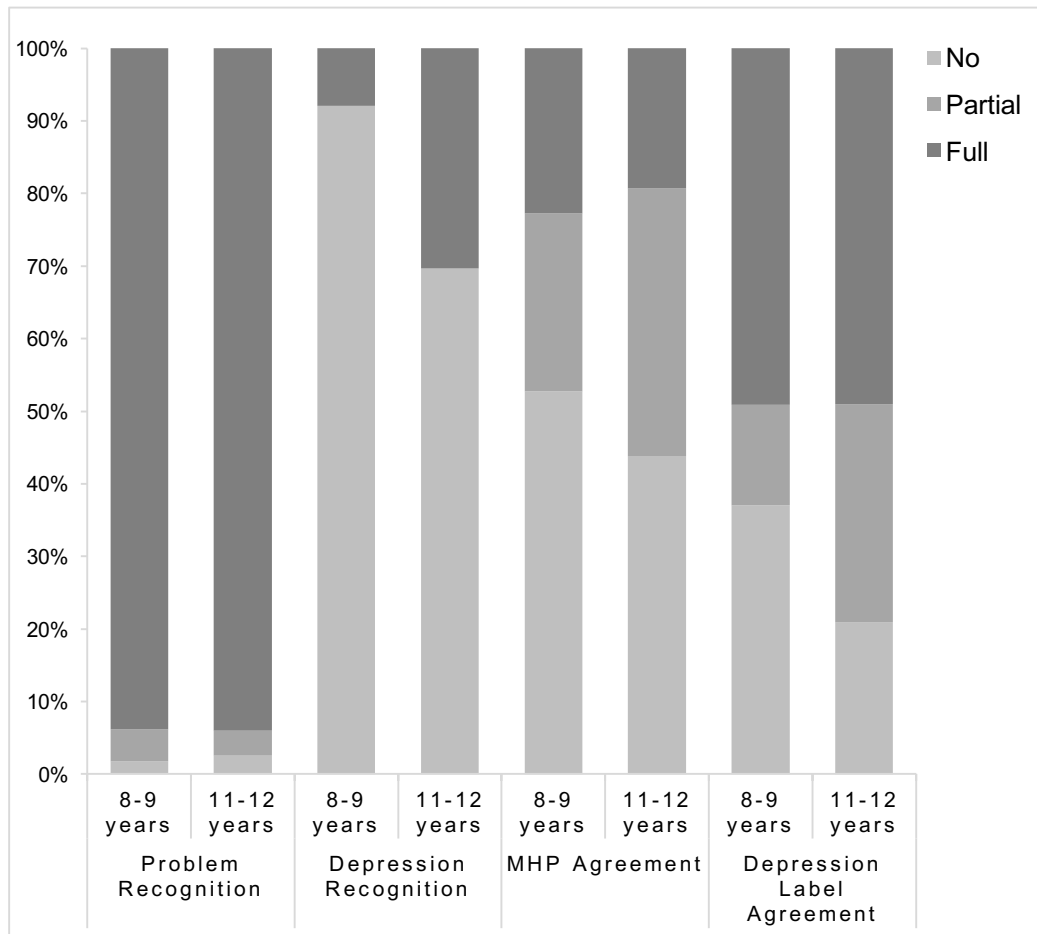
### **3.5.2.2 Main symptom recognition.**

As symptoms portrayed in each vignette are not identical, results on main symptom recognition are presented by vignette. For the child vignette (8 years), the most common symptoms children recognised were sleep problems (21% of participants), decline of school performance (20.6% of participants) and sadness (14.4% of participants). For the preadolescent vignette (11 years), children identified low mood (31.7% of participants), falling out with friends (17.3% of participants) and losing interest in hobbies (13.5% of participants). For the adolescent vignette (14 years), main symptoms were suicidal thoughts (40.6% of participants), feelings of worthlessness (15.8% of participants) and sadness (13.9% of participants).

11-12 year-olds were significantly more likely to recognise depression in unprompted depression recognition than 8-9 year-olds,  $\chi^2(1) = 5.92$ ,  $p < .05$ ,  $OR = 5.65$ . In combined vignette scores, 11-12 year-olds were significantly better at recognising

depression ( $M = .91, SD = .77$ ) than 8-9 year-olds ( $M = .24, SD = .49$ ),  $t(103) = 4.84$ ,  $p < .001, r = .43$ , which represents a medium effect. No age differences were found in problem recognition, mental health problem recognition or agreement with depression label (Table 12). No gender or experience differences were found (Table 13).

**Figure 1: Recognition Percentages by Age Group**



Note. MHP=Mental Health Problem. Depression Recognition was a binary category thus partial recognition does not apply

### 3.5.3 Children's perceived causes of depression.

Children were prompted to report all possible causes they could consider. The mean number of causes suggested for individual vignettes was 1.56 ( $SD = .59$ ). The mean

number of perceived causes did not differ significantly between conditions,  $F(2, 172) = 1.75, p > .05, \eta_p^2 = .02$ . Table 8 presents the frequencies of each reported cause by age group. Peer factors were the most frequently reported category (45.2%), followed by family (37.2%) and individual factors (32.4%). Physiological factors (16.3%) and school-related factors (16.7%) were equally common, while loss was the least common category, reported by approximately 10% of participants.

11-12 year-olds provided a greater mean number of causes for depression ( $M = 1.67, SD = .60$ ) than 8-9 year-olds ( $M = 1.32, SD = .49$ ),  $t(85) = 2.72, p < .01, r = .28$ , which represents a medium effect. 11-12 year-olds ( $M = 1.34, SD = .87$ ) reported family factors more often than 8-9 year-olds ( $M = .70, SD = .88$ ),  $t(100) = 3.54, p = .001, r = .33$ , which is a medium effect size. Conversely, 8-9 year-olds ( $M = .95, SD = .78$ ) used tautological explanations more than 11-12 year-olds ( $M = .52, SD = .73$ ),  $t(100) = 2.74, p < .01, r = .26$ , which is a small to medium effect. Boys ( $M = 1.18, SD = .94$ ) scored significantly higher than girls in the individual causal category ( $M = .79, SD = .70$ ),  $t(90.117) = 2.38, p < .05, r = .23$ , which is a small effect. Participants who reported an experience with depression had significantly lower scores in family causes ( $M = .71, SD = .85$ ) than those without an experience ( $M = 1.21, SD = .92$ ),  $t(100) = 2.24, p < .05, r = .22$ , reflecting a small effect. No other age, gender or experience differences were found (see Tables 12 and 13).

**Table 8: Frequencies of Causal Categories by Age Group**

	<b>8-9 year-olds</b> (N = 113)		<b>11-12 year-olds</b> (N = 199)		<b>Total</b> (N = 312)	
Family	26	23.0%	90	45.2%	116	37.2%
Peers	50	44.2%	91	45.7%	141	45.2%
School	20	17.7%	32	16.1%	52	16.7%
Individual	31	27.4%	70	35.2%	101	32.4%
Physiological	18	15.9%	33	16.6%	51	16.3%
Loss	7	6.2%	24	12.1%	31	9.9%

### 3.5.4 Children's perceived consequences of depression.

If the participant recognised that the character needed help (see Chapter 4), s/he was asked to hypothesise the consequences of untreated depression for each character. Responses were combined, following Burns & Rapee's (2006) methodology, resulting in a total sample of 299 responses. The vast majority of participants refer to negative outcomes (68.9%) or to perpetuation of depression symptoms (17.7%), while small percentages refer to improvement of symptoms and recovery without treatment (1.7%) (see Table 9).

**Table 9: Frequencies of Consequences Scale by Age Group**

	<b>8-9 year-olds</b> (N = 105)		<b>11-12 year-olds</b> (N = 194)		<b>Total</b> (N = 299)	
No answer	19	18.1%	18	9.3%	37	12.4%
Improvement	4	3.8%	1	.5%	5	1.7%
Symptom Persistence	26	24.8%	25	12.9%	51	17.1%
Deterioration of Symptoms	56	53.3%	150	77.3%	206	68.9%

Negative consequences (deterioration of symptoms and symptom persistence) were further analysed ( $N = 257$  responses). Children provided a wide range of possible

negative consequences of untreated depression, involving various areas of the character's functioning. Emotional consequences were the most common (36.2% of responses), followed by social (17.1% of responses), school (16.7%), behavioural (13.6%), self-harm (12.5%), adult life (11.3%) and cognitive (7%). Percentages by age group are presented in Table 10.

**Table 10:** *Frequencies of Negative Consequences by Age Group*

	<b>8-9 year-olds</b> (N = 82)		<b>11-12 year-olds</b> (N = 175)		<b>Total</b> (N = 257)	
Emotional	37	45.1%	56	32.0%	93	36.2%
Behavioural	9	11.0%	26	14.9%	35	13.6%
School	16	19.5%	27	15.4%	43	16.7%
Social	11	13.4%	33	18.9%	44	17.1%
Self-Harm	2	2.4%	30	17.1%	32	12.5%
Adult life	12	14.6%	17	9.7%	29	11.3%
Cognitive	8	9.8%	10	5.7%	18	7.0%

To measure group differences for depression consequences, a total score for each participant was measured, by adding his/her responses in the three depression vignettes. Thus, a scale from 1 to 9 was created, with higher scores indicating more negative consequences reported by the participant. 11-12 year-olds scored significantly higher in the consequences scale ( $Md = 9$ ,  $M = 8.56$ ,  $SD = .84$ ) than 8-9 year-olds ( $Md = 8$ ,  $M = 7.88$ ,  $SD = 1.45$ ),  $U=274$ ,  $z= -2.05$ ,  $p < .05$ ,  $r = .26$ , which represents a small to medium effect and indicates that older children consider more negative consequences of untreated depression than younger ones.

The only significant age difference found was for self-harming behaviours. 11-12 year-olds ( $M = .58, SD = .78$ ) considered self-harming behaviour as a consequence more often than 8-9 year-olds ( $M = .06, SD = .24$ ),  $t(58.764) = 3.97, p < .001, r = .33$ , which is a medium effect. Gender differences were found for self-harming behaviour and emotional consequences. Boys ( $M = .67, SD = .88$ ) reported self-harming behaviours more often than girls ( $M = .26, SD = .51$ ),  $t(39.068) = 2.17, p < .05, r = .29$ . Conversely, girls ( $M = 1.23, SD = .94$ ) reported emotional consequences more often than boys ( $M = .74, SD = .76$ ),  $t(60) = 2.19, p < .05, r = .27$ . Both effects are at the small to medium range. No experience differences were found. Group differences are presented in Tables 12 and 13.

### 3.5.5 Children’s perceived curability of depression.

87% of children consider depression to be a curable condition. Approximately 10% of participants were unsure about whether the character would recover (e.g. “*yeah, possibly*”, “*Possibly. Cause it’s really serious.*”). Very few participants reported that they did not perceive depression to be curable. Percentages of each category in combined responses are presented below (Table 11). There were no age, gender or experience differences.

**Table 11:** *Frequencies of Perceived Curability by Age Group*

	8-9 year-olds (N = 110)		11-12 year-olds (N = 187)		Total (N = 297)	
Not Curable	3	2.7%	3	1.6%	6	2.0%
Possibly Curable	11	10.0%	21	11.2%	32	10.8%
Curable	96	87.3%	163	87.2%	259	87.2%

### **3.5.6 Children's perceived timeline to recovery.**

For all three vignettes, as well as when vignettes were combined, the median and mode was 4, referring to a period between one and two months. 3.1% of children view depression to be curable in up to a day, 12.3% of children in a few days, 17.5% of children in a couple of weeks, 34.2% of children in a couple of months, 20.9 % of children in a few months, 5.5% of children in a year, 4.5% of children in more than a year and 2% of participants did not provide an answer.

Similarly to the previous dimensions, total scores were calculated for each participant. 11-12 year-olds ( $Md = 12$ ,  $M = 11.54$ ,  $SD = 3.61$ ) reported significantly longer times needed to recover than 8-9 year-olds ( $Md = 10$ ,  $M = 9.29$ ,  $SD = 3.89$ ),  $U = 872$ ,  $z = -2.69$ ,  $p < .01$ , which is a small to medium effect ( $r = .26$ ). No gender differences were found. Participants with an experience scored significantly lower in perceived timeline to recovery ( $Md = 10$ ,  $M = 8.96$ ,  $SD = 4.44$ ) than participants with no experience ( $Md = 11$ ,  $M = 11.22$ ,  $SD = 3.54$ ),  $U = 685$ .  $z = 2.01$ ,  $r = .20$ . Age, gender and experience differences and effect sizes are presented in Tables 12 and 13.

### **3.5.7 Card-sorting task.**

The card-sorting task provided further insight into the concept of depression identity. Commonly, children based their explanation on the facial expressions, whether the person looked happy or sad:

*"Their faces, it was like all sad, and like their faces were like cheery and stuff like that."* (boy, 8-9 years)

*"They look like a bit upset and depressed."* (girl, 8-9 years, depression pile)

*“Um, the people here look really happy and they all look a bit like, upset.”* (boy, 8-9 years)

*“That they’re all looking pretty upset and very gloomy, like very down.”* (girl, 11-12 years, depression pile)

*“Their faces was my biggest thing, and most of these here you can tell from their faces. And they’re alone mostly, so it was quite easy to tell actually”* (girl, 8-9 years, depression pile)

*“how they look like. And like, how was their expression, like if they’re not smiling”* (boy, 11-12 years)

This shows that a lot of the children categorised cards in the context of the emotional state of depressed mood, rather than depression as a mental illness. Amongst the 11-12 year-olds however, there was greater uncertainty:

*“she looks quite depressed, but she could just be tired, but, I’m not really sure actually”* (boy, 11-12 years)

*“It’s weird because, they could just not be hungry but they also could have depression”* (boy, 11-12 years)

11-12 year-olds also considered more the extent of sadness, identifying that although picture characters looked sad, this could not necessarily reflect depression:

*“she’s just lying on her head or something, I don’t, she might be a bit sad, but I don’t think she’s having depression”* (boy, 11-12 years)

*“He might, he looks a wee bit sad, but it’s like say, he looks like he’s in a basketball top and like, if you lose like a game you might not be all happy. You might feel sad. So I’m not sure, I don’t think it would be depression”* (boy, 11-12 years)

*“I’m not sure ‘cause it isn’t, I’m not sure if he has depression, but I think he’s feeling a bit sad”* (boy, 11-12 years)

*“I just think he might be, maybe a bit upset, or maybe a bit bored or something so. But I don’t think it’s depression”* (boy, 11-12 years)

Further, consideration of the duration of symptoms were only evident among the older age group participants:

*“and the people that are sad, they looked temporarily sad”* (boy, 11-12 years)

Finally, an understanding that despite looking happy, someone can still be depressed was mentioned by older participants:

*“they might just be happy this time, but, I just have a feeling that they’ve got it”*  
(girl, 11-12 years)

This difference observed in the qualitative statements of children’s categorisation was reflected in statistical analysis. There was a significant difference between age groups in the frequency of sorting cards in the “*can’t tell*” pile. 11-12 year-olds were more likely to sort cards in this category than 8-9 year-olds, a difference that indicates a deeper understanding of the difficulty of identifying symptoms of depression from a still photograph,  $t(99.042) = 2.341, p < .05, r = .19$ , which is a small effect.

**Table 12: Developmental Trends in Children's Depression Concepts**

	8-9 years M (SD)	11-12 years M (SD)	<i>t</i> / <i>U</i> , <i>p</i>	<i>r</i>
<b>Recognition</b>				
Problem	5.76 (.54)	5.75 (.64)	$U = 1206, z = .31^a$ , ns	.03
MH problem	2.00 (1.70)	2.30 (1.46)	$U = 676, z = .96^a$ , ns	.09
Label Agreement	3.19 (1.91)	3.71 (1.81)	$U = 325.5, z = .99^a$ , ns	.13
Total Depression	.24 (.49)	.91 (.77)	$t(103) = 4.84^{***}$	.43
Unprompted Depression (n, %)	2 (5.3%)	16 (23.9%)	$\chi^2(1) = 5.92^{*b}$ , ns	5.7 <sup>c</sup>
<b>Causes</b>				
Number of Causes	1.32 (.49)	1.67 (.60)	$t(85) = 2.72^{**}$	.28
Family factors	.70 (.88)	1.34 (.87)	$t(100) = 3.54^{***}$	.33
Peer factors	1.35 (.92)	1.35 (.93)	$t(100) = .01$ , ns	.01
School factors	.51 (.90)	.49 (.75)	$t(100) = .13$ , ns	.01
Individual factors	.81 (.78)	1.08 (.87)	$t(100) = 1.54$ , ns	.15
Physical health	.49 (.61)	.51 (.66)	$t(100) = .160$ , ns	.02
Loss/ bereavement	.19 (.40)	.37 (.60)	$t(97.692) = 1.82$ , ns	.16
Tautology	.95 (.78)	.52 (.73)	$t(100) = 2.74^{**}$	.26
<b>Consequences</b>				
Total Scale	7.88 (1.45)	8.56 (.84)	$U = 274, z = 2.04^{*a}$	.26
School	.59 (.80)	.47 (.79)	$t(60) = .54$ , ns	.07
Adult	.35 (.61)	.27 (.54)	$t(60) = .54$ , ns	.07
Self-Harm	.06 (.24)	.58 (.78)	$t(58.764) = 3.97^{***}$	.33
Emotional	1.24 (.97)	.93 (.86)	$t(60) = 1.19$ , ns	.15
Behavioural	.29 (.59)	.44 (.59)	$t(60) = .90$ , ns	.12
Cognitive	.29 (.47)	.20 (.46)	$t(60) = .72$ , ns	.09
Social	.41 (.51)	.51 (.63)	$t(60) = .56$ , ns	.07
Curability	5.34 (1.02)	5.18 (1.29)	$U = 1216, z = -.434^a$ , ns	.04
Timeline to recovery	9.29 (3.89)	11.54 (3.61)	$U = 872, z = -2.686^{**a}$	.26

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , two-tailed. <sup>a</sup> Mann Whitney (*U*) test performed as categories are ordinal scales. <sup>b</sup> Chi-square performed as category is binary. <sup>c</sup> OR instead of *r*. MH: Mental Health



**Table 13: Gender and Experience Differences**

	Gender				Experience			
	Boys M (SD)	Girls M (SD)	<i>U / t, p</i>	<i>r</i>	No M (SD)	Yes M (SD)	<i>U / t, p</i>	<i>r</i>
Recognition								
Problem	5.79 (.57)	5.73 (.64)	$U = 1252, z = .76, ns$	.07	5.76 (.60)	5.74 (.62)	$U = 907.5, z = .15^a, ns$	.02
MH problem	2.00 (1.56)	2.31 (1.60)	$U = 694, z = .83, ns$	.08	2.13 (1.59)	2.28 (1.53)	$U = 525, z = .29^a, ns$	.03
Label agreement	3.37 (1.89)	3.45 (1.89)	$U = 377, z = .24, ns$	.03	3.15 (1.90)	4.13 (1.64)	$U = 209, z = 1.85^a, ns$	.25
Total Depression	.65 (.71)	.68 (.80)	$t(103) = .17, ns$	.02	.73 (.75)	.43 (.73)	$t(103) = 1.68, ns$	.16
Unprompted Depression (n, %)	10 (19.2%)	8 (15.1%)	$\chi^2(1) = .32, ns$	.75 <sup>t</sup>	16 (19.5%)	2 (8.7%)	$p = .35^c$	.39 <sup>b</sup>
Causes								
Number of Causes	1.59 (.65)	1.53 (.53)	$t(85) = .45, ns$	.05	4.37 (1.87)	4.13 (1.71)	$t(85) = .685, ns$	.07
Family factors	1.12 (.92)	1.10 (.93)	$t(100) = .13, ns$	.01	1.21 (.92)	.71 (.85)	$t(100) = 2.24^*$	.22
Peer factors	1.26 (.96)	1.44 (.87)	$t(100) = 1.0, ns$	.10	1.36 (.91)	1.33 (.97)	$t(100) = .11, ns$	.01
School factors	.50 (.86)	.50 (.75)	$t(100) = 0, ns$	0	.44 (.74)	.71 (1.01)	$t(100) = 1.37, ns$	.14
Individual factors	1.18 (.94)	.79 (.70)	$t(90.117) = 2.38^*$	.23	.99 (.84)	.95 (.86)	$t(100) = .17, ns$	.02
Physical health	.48 (.61)	.52 (.67)	$t(100) = .31, ns$	.03	.56 (.65)	.29 (.56)	$t(35.394) = 1.90, ns$	.17

Loss/ bereavement	.30 (.58)	.31 (.51)	$t(100) = .07, ns$	.01	.31 (.29)	.29 (.56)	$t(100) = .17, ns$	.02
Tautology	.64 (.78)	.71 (.78)	$t(100) = .47, ns$	.05	.68 (.83)	.67 (.48)	$t(100) = .07, ns$	.01
Consequences								
Total Scale	8.29 (1.20)	8.43 (.98)	$U = 448.5, z = .41, ns$	.05	8.48 (1.01)	7.92 (1.24)	$U = 223, z = 1.63^a, ns$	.21
School	.59 (.89)	.43 (.70)	$t(60) = .81, ns$	.11	.46 (.73)	.67 (.99)	$t(60) = .82, ns$	.11
Adult	.33 (.62)	.26 (.51)	$t(60) = .53, ns$	.07	.32 (.59)	.17 (.39)	$t(60) = .86, ns$	.11
Self-Harm	.67 (.88)	.26 (.51)	$t(39.068) = 2.17^*$	.29	.42 (.70)	.50 (.80)	$t(60) = .35, ns$	.05
Emotional	.74 (.76)	1.23 (.94)	$t(60) = 2.19^*$	.27	.96 (.88)	1.25 (.97)	$t(60) = 1.01, ns$	.13
Behavioural	.44 (.58)	.37 (.60)	$t(60) = .48, ns$	.06	.40 (.57)	.42 (.67)	$t(60) = .09, ns$	.01
Cognitive	.22 (.42)	.23 (.49)	$t(60) = .05, ns$	.01	.22 (.47)	.25 (.45)	$t(60) = .20, ns$	.03
Social	.52 (.64)	.46 (.56)	$t(60) = .4, ns$	.05	.48 (.61)	.50 (.52)	$t(60) = .10, ns$	.01
Curability	5.02 (1.43)	5.45 (.87)	$U = 1189, z = 1.38, ns$	.14	5.23 (1.10)	5.26 (1.54)	$U=825.5, z = 1.04^a, ns$	.10
Timeline	10.46 (4.24)	10.98 (3.45)	$U = 1293, z = -.55, ns$	.05	11.22 (3.54)	8.96 (4.44)	$U=685, z = 2.01^{*a}$	.20

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , two-tailed. <sup>a</sup> Mann Whitney ( $U$ ) test performed as categories are ordinal scales. <sup>b</sup> OR instead of  $r$  <sup>c</sup> Fisher's Exact test

### **3.6 Discussion**

The primary aim of this study was to examine children's concepts of depression, organised according to the common-sense model. Children provided comprehensive accounts of their depression concepts. Age differences were evident, while gender and experience differences were minimal.

Children are capable of recognising that a vignette character is experiencing difficulties and to differentiate between clinical depression and control conditions. However, they do not spontaneously recognise depression or the mental health nature of difficulties. This finding highlights that children do not lack the capacity to recognise the existence of a problem; rather, their concepts are not yet able to differentiate mental health-related problems. In previous research, adolescent girls were able to list symptoms of depression, however had difficulty to connect symptoms to a mental illness requiring intervention (Pinto-Foltz, Hines-Martin, & Logsdon, 2010). Similarly, Secker et al. (1999) report similar findings from their qualitative study on young people's understanding of mental illness. For depression, as participants were able to relate to some extent with symptoms through experience, they did not classify it as mental illness, as they did with illnesses they were not able to associate with.

Moreover, it is not possible to determine what children actually mean when they identify someone as having depression (Burns & Rapee, 2006), as their use of the term does not necessary correspond to the clinical term used by professionals. This is

evident in this study where half of the participants do not consider that the character is having a mental health problem. Previous research has suggested that children may use the term depression to refer to the emotional state, rather than a disorder (Leighton, 2009). The findings of the card-sorting task reflect this finding and indicate an age difference; some of the older children in this study differentiate between a temporary emotional state and persistent low mood. Ensuring a shared meaning between public and professionals is likely to benefit communication with children accessing professional help for mental health difficulties. In education with children, defining the terms for mental health problems that are commonly used in everyday language to describe emotional states (e.g. depression, anxiety) would facilitate shared understanding.

Children referred primarily to environmental and relational causes for depression. This finding echoes previous qualitative studies with children and adolescents (Dixon et al., 2013; Hetherington & Stoppard, 2002), as well as quantitative research in adolescent populations (Essau et al., 2013). Due to different coding categories, a comparison with a previous study of a child population is not possible; certain factors that have been grouped in this study (e.g. parental relationships and parenting) constitute separate categories in Hennessy & Heary's study (2009). The finding that older children were more likely to attribute depression to factors related to the family resembles the findings of previous research, reporting that with age, children are more likely to endorse social/environmental factors to mental illness (Maas, Marecek, & Travers, 1978). At the same time, differences in other causal categories were not

evident, in accordance with Hennessy & Heary (2009) who found no differences in the endorsement of internal and external causes for depression.

Children expect depression to be cured within 1-2 months, which is partly in line with previous research (Fox et al., 2010). In adolescent studies, participants choose a longer period between 1-6 months (Georgakakou-Koutsonikou & Williams, 2017). This is an important finding for both mental health education and clinical practice. One possible interpretation for the short expected recovery time might reflect developmental differences in time perception (Chelonis, Flake, Baldwin, Blake, & Paule, 2004; Droit-Volet & Zélanti, 2013). Additionally, certain responses referring to very short timelines (e.g. an hour) might indicate that children perceive depression as short-lived emotional state. Nevertheless, as children anticipate recovery times, exploring children's treatment duration expectations and fostering realistic expectations is needed.

Children expect deterioration or persistence of symptoms of untreated depression. These include both short-term and long-term consequences, and involve both personal and social functioning. The fact that small numbers of children refer to self-harm indicates the lack of knowledge and unfamiliarity with risk. Only 40% identified suicidal thoughts as a symptom of depression, which is a much smaller percentage than in adolescent samples (e.g. Bruno et al., 2015; Byrne et al., 2015). This difference is likely linked to the fact that self-harming behaviours are more evident in adolescence (Hawton, Saunders, & O'Connor, 2012), and as such adolescent

samples are more likely to be knowledgeable about or have contact with people who engage in self-harming behaviours.

This study shows that even from the age of eight years children demonstrate detailed conceptions of depression. Expanding on Hennessy & Heary's (2009) argument, children are able to speculate not only on causes, but also consequences and prognosis of depression. Using the CSM is a promising framework to expand our understanding of children's views. For example, perceived consequences of depression are related to help-seeking and coping in adults (Brown et al., 2001). Further, certain dimensions could facilitate our understanding of how children understand the construct of depression. Considering that measuring correct labelling of depression does not provide a clear understanding of what children mean when they recognise depression in a vignette, additional dimensions shed light on children's conceptualisation. For example, children's perceived consequences in adult life are more likely to be based on a conception of depression as a possibly long-term condition, while very short timelines are more likely to be associated with an understanding of depression as a temporary emotional state. Thus, the CSM is a promising framework for future research in the field of children's conceptualisations of mental illness.

Age trends are evident in all dimensions, apart from curability, possibly due to a ceiling effect. 11-12 year-olds are more likely to recognise depression and attribute it to a larger number of causes, in line with the development of children's understanding of the multitude of causes for physical illness (Perrin & Gerrity, 1981). 11-12 year-olds suggest longer recovery periods and more negative consequences, including risk

behaviours. Older children's conceptualisations aligned more closely with clinical conceptualisations, in line with physical health research, where age predicts more sophisticated concepts (Burbach & Peterson, 1986). The present results are also in line with Fox et al. (2010) who suggest that mental illness becomes a separate construct at the end of middle childhood. Older children's accounts in the card-sorting task echo the statistical findings; children in the 11-12 year-old group started to consider aspects of symptom duration and extent of low mood to decide if a portrayed behaviour or mood is a possible sign of depression.

In this study, minimal gender differences were found. This contrasts with adolescent studies that report gender differences in mental health literacy (e.g. Burns & Rapee, 2006). It is possible that gender differences develop in adolescence, thus the interaction of age and gender with a combined child and adolescent sample should be examined in future studies. Similarly, minimal experience differences were found. The finding that children with an experience scored significantly lower in perceived timeline was unexpected. In children's physical health concepts, there is no consensus on the role of experience. While some studies show that children with experience have a better understanding of illness, others show the opposite results (Burbach & Peterson, 1986). In a study examining children's asthma concepts using the CSM (Paterson, Moss-Morris, & Butler, 1999) experience predicted better understanding of some of the examined dimensions. Further research on the role of experience, both personal and through contact is needed. The lack of significant findings highlights that children who have either experienced depression or have a depressed parent or other family member do not necessarily hold a more comprehensive understanding

of the condition than their non-experienced peers. This finding highlights the need for psychoeducation with children that receive treatment for depression. In addition, the results indicate that universal mental health literacy interventions are appropriate for all children.

### **3.6.1 Strengths, limitations and future research.**

This is the first study to attempt a detailed exploration of conceptualisations of paediatric and adolescent depression in this age group, adopting a methodology that has been used in research with adolescent populations and in children's physical health concepts. Limitations are discussed below, in light of future research recommendations.

The hypothetical nature of responses in vignette methodologies has been highlighted systematically (Burns & Rapee, 2006; Hughes & Huby, 2002) and as such it is unknown whether children's concepts would equal personal beliefs if experiencing depression. Similarly, triangulating children's experience with parent report would be beneficial, as in this study it was uncertain what children defined as having an experience with depression. The use of three depression vignettes allowed the inclusion of symptoms that are relevant in different age groups (e.g. suicidality in adolescence). However, due to the study design, differences between vignettes would be difficult to interpret. For example, it is unclear whether higher recognition of the adolescent vignette as depressed was due to the description of suicidal thoughts as found in previous studies (Bruno et al., 2015; Burns & Rapee, 2006) or whether children are more likely to consider an adolescent as depressed. Studies have

advocated that the gender of the character might differentiate results (Dolphin & Hennessy, 2014), the age of the vignette character would be an interesting next step and an area that has not been examined to date. Similarly, comparison between vignettes describing different mental illnesses prevalent in this age group might inform our understanding of how children's conceptualisations develop. For example, Swords, Hennessy & Heary (2011a) found that only older adolescents (16 years) could differentiate between the help needed for depression and ADHD, while younger adolescents (12 and 14 years) did not distinguish between the two conditions.

Regarding recognition of depression, the range of accepted responses might have resulted in over-estimating correct depression recognition. In that case, even smaller numbers of children (17% of participants in this study) are able to label depression from a cluster of symptoms presented. Finally, cultural and ethnic differences were not examined in this study. Adult research indicates cultural and ethnic differences in mental health conceptualisations (Anglin, Alberti, Link, & Phelan, 2008; Furnham & Hamid, 2014). No research examining ethnic or cultural differences in children's conceptualisations of depression has been identified. This would be an interesting research focus for future studies.

### **3.7 Conclusion**

Children are able to identify emotional difficulties displayed by depressed characters and consider possible causes, consequences, and prognosis of depression. Older children have more comprehensive depression concepts, in terms of recognising depression, suggesting longer recovery periods, expecting more negative outcomes if

untreated and being more aware of potential risk. However, differences to adult or professionals' conceptualisations of depression are evident. In clinical practice, it is important to take into consideration children's beliefs and target misconceptions. The findings provide an initial detailed account of children's depression conceptualisations and highlight areas where mental health education should focus upon.

## **4 Study 1b: Children's beliefs about depression treatment and help-seeking**

In the previous chapter, children's' concepts of depression, based on the CSM were presented. In this chapter, the second part of the study results, specifically children's concepts of depression treatment and help-seeking are presented.

### **4.1 Introduction**

Although depression is one of the most common mental health problems in adolescence, research in help-seeking reports that only a minority of young people seek help (Gulliver et al., 2010; Rickwood, Deane, & Wilson, 2007). Low perceived need for help has been identified as one of the barriers to seeking help (Gulliver et al., 2010). For adolescents and young adults, correct knowledge about the treatment of mental illness is likely to facilitate effective help-seeking strategies (Kutcher et al., 2016; Rickwood et al., 2005). Thus, deriving from the mental health literacy field (Jorm et al., 1997), recent studies have explored help-seeking and perceived sources of help for depression in general population samples of adolescents (Burns & Rapee, 2006; Byrne et al., 2015; Coles et al., 2016). The majority of young people are able to identify the need for help of characters with clinical levels of depression in vignettes. The most suggested sources of help are mental health professionals, parents and friends, while doctors and teachers are reported less often in adolescent samples (Georgakakou-Koutsonikou & Williams, 2017).

Although numerous studies examine perceived sources of help in adolescence, few studies have been identified that examined perceived sources of help for depression in children under 12 years of age. In their study, including three age groups of 8, 11 and 14 year-olds, Hennessy and Heary (2009) note that small numbers of children report mental health professionals as a source of help, with no significant differences between age groups. In a study with six to 11 year-olds, Fox et al. (2011) report that younger children (6-7 years) were more likely to suggest “seeing a doctor” for depression than older ones (8-9 and 10-11 years), who were in turn more likely to suggest “have therapy” than younger ones. In one study with adolescents of 12 to 16 years, 16-year-olds believed more in a depressed character’s need for help and suggested mental health professionals more often (Swords, Hennessy & Heary, 2011a) than 12 and 14 year olds. With the exception of Hennessy and Heary’s study (2009), no other study has specifically aimed to examine age differences in children’s (under 12 years) treatment knowledge and suggestions for depression.

Similarly, the role of gender in children’s help-seeking suggestions for depression is unclear. Recent studies with adolescent participants have focused on gender differences in mental health literacy. Where differences are found, girls show more sophisticated concepts or higher mental health literacy (Georgakakou-Koutsonikou & Williams, 2017). Four studies have followed Burns & Rapee’s methodology (2006) to examine gender differences in mental health literacy. Girls are found more concerned for a depressed peer in all studies (Burns & Rapee, 2006; Byrne et al., 2015; Coles et al., 2016; Marshall & Dunstan, 2013), more able to identify the need for help (Burns & Rapee, 2006; Coles et al., 2016) and in one study more likely to recommend sources

of help (Coles et al., 2016). In other studies, boys were more likely to endorse the belief that they would worsen the situation if they were to help, and suggest “dealing with it alone” (Jorm et al., 2006; Kelly & Jorm, 2007). In younger children, Fox et al. (2010) report minimal gender differences in their sample of six to 11 year-olds.

Regarding personal (hypothetical or actual) help-seeking for depression, few studies have focused in preadolescent children. In a focus group study with Scottish children aged 10, 13 and 15 years, MacLean, Hunt and Sweeting (2013) explored children’s understanding of mental health symptoms in relation to help-seeking. Participants reported that they would be less likely to seek help for mental health problems than physical health problems. They explained psychological symptoms, including but not restricted to symptoms of depression, as “taboo”, “voluntary” and “weird”, and in turn raised their concerns regarding stigmatising reactions of others in case of disclosure.

The role of experience in children’s health concepts has not been systematically examined. Earlier research in children’s understanding of physical illness reports mixed results regarding the role of experience. While some studies show that children with experience have more sophisticated views of illness, other studies show opposite results and some show no correlation with experience (Burbach & Peterson, 1986). In children’s concepts of the treatment of mental illness, Wright et al. (2007) report that experience was associated with endorsing appropriate sources of help for depression, in a sample of young people 12 to 25 years. Leighton (2010) found that participants (12 to 15 years) with an experience showed more flexibility in the type of endorsed sources of help and the perceived benefits of each type of help for mental health

problems. No study with children below the age of 12 has explored the role of experience in children's knowledge of depression treatment and help-seeking. Understanding children's knowledge and beliefs of depression treatment is important for effective communication with and support from professionals, as well as for relevant and evidence-based mental health education.

## **4.2 Aim of the Study**

Thus, the aim of this study is to examine children's knowledge about depression treatment and help-seeking and to explore age, gender and experience differences for each of the following research questions:

**Research Question 1:** Do children recognise the need for help for a depressed peer?

**Research Question 2:** Do children show more concern for a depressed than a control peer?

**Research Question 3:** What are the sources of help children suggest for depression?

**Research Question 4:** What are children's personal hypothetical sources of help for depression?

**Research Question 5:** Do children desire higher social distance for a depressed peer, in comparison to a control condition?

## **4.3 Methodology**

### **4.3.1 Ethical considerations and approval.**

The study was approved by the University of Edinburgh (School of Health in Social Science, Level 2/3 ethics application, approval date: 22.08.2014) and the City of

Edinburgh Council Research Ethic Committees, approval date 2.10.2014). Ethical considerations are discussed in detail in chapter 3.3. Approved applications are attached in Appendix A. The average response rate was 66.3% within the participating schools. No participant withdrew from the study.

### **4.3.2 Participants.**

The sample consisted of the same participants as in study 1a. Participants were 105 primary school pupils ( $M = 10.76$  years,  $SD = 1.47$ ) in years 4 ( $M = 8.86$ ,  $SD = 0.32$ ) and 7 ( $M = 11.84$ ,  $SD = 0.32$ ) from three schools in Scotland. There were equal numbers of boys ( $N = 52$ ) and girls ( $N = 53$ ). Detailed information is provided in Chapter 3.3.1.

### **4.3.3 Materials.**

Four vignettes and an interview questionnaire were developed for the purposes of this study.

#### **4.3.3.1 Vignettes.**

Vignettes were designed to capture key elements of depression as it is experienced by children of different ages. Three vignettes portray a character of 8, 11 and 14 years, meeting criteria for a major depressive episode, according to DSM-IV (American Psychiatric Association, 2000) and ICD-10 (World Health Organisation, 1992). A fourth control vignette portraying a child of the same age as the participant without depressive symptoms was used to examine whether children are able to separate between clinical depression and common emotional variations. The gender of the

characters was counterbalanced between same age depression and control vignettes and between the remaining two vignettes.

#### ***4.3.3.2 Interview schedule.***

The first part of the interview schedule is presented in Chapter 3.4.4.1. In this section, the questions related to help-seeking and depression treatment knowledge are presented. In addition to the CSM described in Chapter 3, the interview additionally included questions on help-seeking, specifically: perceived need for and sources of help, concern for the characters, personal hypothetical sources of help, and desired social distance.

Participants were asked whether they thought the character needed help (“*do you think [character’s name] needs help from someone else?*”), and if they responded positively, they were asked to name sources of help (“*who do you think could help [character’s name]?*”). Participants were prompted to name as many sources of help as they could think of, to reach saturation. To facilitate participants who could not provide an answer, prompt questions were used (“*What could help [character’s name]?*”, “*who do you think that [character’s name] would talk to?*”, “*would s/he talk to a grown up or a child?*”). Choices were also available if the participant could not provide an answer; the choices were based on previous studies (Byrne et al., 2015; Hennessy & Heary, 2009), and included: parents, teachers, doctors/nurses, mental health professionals, helplines, someone who has had the same experience, and websites. 8 children (4 from each age group) used prompts, 2 for the child vignette, 4 for the preadolescent vignette, and 2 for the adolescent vignette, all of which used prompts

for only one vignette. If the prompt was used, the child's responses were included in the analysis of specific sources of help, however excluded from the analysis of the total number of suggested sources of help.

Worry was measured using an adapted version of the scale developed by Burns and Rapee (2006). The participants were asked (“*would you worry for [character's name]?*”) for each character, and if they responded positively, they were asked if they would be “a little worried”, “quite worried” or “very worried”.

#### **4.3.3.3 Social distance.**

A social distance scale was used, adapted from a scale used in previous studies (Kelly & Jorm, 2007; Wright, Jorm, & Mackinnon, 2011). The participant was asked to indicate how happy they would be to spend time with the character in four scenarios, indicating between 1 (definitely not [happy]) and 4 (definitely yes). The social distance questions were asked for the control character and only for the depression character that was at the same age as the participant (child vignette for participants in fourth year or preadolescent vignette for participants in seventh year). The scale had good reliability, as measured with Cronbach's alpha (depression condition  $\alpha = .819$ , control condition:  $\alpha = .837$ ). The total score ranges from 4 to 16 with higher scores indicate less desired social distance.

Following the vignettes and questions, participants were asked whether they have had a personal (“*have you ever had depression?*”) or indirect (“*do you know someone who has had depression?*”) experience with depression, while reminded that they can refuse

to respond to any of the questions. Finally, participants were asked about their personal hypothetical help-seeking (“*if you thought you had depression, would you talk to someone about it?*”), source of help if the participant responded positively (“*who would you talk to?*”) and barriers to seeking help if the participant responded negatively (“*why would you not talk to someone?*”). The questionnaire is included in Appendix C.

#### **4.3.4 Procedure.**

Children were interviewed individually within the school setting. The vignettes were read to the participant in a random order, followed by the questions in a set sequence after each vignette (as above). The interviews were recorded using a password-protected digital audio recorder and transcribed for subsequent analysis.

#### **4.3.5 Analysis plan.**

Content analysis was performed for each coding category, following quantitative content analysis techniques (Krippendorff, 2004; Neuendorf, 2002) using Dedoose Software (2016). The coding scheme was inductively developed and included the categories, operational definitions and examples of units coded within the category. Descriptive results are presented first, followed by group differences (age, gender, experience) or group comparisons between depression and control vignettes.

*Need for help:* To present frequencies of need for help, responses to the three vignettes were combined, thus creating a total sample of 315 responses, following the technique used by previous studies utilising more than one depression vignettes (Burns & Rapee, 2006). In turn, a total score for each participant was calculated from the three responses

in the depression vignettes, thus creating a variable with values from zero to three, with higher values showing that the perceived need for help was endorsed more frequently. The total score was used to explore age, gender and experience differences.

*Sources of Help:* Frequencies are presented from a combined score from the three vignettes ( $N = 315$  responses). To explore group differences, a binary score was calculated first for each source of help, indicating whether the specific response was reported by the participant in at least one depression vignette. This allowed to explore whether the participant has any knowledge of this source of help as relevant to depression. In turn, total scores for each participant were calculated from the responses in each individual vignette for each source of help. The variable ranges from zero to three, with higher scores showing that the source of help was more frequently endorsed for depression. Both the binary and the total score were used to examine age, gender and experience differences using chi-square and independent sample t-tests.

*Informal Treatment Options:* Informal and self-help treatment options were analysed similarly to sources of help. Frequencies are presented first, by combining participants' responses to the three vignettes. In turn, binary (0-not reported, 1-reported for at least one vignette) and total scores (0-not reported, to 3-reported for all three vignettes) were used to examine group differences (age, gender and experience).

*Personal sources of help:* Frequency analysis was performed, followed by age, gender and experience comparisons for each category of sources of help.

*Social Distance:* Total scores for the depression and control vignette were calculated, creating a variable from 4 to 16. Higher values show lower desired social distance from the character. Mixed ANOVA was conducted between age and gender on participants'

total scores on the two vignette scenarios (same age depression vignette and control vignette).

*Worry for the character:* A mean score was calculated from the three depression vignettes, following the analysis of Burns and Rapee (2006). Mixed ANOVA was conducted between age and gender on participants' mean score from the depression vignette and on the control vignette score.

For social distance and worry, the sample size did not allow for age, gender and experience to be concurrently examined, as there were few participants reporting an experience of depression. Independent sample t-tests were performed between participants reporting an experience and those with no previous experience to test for differences on desired social distance and worry.

## **4.4 Results**

### **4.4.1 Research question one: Perceived need for help.**

The vast majority of participants consider that a child or young person requires help for depression, with percentages ranging from 95.2 to 96.2% in individual vignettes. Vignettes were combined to provide overall percentages of suggested need for help (Table 14). To examine possible age, gender and experience differences, a total score was calculated for each participant from the three depression vignettes, creating a category from zero to three, with higher scores showing that the participant endorsed a need for help more frequently. No age, gender or experience differences were found (Table 20). For the control condition, 69.9% of participants consider that the character needs help, which is significantly associated with age group,  $\chi^2(1) = 5.86, p < .05$ .

Older children report less often ( $N = 40, 61.5\%$ ) that the control character requires help than younger children ( $N = 32, 84.2\%$ ). Based on the Odds Ratio, 8-9 year olds were 3.3 times more likely than 11-12 year-olds to suggest that the control character needs help. There was no difference based on gender ( $\chi^2(1) = .08, p > .05$ ) or experience ( $\chi^2(1) = .72, p > .05$ ).

**Table 14:** *Frequencies of Perceived Need for Help for the Depression and Control Vignettes by Age Group*

	Depression						Control					
	8-9 year-olds		11-12 years-olds		Total (N = 301)		8-9 year-olds		11-12 year-olds		Total (N = 103)	
	N	%	N	%	N	%	N	%	N	%	N	%
No help needed	9	7.9%	4	2.0%	13	4.2%	6	15.8%	25	38.5%	31	30.1%
Help needed	105	92.1%	193	98.0%	298	95.8%	32	84.2%	40	61.5%	72	69.9%

*Note.* N refers to the total number of responses.

#### 4.4.2 Research question two: Worry for depressed and control peers.

To test whether children worry more for a depressed than a control character, mean scores of the depression vignettes were generated for each participant. A mixed ANOVA was conducted, between vignette condition (depression and control), age and gender of the participant on worry scores. There was a significant main effect of vignette, condition  $F(1, 96) = 100.4, p < .001, \eta_p^2 = .51$ , which is a large effect. Children worried significantly more for the depressed characters ( $M = 1.83, SD = 0.61$ ) than the control condition ( $M = 0.96, SD = 0.83$ ). There was a significant vignette x age interaction,  $F(1, 96) = 22.25, p < .001, \eta_p^2 = .188$ , representing a large effect. For the depression condition, older participants ( $M = 1.91, SD = 0.55$ ) report higher worry than younger ones ( $M = 1.69, SD = 0.70$ ), while for the control condition, older

participants ( $M = 0.78$ ,  $SD = 0.75$ ) report less worry than the younger participants ( $M = 1.28$ ,  $SD = 0.88$ ). Older children's concern for a peer seems to be more influenced by vignette condition than for younger children. There was no significant vignette x gender interaction ( $F(1, 96) = 0.40$ ,  $p > .05$ ) or vignette x age x gender interaction ( $F(1, 96) = 3.26$ ,  $p > .05$ ).

Independent sample t-test was conducted to test the effect of experience on the mean worry score for the depressed characters. There was no significant difference between participants reporting an experience ( $M = 1.80$ ,  $SD = 0.76$ ) and those with no reported experience ( $M = 1.81$ ,  $SD = 0.60$ ),  $t(100) = 0.09$ ,  $p = .931$ ,  $r = .009$ . No significant difference was found for the control condition either,  $t(101) = 0.69$ ,  $p > .05$ ,  $r = .07$ .

#### **4.4.3 Research question three: Sources of help for a depressed peer.**

Five categories of sources of help were created: family members, teachers, peers, doctors, mental health professionals. In family members, parents and other adult family members are included (e.g. grandparents). Peers include both friends and siblings. The category of teacher refers to any teaching staff mentioned, including learning assistants, head teachers, coaches at activities within and out with school. Doctors include medical doctors and nurses, including the general practitioner (GP), school nurse and specialist doctors. Mental health professionals (MHPs) refer to any professional offering psychological support, including: psychiatrists, psychologists, helplines, specific professional treatment options mentioned (e.g. mindfulness), and school counsellors. Responses that were either too generic (e.g. "someone she can trust") or very rare (e.g. "the police") were coded as uncategorisable. Table 15 presents

examples of the coding scheme. All options were coded as either zero (not reported) or 1 (reported). The mean number of sources of help for the depression vignettes was 1.97 ( $SD = .54$ ). There was no age group difference,  $t(83) = 1.84, p > .05, r = .20$ . Combining all three vignettes, frequencies for each source of help by age group are presented in Table 16.

**Table 15: Coding of Sources of Help**

Source of Help	Quotes (Gender, Age group, Vignette)
Family	<p>“You should always talk to your parents about problems” (Girl, 8-9 years, AV)</p> <p>“From his parents, he could talk over what’s going on, and why he’s acting like this, and probably his teachers at school.” (Boy, 11-12 years, AV)</p> <p>“Yeah, I think he would need help from his parents” (Girl, 11-12 years, PV)</p>
Teachers	<p>“Maybe an adult to support her... maybe like a learning assistant” (Girl, 8-9 years, PV)</p> <p>“Your teacher, if, because your teachers are nice to you.” (Boy, 11-12 years, AV)</p>
Peers	<p>“For his friends to come and say: how’ve you been for the last four days, and, um, do you want to have a small chat and play a game with me?” (Girl, 8-9 years, CV)</p> <p>“Maybe if she’s like got a good friend that can maybe help her, like, if someone says something mean to her, they can defend her” (Girl, 11-12 years, AV)</p>
Doctors	<p>“And a doctor, about how she may be feeling and if she’s going through a hard time in school.” (Girl, 8-9 years, CV)</p> <p>“Doctor, to get rid of the depression.” (Girl, 11-12 years, CV)</p>
MHPs	<p>“He could do mindfulness ...And he could just get help and stop worrying about things.” (Girl, 8-9 years, PV)</p> <p>“I think maybe like, someone like, maybe a therapist or someone like that” (Boy, 11-12 years, AV)</p> <p>“Yeah, possibly ChildLine or something like that” (Boy, 11-12 years, AV)</p>
Uncategorisable/ Other	<p>“Someone who looks like an important person, like a policeman or something” (Boy, 8-9 years, CV)</p> <p>“Or someone who she trusts” (Girl, 11-12 years, CV)</p>

Note. CV= Child Vignette. PV= Preadolescent Vignette. AV= Adolescent Vignette. MHPs: Mental Health Professionals

**Table 16: Frequencies of Sources of Help for Depression by Age Group**

	8-9 year-olds (N = 104)		11-12 year-olds (N = 196)		Total (N = 300)	
	N	%	N	%	N	%
Family	50	48.1%	113	57.7%	163	54.3%
Teachers	44	42.3%	105	53.6%	149	49.7%
Friends	47	45.2%	65	33.2%	112	37.3%
MHPs	21	20.2%	82	41.8%	103	34.3%
Doctors	15	14.4%	13	6.6%	28	9.3%

*Note.* MHPs: Mental Health Professionals. N refers to the total number of responses from the three depression vignettes.

For each source of help category, a total score was calculated, thus a scale from zero to three was created, with higher scores indicating that the source of help was more frequently endorsed by the participant. 8-9 year-olds reported friends ( $M = 1.50$ ,  $SD = .92$ ) more often than 11-12 year-olds ( $M = 1$ ,  $SD = .92$ ),  $t(89) = 2.40$ ,  $p < .05$ ,  $r = .25$ , which represents a small to medium effect. Conversely, 11-12 year-olds ( $M = 1.24$ ,  $SD = 1.03$ ) reported MHPs more often than 8-9 year-olds,  $t(89) = 2.89$ ,  $p < .01$ ,  $r = .29$ , which is a medium effect size. No gender or experience differences were found. All tests are reported on Table 20. Further, binary variables measuring if a participant reported the source of help for any of the depression vignettes was created for each of the five categories (0-not at all endorsed and 1-endorsed for at least one vignette). Frequency analysis showed that each of the source of help was endorsed more often for at least one condition. 80% of participants suggested family as a source of help for at least one vignette, 76.2% suggested teachers, 68.6% suggested friends, 17.1% suggested doctors and 61% suggested mental health professionals. Examining age differences using the binary categories, the only significant difference found was for MHPs,  $\chi^2(1) = 8.89$ ,  $p < .01$ ,  $OR = 3.47$ . Older children reported MHPs more often ( $N$

= 48, 71.6%) than younger children ( $N = 16$ , 42.1%). No significant gender and experience differences were found (Table 17).

**Table 17: Gender and Experience Differences on Reported Sources of Help for Depression**

	Gender				Experience			
	Male ( $N = 52$ )	Female ( $N = 53$ )	$\chi^2(1)$	p	No ( $N = 82$ )	Yes ( $N = 23$ )	$\chi^2(1)$	p
Family	78.8%	81.1%	.09	.770	82.9%	69.6%	2.00	.157
Teachers	75%	77.4%	.08	.777	76.8%	73.9%	.08	.772
Friends	61.5%	75.5%	2.36	.124	64.6%	82.6%	2.70	.101
MHPs	57.7%	64.2%	.46	.498	62.2%	56.5%	.24	.622
Doctors	15.4%	18.9%	.22	.636	14.6%	26.1%	1.66	.198

*Note.* MHPs: Mental Health Professionals. *Note.* N refers to the total number of responses from the three depression vignettes.

### Self-help and informal treatment options

Approximately half of the participants ( $N = 56$ , 53.3%) spontaneously provided suggestions of informal or self-help options for recovery. In this section, the informal and self-help options are further analysed, to provide some insight into the treatment options children report for depression. There are categorised in four groups: behavioural strategies, focusing on solving the perceived cause, focusing on the symptoms and changing thinking style.

**Behavioural Strategies:** Children suggested behavioural strategies to overcome depression, including: changing own behaviour (e.g. “*I think maybe he should be with his friends and don't get angry with them*”, girl, 8-9 years, PV), behavioural activation (e.g. “*maybe trying music and sports out again*”, boy, 11-12 years, AV) and activities

together with others to improve mood (*“like, meet with people who are his friends and then go on things he likes doing”*, girl, 11-12 years, CV).

***Solving the cause:*** Participants also recommended focusing on solving the perceived cause of the problem to treat depression, as for example *“if he is getting bullied, just do something about it”* (boy, 11-12 years, PV).

***Symptom Focused:*** Children also offered responses focusing on treating one of the symptoms presented in the vignette, for example: *“he’s starting to go to bed a bit earlier and then maybe, and he’ll be fine”* (boy, 8-9 years, PV). Within this category, building self-esteem was a frequent response for the adolescent character, who claims that *“I’m not good for anything anyway”*. Children recommended individual strategies or help from others to improve self-esteem (*“if people like encouraged him to believe in himself and told him you can do it”*, girl, 8-9 years, AV).

***Thinking Style:*** The last category involves changing thinking, focusing on changing negative thinking, and suggested helping the character to change the way s/he thinks: *“If he just keeps on doing things happy and then try to get his mind of it”* (girl, 11-12 years, CV), *“Well, she might need to think brighter...So like she doesn’t think of the arguments all the time and think of something happier”* (girl, 11-12 years, CV).

Frequencies based on combined vignettes are presented in Table 18 below. Further quotes for each category are presented in Table 19.

**Table 18: Frequencies of Informal and Self-Help Treatment Options for Depression**

	8-9 years-olds (N = 104)		11-12 years-olds (N = 196)		Total (N = 300)	
	N	%	N	%	N	%
Behavioural strategies	9	8.7%	10	5.1%	19	6.3%
Symptom focused	24	23.1%	14	7.1%	38	12.7%
Solving the cause	2	1.9%	9	4.6%	11	3.7%
Thinking style	8	7.7%	7	3.6%	15	5%

*Note.* N refers to the total number of responses from the three depression vignettes.

Eighteen percent of participants suggested behavioural strategies for at least one vignette, 27.6% of children offered strategies focusing on the symptom, 8.6% suggested strategies focused on solving the perceived cause of the problem and 12.4% suggested cognitive strategies.

More 8-9 year-olds suggested at least one informal treatment option ( $N = 26, 68.4\%$ ) than 11-12 year-olds ( $N = 30, 44.8\%$ ),  $\chi^2(1) = 5.45, p < .05, OR = 2.7$ . There was no difference based on gender ( $\chi^2(1) = 1.14, p > .05$ ) or experience ( $\chi^2(1) = 0.36, p > .05$ ). Based on the binary scores, 8-9 year-olds ( $N = 17, 44.7\%$ ) reported symptom-focused strategies more frequently than 11-12 year-olds ( $N = 12, 17.9\%$ ) in at least one vignette,  $\chi^2(1) = 8.73, p < .01, OR = 3.7$ . Girls ( $N = 10, 18.9\%$ ) were more likely to suggest changing thinking style than boys ( $N = 3, 5.8\%$ ),  $\chi^2(1) = 4.15, p = .042, OR = 3.8$ .

Similar results were found using the total scores. The only significant age difference found was for symptom-focused informal help options, with 8-9 year-olds ( $M = 0.75, SD = 0.89$ ) reporting options in this category more frequently than 11-12 year-olds ( $M = 0.21, SD = 0.48$ ),  $t(89) = 3.79, p < .001, r = .37$ . For gender, girls ( $M = .26, SD =$

.53) reported options related to changing thinking more often than boys ( $M = .22$ ,  $SD = .15$ ),  $t(89) = 2.8$ ,  $p = .006$ ,  $r = .29$ . No other differences were found (see Table 20).

**Table 19: Coding of Informal Help and Self-help Strategies**

Category of Strategy	Quotes (Gender, Age group, Vignette)
Behavioural strategies	<i>“If he like, have mum and dad take him to go out to somewhere nice”</i> (Boy, 8-9 years, CV)
	<i>“I think her family or her friends could find a way to make her happier...they could, do, they could go out and do fun things”</i> (Girl, 11-12 years, PV)
Focus on perceived cause	<i>“Maybe if it’s something that’s going on at home, maybe he doesn’t want to stay at home or something”</i> (Boy, 11-12 years, CV)
	<i>“Um, if for example he’s been bullied that he should tell someone so that they can help him and sort it out”</i> (Girl, 11-12 years, AV)
Focus on symptom	<i>“Just having an early night.”</i> (Girl, 8-9 years, CV)
	<i>“Um, maybe if she went like to a, ‘cause it said she is good at music, um, maybe if she went to a concert and then had everyone clapping for her. Cause then she’ll feel like “maybe I am actually quite good”</i> (Girl, 11-12 years, AV)
Thinking style	<i>“He needs to get like happy things on his head”</i> (girl, 11-12 years, PV)
	<i>“I think he just has to sit down and have a little think about how he was doing, and how he’s now doing, and which one he prefers to do.”</i> (Girl, 11-12 years, CV)

*Note.* CV= Child Vignette, PV= Preadolescent Vignette, AV= Adolescent Vignette.

#### 4.4.4 Research question four: Personal hypothetical sources of help.

Participants were asked whether they would talk to someone in a hypothetical case that they encountered difficulties with depression. The majority of participants ( $N = 97$ , 92%) responded that they would seek help from someone. Those that answered positively, were asked to identify who they would talk to. 57% provided one source of

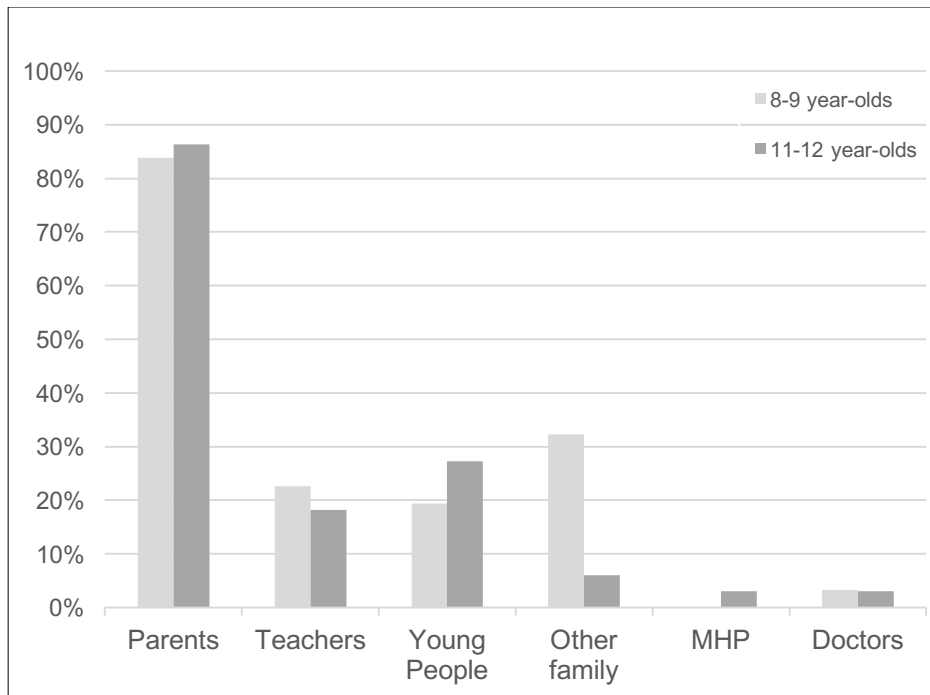
help, 35% provided two possible sources of help, 7% of children provided three and 1% provided four.

The vast majority reported their parents as the first sources of help (85.6%) for both age groups. Other sources of help reported were: peers (including friends and siblings/other young people in the family), teachers (all teaching staff, including teachers, head teachers, learning assistants) extended family (including adult family members apart from parents), mental health professionals (psychologists, counsellors and helplines) and doctors (including GP, doctor and nurse). Frequencies for each category were: 23.7% peers, 18.6% teachers, 14.4% family, 2.1% MHPs and 3.1% doctors. The only significant age difference was for extended family, with the younger age group ( $N = 9$ , 29%) suggesting extended family more often than the older age group ( $N = 4$ , 6.8%) ( $\chi^2(1) = 8.14, p < .05$ ) (figure 2). Based on the OR, younger participants were 5.6 times more likely to report extended family than older participants. No other age, gender or experience differences were found (see Table 20).

Children that reported that they would not seek help for depression ( $N = 5$ , 4.9%) were asked a follow-up question regarding the reasons why they would not want to share it. One child referred to being laughed at (“*I’d feel a bit like someone’s making fun of me*”, 8-9 year-old girl), one child reported not wanting to upset other people with their own problems (“*they have other troubles and stuff*”, 11-12 year-old boy) and one child reported that they do not like to express their feelings (“*cause I’m not someone who likes to share things*”, 8-9 year-old boy). It was apparent that three children referred to feeling sad or low for a short period of time, for example: “*I was doing my homework*

and I didn't know what to do, I felt really depressed, sad, because I couldn't do it" (8-9 year-old girl).

**Figure 2:** *Hypothetical Personal Sources of Help for Depression*



Note. *N* = 100 participants, MHP: Mental Health Professionals

**Table 20: Age, Gender and Experience Differences**

	<b>Age</b> t-test/ $\chi^2$ , p value	<b>Gender</b> t-test/ $\chi^2$ , p value	<b>Experience</b> t-test/ $\chi^2$ , p value
Need for Help	$t(64.106) = 1.77$ , ns	$t(101) = .81$ , ns	$t(101) = .50$ , ns
Number of SOH	$t(83) = 1.84$ , ns	$t(83) = .37$ , ns	$t(89) = .27$ , ns
Family	$t(89) = 1.07$ , ns	$t(89) = .93$ , ns	$t(89) = 1.86$ , ns
Teachers	$t(89) = .87$ , ns	$t(89) = .57$ , ns	$t(89) = .18$ , ns
Friends	$t(89) = 2.40^*$	$t(89) = .62$ , ns	$t(89) = 1.47$ , ns
MHPs	$t(89) = 2.90^{**}$	$t(89) = .61$ , ns	$t(89) = .37$ , ns
Doctors	$t(89) = 1.06$ , ns	$t(89) = 1.26$ , ns	$t(19.428) = 1.55$ , ns
Informal Help			
Behavioural strategies	$t(89) = 1.40$ , ns	$t(89) = .37$ , ns	$t(89) = .29$ , ns
Symptom focused	$t(89) = 3.79^{***}$	$t(89) = .44$ , ns	$t(89) = .11$ , ns
Cause focused	$t(89) = 1.25$ , ns	$t(89) = .64$ , ns	$t(89) = 1.38$ , ns
Thinking style	$t(89) = 1.11$ , ns	$t(89) = 2.80^{**}$	$t(89) = 1.57$ , ns
Personal Sources of Help			
Total Number	$t(100) = .06$ , ns	$t(90.119) = 1.74$ , ns	$t(100) = 1.75$ , ns
Parents	$\chi^2(1) = .11$ , ns	$\chi^2(1) = 1.44$ , ns	$\chi^2(1) = 2.70$ , ns
Teachers	$\chi^2(1) = .26$ , ns	$\chi^2(1) = .09$ , ns	$\chi^2(1) = 1.23$ , ns
Peers	$\chi^2(1) = .48$ , ns	$\chi^2(1) = 1.56$ , ns	$\chi^2(1) = .82$ , ns
Family	$\chi^2(1) = 8.14^{**}$	$\chi^2(1) = 1.57$ , ns	Fischer's exact test, ns
Professionals	Fischer's exact test, ns	Fischer's exact test, ns	Fischer's exact test, ns
Doctors	Fischer's exact test, ns	Fischer's exact test, ns	Fischer's exact test, ns

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , two-tailed. ns:  $p > .05$ . SOH: Sources of Help. MHPs: Mental Health Professionals.

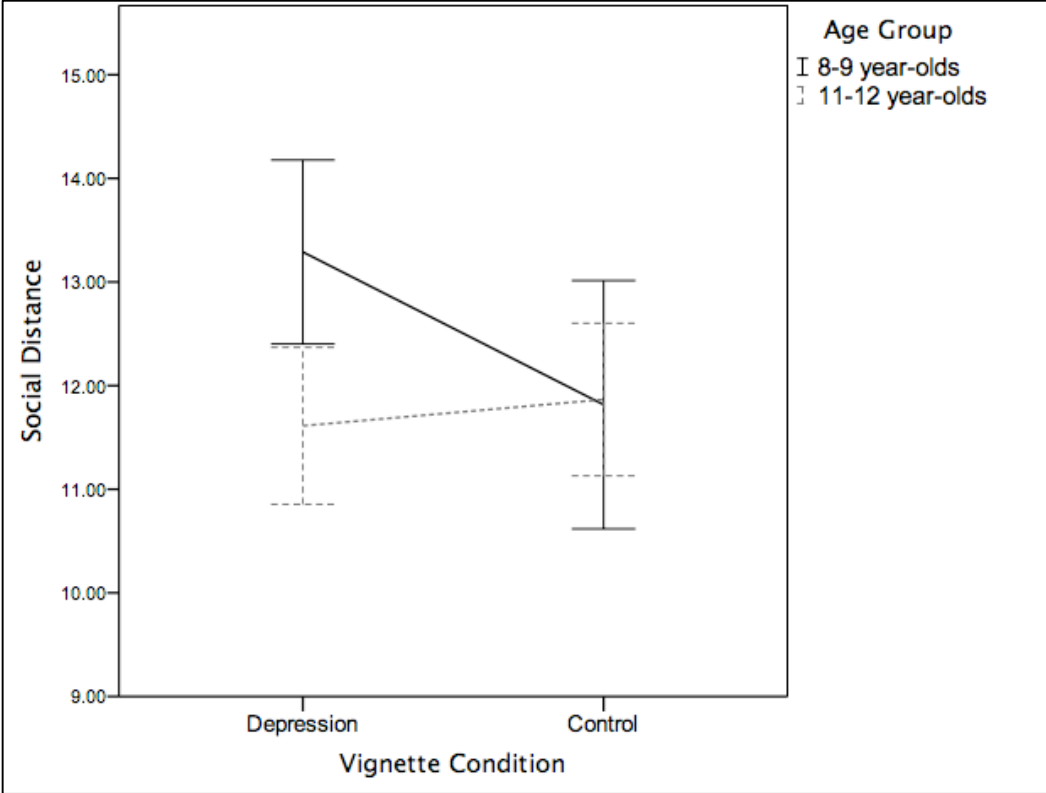


#### 4.4.5 Research question five: Desired social distance.

Finally, a social distance scale was used to examine desired social distance from a hypothetical peer with depression and a control condition, and specifically to examine age, gender and experience differences in desired social distance. Mixed ANOVA was conducted between age group, gender and vignette condition (depression and control) on social distance total scores. There was no significant main effect of vignette condition,  $F(1, 101) = 3.52, p > .05, \eta_p^2 = .034$ , suggesting that whether a character was portrayed as depressed or not did not significantly affect acceptance. There was no significant interaction effect between gender of the participant and vignette condition,  $F(1, 101) = 0.38, p > .05, \eta_p^2 = .004$ . There was a significant interaction effect between age of the participant and vignette condition,  $F(1, 103) = 7.05, p = .009, \eta_p^2 = .065$ , which is a medium effect. This indicates that level of desired social distance for a depressed and control character differed between the age groups. For the control condition, social distance scores were similar for 8-9-year-olds ( $M = 11.82, SD = 3.65$ ) and 11-12 year-olds ( $M = 11.87, SD = 3.02$ ). For the depression condition, 8-9 year-olds scored higher ( $M = 13.29, SD = 2.70$ ) than 11-12 year-olds ( $M = 11.62, SD = 3.10$ ), indicating that 8-9 year-olds desired lower social distance from the depressed character than 11-12 year-olds (Figure 3).

No differences were found between experienced and non-experienced participants on social distance for the control condition,  $t(103) = 0.33, p > .05$ , or the depression condition,  $t(103) = 0.23, p > .05$ , showing that experience was not associated with acceptance of a depressed or control character.

**Figure 3:** *Social Distance for Depression and Control Vignette by Age Group*



## 4.5 Discussion

This is one of the few studies to examine children's help-seeking suggestions for depression, and to provide detailed accounts of children's perceived sources of help for a depressed character as well as for oneself. Children of 9 and 12 years are able to identify the need for help for a depressed character, and suggest a number of sources of help, which are primarily informal. Mental health professionals or other professional help (e.g. doctors) are underreported. Older children were significantly more likely to suggest professional sources of help and to differentiate between the depressed and control condition with regard to the need for help. Gender differences and differences based on experience were minimal.

High percentages of children from both age groups identify that a depressed character needs help. The percentages reflect results from adolescent samples, where perceived need for help ranges from 69 to 99 percent (Georgakakou-Koutsonikou & Williams, 2017). It is interesting that higher percentages of children identified the need for external help than some of the adolescent samples (e.g. Coles et al., 2016). The results are encouraging, considering that perceived need for help constitutes a significant barrier to help-seeking (Gulliver et al., 2010). From this viewpoint, regardless of their overall level of mental health literacy, children do identify that a depressed child needs help and recommend appropriate sources of help. Nonetheless, the high percentage of perceived need for external help might also mirror developmental changes in coping. In middle childhood, children rely more on others than they do as they enter adolescence, when coping becomes increasingly more self-reliant (Zimmer-Gembeck & Skinner, 2011).

Regarding sources of help and informal strategies, children primarily refer to informal support. This is in line with previous studies with children (Hennessy & Heary, 2009). In adolescent samples, professionals are more frequently suggested (Georgakakou-Koutsonikou & Williams, 2017). However, the analysis of both binary and frequency scores shows that 61% of children suggested professional help for at least one vignette. This finding shows that children have knowledge of professional help options, however these are not systematically reported. Children in this study suggested various informal strategies to overcome depression. These strategies resemble the findings of Dixon et al. (2013), who report that 8-9 year-olds offered solutions to the difficulties of the characters (describing depression and anxiety), which were primarily informal. These solutions were influenced by children's perceived causes of the difficulties and also focused on changing thinking errors.

11-12 year-olds were better able to differentiate between the depressed and control characters with regard to the need for help, in comparison to 8-9 year-olds. This is mirrored in the level of worry participants showed towards the depressed and control condition. At the same time, 12 year-olds were more likely to suggest mental health professionals as a source of help. This is in line with previous research. Poster (1992) reports that children in sixth grade were more likely to suggest psychiatric interventions than third and fourth graders. It could be that at the age of 11-12 years, children are more knowledgeable about the role of mental health professionals than those aged 8-9 years. In line with Study 1a, it is also possible that 11-12 year-olds conceptualise the difficulties in the vignette as a mental illness, and therefore refer to professional help, while younger ones suggest informal sources of help, drawing on

from their own experiences when encountering emotional difficulties. Younger participants of 8-9 years were more likely to suggest informal strategies based on the perceived symptom of depression, which possibly reflects more concrete thinking than children at the age of 11-12 years.

There was a marked difference between children's help-seeking responses for a depressed peer and for oneself. Despite being aware of a variety of sources of support for a depressed character, children did not endorse the same sources of help for their own difficulties. This finding is in line with previous research, where adolescents were found more likely to refer a peer for help than to seek help for one-self (Leighton, 2010; Raviv, Sills, Raviv, & Wilansky, 2000). One interpretation for the current sample could be that due to their young age the participants would not autonomously decide on or access professional help. However, there remains a difference in self-report and other-report for the informal sources of help (e.g. teachers, friends). While hypothetical help-seeking was examined in this study, the results indicate the need to explore how knowledge (in this instance for sources of help) translates into behaviour (hypothetical help-seeking behaviour here). Regardless of their knowledge, children in this age group would rely on parents for decisions related to help-seeking for mental health difficulties, a finding that highlights the importance of parents in the help-seeking process. The need to explore and increase parental mental health literacy to improve children's timely help-seeking has also been highlighted in previous research (Logan & King, 2001; Ryan et al., 2015).

8-9 year-olds reported lower desired social distance from a depressed peer than 11-12 year-olds. This finding confirms previous research reporting that younger children hold more positive attitudes towards depressed peers (Bellanca & Pote, 2013; Peterson et al., 1985). It should however be noted that in the present study only one measure was used to assess social distance. Some studies have found age differences in stigmatising attitudes, depending on the examined aspect of stigma (McKeague, Hennessy, O'Driscoll, & Heary, 2015; O'Driscoll et al., 2012). A detailed examination of stigmatising attitudes surpasses the aims of this study, however the findings indicate that desired social distance increases between the ages of 8-9 and 11-12 years. Researchers have proposed that, as stigma develops at a young age, anti-stigma interventions are needed in the primary school years (Heary et al., 2017), a suggestion that is supported by the present results.

In this study, no gender differences were found. This is in line with Fox et al. (2010) who report no significant gender differences in children's (6 to 11 years) conceptions of mental illness. However, this is the first study to examine gender differences in knowledge of depression treatment and help-seeking in this age group. Gender differences in older, adolescent samples have been reported inconsistently (Georgakakou-Koutsonikou & Williams, 2017). Where differences are found, female participants show higher mental health literacy. In adulthood, gender differences in mental health literacy are more clear (Cotton et al., 2006; Swami, 2012); however various studies report no significant differences (Holzinger et al., 2012). Understanding at what age gender differences in mental health literacy and help-

seeking commence might shed light into the mechanisms under which these differences develop.

No significant experience differences were found in the study, which contradicts the limited evidence base on the role of experience in mental health literacy and help-seeking (Leighton, 2010; McMenamy & Perrin, 2008). It should be noted that the self-report method of measurement in this study is a limitation. Children's definition of depression might differ from the clinical term used by professionals (see also Chapter 3) and as such it is unclear what participants defined as having had an experience of depression. Triangulation with parental report could provide a more reliable measure of experience. Further, personal and indirect experience were combined in this study due to the low percentages of participants in each category, to allow for group comparisons. It is possible that the type of experience (direct or indirect) and in the case of indirect experience the amount of contact with the depressed person are likely to affect children's understanding.

This study is the first to explore in detail help-seeking knowledge for depression in middle childhood. Limitations of the study involve the hypothetical nature of characters used in the vignettes to explore help-seeking knowledge (Hughes & Huby, 2002), as well as the measurement of help-seeking intentions, rather than behaviour (Rickwood et al., 2005). Additionally, ethnicity was not measured in the study. Future research on the role of experience and contact is needed in the measurement of both knowledge and attitudes towards peers. Exploring how mental health knowledge

translates into behaviour or attitudes in this age group would be an interesting next step.

## **4.6 Conclusion**

This study explored children's help-seeking knowledge for depression and personal future help-seeking intentions. Children acknowledge the need for help and endorse a variety of sources of help for depressed peers. These are primarily informal; however, children are also knowledgeable about professional sources of help and this knowledge appears to increase with age. Despite their knowledge, children would refer primarily to parents for difficulties with depression. Children also offered a variety of self-help and informal treatment options for depressed peers, related to the symptoms and perceived causes of depression and involving change of thinking and behaviour. Overall, children's responses resemble results of studies with adolescent samples.

***Conclusions from Study 1:*** Based on the findings of Study 1a and 1b, children of 8-9 and 11-12 years demonstrate sophisticated knowledge of depression and complex concepts regarding its development and treatment. Areas of focus for psychoeducation on depression with this age group should involve: differentiating between common emotional variations and mental illness, defining terms to reach a shared understanding of the vocabulary used (e.g. depression used for clinical depression rather than emotional state), explaining the role of professionals in the treatment of depression, expanding children's perceived sources of help for mental health difficulties (for example, doctors) and fostering realistic expectations of treatment duration.

## **5 School-Based Mental Health Literacy Interventions**

### **5.1 Mental Health Literacy**

The evolution of the construct of health literacy has resulted in the introduction and increasing interest in the parallel concept of mental health literacy. Mental health literacy involves knowledge that aids the maintenance of mental health and the prevention of mental illness, facilitates timely recognition of the development of mental illness, promotes effective help-seeking and help-providing as well as contributes to the reduction of stigma (Jorm, 2012; Kutcher et al., 2016). Integral to current definitions of the mental health literacy construct is the assumption that increased knowledge in the above areas is related to “*a possibility of action to benefit one’s own mental health or that of others*” (Jorm, 2012, p.1). From this perspective, knowledge is linked to effective behaviour regarding self-care and help-seeking. Research on mental health literacy is rapidly increasing, both in adult and in adolescent populations. In Chapter 2, a review of relevant research on child and adolescent depression literacy is discussed in detail. In this chapter, mental health literacy is discussed in relation to interventions aiming to improve young people’s understanding of mental illness and associated behaviour and attitudes regarding help-seeking and stigma.

## **5.2 Health Literacy, Mental Health Literacy and Policies**

The benefits of health literacy and consequently the importance of health literacy interventions and strategies are widely acknowledged (World Health Organization, 2013). Meanwhile, the integral part of mental health literacy in the construct of health literacy and as such as a component of health literacy interventions is overlooked (Jorm, 2015).

Prevention and early intervention of mental illness have been identified as major challenges and priorities in mental health globally (Collins et al., 2011). The role of schools in promoting mental health and wellbeing is indisputable. Schools provide a platform where the vast majority of young people can be reached and supported. Recent policies and educational curricula increasingly acknowledge the potential contribution and duty of schools to support students' mental health in high-income countries (Australian Government, 2009; Department for Education, 2016b; Jané-Llopis & Braddick, 2000; Mental Health Commission of Canada, 2012). In Scotland, mental health policies (The Scottish Government, 2003, 2007, 2017b) as well as the national educational curriculum (Curriculum for Excellence) (Scottish Executive, 2006a) highlight the importance of mental health promotion, early identification of students with potential difficulties, early intervention within schools and mental health awareness education. The recent release of a UK advisory governmental document on school mental health indicates the growing importance and need to intervene in schools (Department for Education, 2016b), including the need to provide sessions on mental health awareness, either by teachers or mental health professionals. In Scotland, the

need to raise mental health awareness has long been identified (The Scottish Government, 2003, 2007). Mental health literacy has also been identified as part of the health literacy needs in Scotland (The Scottish Government, 2009). In England, it has been suggested that improving health literacy is a medium to resolve health inequalities (Public Health England, 2015), however, disappointingly, mental health literacy is overlooked in the process. It is evident that even within the UK, the attention given, definitions used and perceived role of mental health literacy are rather diverse.

At the same time, there are no standardised and evidence-based teaching resources for mental health education and as such schools are flexible to decide on the amount and content of mental health education through PSE or Personal, Social, Health and Economic classes (PSHE) (Department for Education, 2016b). Concurrently, teachers identify that insufficient teacher training as a central barrier to responding to students' mental health needs in schools (Reinke, Stormont, Herman, Puri, & Goel, 2011; Whitley, Smith, & Vaillancourt, 2013).

### **5.3 School-Based Mental Health Literacy Interventions**

Under the mental health literacy framework, mental health literacy interventions have been developed, in an effort to improve early intervention for mental health problems through timely help-seeking and stigma reduction. Mental health literacy programmes aim to inform young people about the symptoms and treatments of mental illness, to promote help-seeking, and as such differ from mental health interventions, the latter having a unique aim to prevent or treat mental health problems or promote mental health well-being (Wei et al., 2013). However, this division appears problematic,

considering that the defined construct of mental health literacy incorporates mental health promotion and prevention of mental illness.

To date, there are two approaches to mental health literacy programmes. Some programmes focus on mental health and illness in general, usually including components on help-seeking and stigma, while other programmes target specific disorders (Wei et al., 2013). General mental health literacy programmes aim to tackle myths and stigma of mental illness (e.g. mental illness is a weakness), encourage help-seeking, and promote mental health through skills development (e.g. relaxation, cognitive restructuring). Although the wide scope of general mental health literacy programmes allows targeting a variety of difficulties experienced by young people, it is possible that the limited depth of teaching on specific mental disorders hinders its effectiveness. Firstly, young people's knowledge and attitudes differ between mental disorders and as such generic approaches might not tackle specific misconceptions, especially stigma-related ones. Various studies show that children's and adolescents' concepts differ between mental illnesses, as for example in causal attributions (Coleman et al., 2009), suggested sources of help (Swords, Hennessy, et al., 2011a), intentions to offer help (Kelly et al., 2006) and stigma (O'Driscoll et al., 2012; Swords, Heary & Hennessy, 2011). Additionally, it is hypothesised that the ability to recognise symptoms of mental illness and knowledge of effective treatments facilitates help-seeking (Gulliver et al., 2010; Kelly & Jorm, 2007). Thus, a promising component in mental health literacy education may include information about symptoms and treatment options. Under this perspective, recent approaches combine general mental health education with specific modules on common mental health problems

experienced by young people. For instance, the Canadian national curriculum “The Guide”, comprising of ten to twelve hours of teaching, combines the two approaches, containing modules on: mental health and illness, stigma, specific mental disorders and their impact, as well as help-seeking and mental well-being. The authors report significant changes in knowledge about mental illness as well as positive changes in attitudes towards mental illness (McLuckie, Kutcher, Wei, & Weaver, 2014). One possible limitation of such approaches involves the evaluation of effectiveness in knowledge acquisition. In the abovementioned intervention, knowledge on specific disorders was measured with one to two questions each for depression/bipolar disorder, ADHD, social anxiety, panic disorder, self-harm, anorexia nervosa, psychosis and schizophrenia. Consequently, although results show significant improvements in overall knowledge, it is difficult to specify change in knowledge and attitudes to specific disorders.

In a systematic review of school-based interventions, Wei et al. (2013) report the findings of 27 studies on the effectiveness of school-based mental health literacy programmes. The authors conclude that there is insufficient evidence to state whether mental health literacy programmes have a positive impact. Most of the studies focus on mental illness in general ( $N = 16$ ), while 11 studies focus on specific disorders. Between them, five studies include teaching on depression, amongst other specific disorders (e.g. eating disorders, psychosis) and two studies are solely focused on depression literacy. However, although the authors measure school-based programmes, their criteria include participants 12 to 25 years of age. Thus, from the two studies specific to depression literacy identified in their systematic search, one

study reports a programme with undergraduate University students (Merritt, Price, Mollison, & Geddes, 2007). Therefore, only one school-based programme for depression was found, conducted by Swartz et al. (2010) in the United States. The Adolescent Depression Awareness Programme is a school-based three-hour curriculum developed in the USA, which educates students on depression and bipolar disorder, emphasising the need to seek help and receive treatment (Swartz et al., 2010). The programme has been evaluated in a pre-post test design and a non-randomised controlled trial and shows significant increases in knowledge and improvements in help-seeking/ providing intentions (Ruble, Leon, Gilley-Hensley, Hess, & Swartz, 2013; Swartz et al., 2010).

#### **5.4 Recent School Mental Health Literacy Studies**

To identify more recent research on school-based mental health literacy programmes, a systematic search of the same databases as the ones used in the review of Wei et al. (2013) was conducted in August 2016. The same search methods were used, limiting the results to studies from 2011 onwards and adding key words to identify interventions specific to or including depression. The search yielded 825 studies, of which five referred to a school-based mental health literacy programme for secondary school pupils specific to depression or including depression amongst teaching on other mental health conditions. A data extraction table, adapted from Wei et al. (2013) and updated with more recent studies is included in Appendix D (Table 34).

In the USA, Strunk, King, Vidourek and Sorter (2014) report on the “Surviving the Teens Depression Awareness and Suicide Prevention Program”, a four-day curriculum

including information on symptoms of depression and signs of suicidal risk, help-seeking/providing, but also CBT based techniques, such as: problem solving, cognitive restructuring and relaxation. In Australia, “HeadStrong”, developed by the Black Dog Institute, was evaluated by Perry et al. (2014). “HeadStrong” consists of five modules, on generic mental health literacy, mood disorders including depression, help-seeking and providing, and building resilience. The programme is intended to be taught by teachers in health class. The programme was successful in improving depression literacy and reducing personal stigma. However, no differences were found for attitudes towards help-seeking and psychological distress. Ojio et al. (2015) developed an intervention delivered by teachers in Japan, including generic components and specific information on depression and schizophrenia literacy. The authors used vignettes to measure recognition of depression and schizophrenia, together with a general mental health literacy questionnaire and help-seeking intentions. Significant differences in depression recognition, help-seeking and in some aspects of the mental health literacy questionnaire are reported, as measured before and after treatment. McLuckie et al. (2014) evaluated “the Guide”, a mental health curriculum developed in Canada (see Chapter 5.3), which involves teaching on stigma and mental illness, information on specific mental illnesses, while it also covers the impact of mental illness and help-seeking. The findings show that the intervention was effective in increasing students’ mental health knowledge and in improving their attitudes towards mental illnesses.

In the UK, one programme was identified, evaluated by Bentham, Daunt, Taylor and Simmons (2013). The fifty-minute workshop was delivered by medical students and

includes a generic module on mental health, specific information on anxiety, depression and substance abuse, stigma and help-seeking. The programme reports increased knowledge and positive changes in attitudes towards mental illness. Although the results appear promising, there are various limitations to the study design and analysis, which hinder its evaluation. Apart from the limitations of generalisability and lack of control group reported by the authors, no statistical tests were reported that would determine a significant level of change. Moreover, the questionnaire contains generic questions on mental health, of which one question refers to identifying depressive symptoms from a list of five possible symptoms (three depression symptoms and two symptoms of other mental illnesses). As such, it is difficult to judge changes in depression knowledge.

Effectiveness of mental health literacy programmes is usually measured in three areas: knowledge acquisition, changes in stigmatising attitudes and changes in help-seeking intentions or behaviour (Wei et al., 2013). The majority of studies report significant improvements in knowledge, while results in help-seeking and stigma are mixed. More importantly, heterogeneity of interventions (including content, duration, delivery method), measurement tools, time of measurement, study design, as well as populations do not allow for comparisons between studies (Wei et al., 2013). The five mental health literacy interventions published between 2013 and 2016 and identified through the updated systematic search face similar methodological limitations as those identified by Wei et al. (2013). These include either lack of control group (Bentham et al., 2013; McLuckie et al., 2014; Ojio et al., 2015) or lack of randomisation (Strunk et al., 2014), with the exception of the study of Perry et al. (2014) who conducted a cluster

randomised control trial. In turn, some studies lack long-term follow-up (Bentham et al., 2013; Strunk et al., 2014). Finally, some studies did not report psychometric properties of the utilised measurement tools (Bentham et al., 2013; Ojio et al., 2015). It should be noted that the study conducted by Perry et al. (2014), evaluating the programme “HeadStrong”, constitutes the only study identified that is of higher methodological quality and meets criteria for low risk of bias.

Below, school-based interventions aiming to improve depression literacy are presented, with a focus on their content and measurement of knowledge.

#### **5.4.1 Depression literacy interventions.**

Combining the results of Wei et al. (2013) with the updated search of databases, ten studies have evaluated mental health literacy programmes specific to depression or including depression literacy until 2016. One study is specific to depression (Swartz et al., 2010), one is focused on depression and suicide (Strunk, King, et al., 2014) while eight studies report interventions including teaching on depression amongst other mental illnesses. Four studies are from the USA, and one each from Australia, Canada, Germany, Japan, Pakistan, and the UK. Three studies adopted a pre-post-test design, four studies use a controlled before and after (CBA) design and three studies are randomised controlled trials. Duration of the interventions varies between a single fifty-minute session to twelve hours of teaching.

Overall, depression-specific interventions or general interventions including specific information on depression show increase in knowledge about depression in all eight studies measuring depression knowledge (Bentham et al., 2013; McLuckie et al., 2014;

Naylor, Cowie, Walters, Talamelli, & Dawkins, 2009; Ojio et al., 2015; Perry et al., 2014; Rahman, Mubbashar, Gater, & Goldberg, 1998; Strunk, King, et al., 2014; Swartz et al., 2010). Two studies report mixed results, with significant knowledge change found in some of the areas examined (Naylor et al., 2009; Ojio et al., 2015). Three of the studies administered a follow-up questionnaire, between two and six months following the intervention, reporting that changes in knowledge were maintained (McLuckie et al., 2014; Ojio et al., 2015; Perry et al., 2014). In turn, five studies explored help-seeking, four of which report significant improvements (Battaglia, Coverdale, & Bushong, 1990; Conrad et al., 2009; Ojio et al., 2015; Strunk, Sorter, Ossege, & King, 2014); one study found no significant change (Perry et al., 2014). Finally, five studies examined stigmatising attitudes and they all report significant improvements (Bentham et al., 2013; Conrad et al., 2009; McLuckie et al., 2014; Perry et al., 2014; Strunk, King, et al., 2014).

#### **5.4.2 Measurement of depression literacy.**

Various questionnaires have been developed to measure depression knowledge either in mental health literacy cross-sectional surveys or in the evaluation of interventions (Wei et al., 2013, 2015, 2016). In both areas of research, studies normally use questionnaires developed for the specific aims of the study. In the abovementioned interventions including teaching in depression, one study used a modified version of a standardised adult depression literacy questionnaire (D-Lit) (Griffiths, Christensen, Jorm, Evans, & Groves, 2004). In a recent systematic review of the psychometric properties of mental health literacy knowledge measures, of the sixteen reviewed questionnaires, five studies measure depression literacy, of which only the Adolescent

Depression Knowledge Questionnaire (ADKQ) was developed for an adolescent population (Wei et al., 2016). That is, although other depression literacy measures exist, psychometric properties have not been reported or measured adequately. The ADKQ was developed for the evaluation of the ADAP, a school-based depression literacy intervention (Hart et al., 2014; Swartz et al., 2010). The questionnaire comprises of 19 items, with the majority being dichotomous statements (e.g. “*Depression can be controlled through willpower*”) on depression and bipolar disorder.

From the remaining studies that include or are focused solely on depression, a common measurement method is to provide true-false questions on facts about mental illness and in turn calculate a total score (e.g. McLuckie et al., 2014; Rahman et al., 1998). Some studies also use vignette-based methods to introduce the examined disorder, and in turn measure recognition together with knowledge (e.g. Ojio et al., 2015). One limitation of studies introducing and measuring a variety of mental illness common in adolescence is the inevitable limited scope of measurement for each disorder. For example, Naylor et al. (2009) included teaching in depression, stress, suicide/self-harm, learning disabilities and bullying. Similarly, Bentham et al.’s (2013) intervention involves teaching on depression, anxiety, drug abuse as well as general mental health. In the process of evaluating the effectiveness of such interventions, a generic scale including questions on all of the taught areas does not allow researchers to explore in depth young people’s concepts of specific disorders or to appropriately measure change for each topic.

To conclude, efforts to increase students' mental health literacy and to provide the evidence base on the effectiveness of such interventions are evident in recent years. Mental health literacy interventions include a wide range of topics, delivery methods and measurement tools. To date, evidence on the effectiveness of school based mental health literacy interventions is not strong, although where significant changes are found, these are in the hoped-for direction.

In this thesis, an intervention on depression literacy was developed and evaluated with secondary school pupils. In the next chapter (Chapter 6), the development of the intervention and of the evaluation tool are presented. In turn, in the following two chapters (Chapters 7 and 8), the analysis of the findings of the study are presented. Chapter 7 includes the exploratory factor analysis of the questionnaire and the baseline questionnaire results and in Chapter 8 the evaluation of the intervention is presented.

## **6 The Development of the “*Depression in Young People*”**

### **Mental Health Literacy Intervention**

#### **6.1 Introduction**

In Scotland, while mental health policies acknowledge the importance of mental health promotion, early identification, early intervention within schools and mental health awareness education, the respective teaching resources are lacking. Further, although the pivotal role of schools in promoting student physical and mental health is recognised, research has yet to determine the knowledge and skills young people need to achieve positive mental health and well-being. The construct of mental health literacy has been created to fill this gap (Kutcher et al., 2016; Wei, Kutcher, & Szumilas, 2011). Mental health literacy includes knowledge on maintaining positive mental health, understanding of mental disorders and effective treatments, reducing stigma, as well as coping strategies to cope with mild difficulties (Kutcher et al., 2016).

To the author’s best knowledge, there are no evaluation studies of classroom-based depression literacy interventions for adolescents in the UK. As educational curricula vary between countries, it is essential to tailor interventions to the specific target group, according to their baseline knowledge and attitudes. In this chapter, the development of a single-session classroom-based psychoeducational intervention on depression in

adolescence is presented, together with the questionnaire developed to evaluate this study and to capture young people's depression literacy.

## **6.2 Intervention Development**

The intervention consists of a one-hour psycho-educational classroom-based session on depression in young people, in order to fit within school timetables. The intervention is based on a previous session developed by the Young People's Unit, Child and Adolescent Mental Health Services (CAMHS), NHS Lothian, entitled "Depression in Young People", delivered in Edinburgh as part of PSE. The content of the intervention is based on the concept of mental health literacy, which includes: knowledge about mental illness, being able to recognise a mental illness, knowledge about help-seeking options and effective treatments, knowledge about maintaining positive mental health, mental health first-aid skills to support others and stigma-reducing strategies (Jorm, 2012; Kutcher et al., 2016). The first part of the session is based on knowledge about depression, and is structured according to the five dimensions of the CSM, as described by Leventhal et al. (1980) (see Chapter 2). The content includes: symptoms of depression, aetiology and risk factors, consequences of depression in young people, curability and timeline to recovery. The content of the slideshow presentation is included in Appendix E.

### **6.2.1 Symptoms of depression.**

Symptoms of depression were discussed, triggered by a small group task on identifying possible depression signs with the use of a video (see paragraph on tasks below). Common symptoms, based on DSM-IV (American Psychiatric Association, 2000) and

ICD-10 criteria (World Health Organisation, 1992) for major depression were presented, organised in four categories, according to the cross-sectional cognitive-behavioural formulation of depression. At this section, symptoms and consequences of depression were considered intertwined and as such possible signs of depression (e.g. decline of school work) could also be conceived as consequences.

### **6.2.2 Aetiology.**

Perceived causes of depression might relate both to perceived helpfulness of treatments, as well as to stigmatising beliefs. In adult populations, studies have confirmed the intuitive association between attributions of mental illness and perceived sources of help (e.g. Angermeyer, Matschinger, & Riedel-Heller, 1999) and treatment preferences (Dunlop et al., 2012; Khalsa et al., 2011). Common aetiological factors were thus presented, based on current theories of developmental psychopathology (Carr, 2005; Hammen, Rudolph, & Abaied, 2014). Using a metaphor, equifinality and the variety of factors that can lead to depression were emphasised.

### **6.2.3 Curability and treatment options for depression.**

In a study examining predictors of mental health help-seeking for young people in the UK, O'Connor, Martin, Weeks and Ong (2014) found that perceived benefits of seeking help were stronger predictors than perceived barriers of seeking help. Based on this finding, the authors discuss the need for mental health promotion programmes to convey the message that mental health services offer effective treatments and prevention of dysfunctional coping. This finding is especially important considering

that current effective interventions have been based on removing barriers to help-seeking (such as stigma), in accordance with previous research (e.g. Gulliver et al., 2010) and theoretical suggestions of the mental health literacy field (e.g. Kutcher et al., 2016). In the present intervention, the incorporation of information on curability and treatment control is in line with O'Connor et al.'s (2014) suggestions. By presenting information on effective psychological therapies for adolescent depression available through CAMHS in Scotland (e.g. CBT and IPT-A), which are in line with the evidence base and national guidelines (NICE, 2015), it was expected that the session would add to perceived benefits of seeking help, and possibly indirectly affect participants' help-seeking intentions. Additionally, the effectiveness of treatments in combination with information on the process of accessing care from CAMHS, through GPs and school, could potentially add to young people's intention to seek help from a variety of sources of help available to them. Although young people realise the need for professional help for a depressed peer (e.g. Melas et al., 2013; Swords, Hennessy & Heary, 2011a), young people consider family and peers as the primary sources of help for emotional difficulties for oneself (Hagell, Coleman, & Brooks, 2013; Raviv et al., 2000).

The second part is based on help-seeking and self-help strategies, including: informal and professional help-seeking, supporting a friend with depression (help-providing) and self-help strategies for mild emotional difficulties.

#### **6.2.4 Help-providing.**

Developmentally, adolescents tend to increasingly rely more on oneself and friends for support (Rickwood et al., 2005). For depression, adolescents are more likely to seek help from professionals, if recommended by their support network (Vogel, Wade, Wester, Larson, & Hackler, 2007). Similarly, adolescents tend to spend more time with peers (Brown & Larson, 2009; Larson & Verma, 1999) and are thus more likely to identify changes in behaviour than adults. Thus, help-providing strategies were included in this study to emphasise the need to engage an adult to ensure safety and well-being and to facilitate talking about depression whilst removing the stigma or misconceptions. Regarding the latter, Kelly and Jorm (2007) found that a small percentage (4%) of adolescents in their study would not offer help to a depressed peer, believing that they would worsen the situation. Especially for depression with suicidal ideation, the common myth that talking about suicide might increase the risk (World Health Organization, 2014) is of particular concern regarding young people's intention to offer assistance to a depressed peer. From a similar perspective, Kelly and Jorm's (2007) study showed that more than one in every five adolescents would provide an unhelpful response, defined as "inappropriate but well-intended" behaviours, such as offering use of substances. Likewise, small proportion of young people would refer to an adult for help (Byrne et al., 2015; Kelly & Jorm, 2007). Concluding, informing young people on help-providing strategies could not only increase the possibility of seeking professional or adult help, but also indirectly tackle common misconceptions and fears.

## **6.3 Delivery**

A systematic review of effective mental health programmes in schools has identified that effective interventions use active rather than didactic methods and involve interactive teaching. Moreover, a combination of different teaching methods has been found to improve learning, in comparison to one pedagogical approach (Weare & Nind, 2011). Similarly, collaborative learning techniques, including group discussion with peers are considered facilitators of learning (Hämäläinen & Vähäsantanen, 2011; Limón, 2001) and have been found effective in teaching of sciences (Schroeder, Scott, Tolson, Huang, & Lee, 2007). To facilitate learning, a variety of teaching methods were employed for the intervention, including lecturing, video-presentations, small group discussions and tasks, whole-class discussions as well as individual work. This combination of techniques was chosen to: create an engaging and interactive session, include peer learning and accommodate different learning styles. Below, each method is discussed in further detail.

### **6.3.1 Videos.**

Videos were used during the session to trigger group discussions on the signs of depression and on help-providing strategies. The videos were developed by NHS Lothian CAMHS and portray two adolescents with depression. The videos capture common signs of depression in young people, as well as systemic factors that are associated with the development of depression (e.g. bullying). The second video introduces suicidal ideation, which is discussed in the subsequent group activity.

### **6.3.2 Integrated intervention group activities.**

#### ***6.3.2.1 Group activity one: signs of depression.***

This task aims to introduce the session through an interactive pedagogical method, including video-presentation, followed by small group work and in turn whole-class discussion. The task is based on CBT and uses a cross-sectional formulation (feelings, thoughts, behaviour and physical symptoms) as a framework for students to identify possible depressive symptoms after watching the video (Appendix E).

#### ***6.3.2.2 Group activity two: helping a friend.***

After watching the second video, portraying an adolescent girl with depression and suicidal ideation, students are asked to discuss strategies to help a friend with similar difficulties in small groups. This task is followed by a section on help-providing and in turn help-seeking, emphasising the need to engage an adult.

#### ***6.3.2.3 Coping strategies.***

Maintaining positive mental health, through learning and implementing helpful self-help strategies, is a central part of the concept of mental health literacy (Jorm, 2012; Kutcher et al., 2016). A “Coping Scale” individual task was developed, asking participants to classify the helpful and unhelpful coping strategies they use from a list of statements. The statements were chosen from four child and adolescent coping scales (Brodzinsky et al., 1992; Causey & Dubow, 1992; Dise-Lewis, 1988; Frydenberg & Lewis, 2011) and aim to encourage students to reflect on their personal strategies when encountering emotional difficulties. It was emphasised that these self-

help strategies could be implemented for mild emotional difficulties and do not substitute the need to seek help for moderate-severe depression (Appendix E).

### **6.3.3 Debriefing.**

A debriefing leaflet was distributed at the end of the study, including information about support services and points of contact for mental health difficulties (Appendix E). Links to websites designed to raise awareness about adolescent depression were also provided, with the aim to further promote help-seeking. Some of the information delivered to students is also available on a website, developed by Lothian CAMHS (Scotland) aiming to provide further information to young people (Richards, Cannon, & Scott, 2004). The content of the website has been evaluated by young people and has shown positive initial results (Young, Richards, & Gunning, 2012). Participants were also given the opportunity to ask questions about the session and research. Finally, participants were asked to fill an anonymised feedback sheet to provide their evaluation of the session, together with possible recommendations.

### **6.3.4 Expected mechanisms of impact.**

It was hypothesised that the session will produce change under the following assumptions. According to the mental health literacy framework, the ability to identify symptoms and the knowledge about sources of help are contributors to effective and timely help-seeking (Jorm, 2012). Indeed, insufficient ability to identify symptoms is one of the main barriers to help-seeking for adolescents with depression and anxiety (Gulliver et al., 2010). Under this premise, it was expected that a discussion about the symptoms of adolescent depression as well as videos showing young people

with depressive symptoms would increase participants' knowledge and in turn improve their ability to recognise symptoms in oneself and others. As adolescents consider peers as one of the first sources of support, increasing all students' ability to recognise symptoms would encourage students to facilitate help-seeking for friends, in addition to oneself. Help-providing information and information about sources of help provided during the session would facilitate encouraging friends to seek help, considering that a large number of adolescents would not necessarily engage adults for a depressed peer (e.g. Byrne et al., 2016). Some adolescents, as well as children (see Study 1) might struggle to categorise depression as a mental health problem, although they do recognise the "abnormal" nature of depressive symptoms (e.g. Leighton, 2010). Facilitating classifying symptoms under the term of depression could thus aid directing the help-seeking process towards mental health professionals and services. Research shows that knowledge about mental illness predicts lower personal stigma (Griffiths, Christensen, & Jorm, 2008) and more positive attitudes towards depressed people (Milin et al., 2016) and does not lead to increased perceived stigmatisation of depression (Angermeyer & Matschinger, 2003; Wright et al., 2011) as previously suggested in the literature (Link & Phelan, 2006). Finally, the content of the session on aetiology, consequences, curability and recovery timeline were expected to inform young people's depression literacy and to challenge stigmatising (e.g. depression is a weakness) or dysfunctional beliefs (e.g. belief in dealing with depression alone).

## **6.4 Development of the Adolescent Concepts of Depression**

### **Questionnaire (ACDQ) Evaluation Tool**

Although there have been a number of studies examining public understanding of mental illness, and more recently adult and young people's mental health literacy, very few standardised measures have been developed, even fewer for specific mental illnesses (Wei et al., 2013, 2016). This is not surprising, considering that the construct of mental health literacy is relatively new, and is continuing to evolve over the last two decades. Mental health literacy comprises of a broad range of knowledge, skills and attitudes that are not necessarily addressed in all interventions (Jorm et al., 2012; Kutcher et al., 2016). Therefore, Jorm (2015) suggests that measures specific to the aims of each intervention are needed for effective evaluation. Moreover, in psychopathology research, diverse theoretical models and treatment options are constantly developed and evaluated and as such specifying what would be defined as correct knowledge of mental illness is a problematic task, that is likely to be marked by the perspective of those developing the measure.

Currently, to the author's best knowledge, there exists only one questionnaire for the measurement of young people's depression concepts. ADKQ was developed with the aim to evaluate the ADAP, a school-based depression literacy intervention (Hart et al., 2014; Swartz et al., 2010). The first section of the questionnaire comprises of 19 dichotomous items measuring knowledge of depression and bipolar disorder. The remaining items measure help-seeking and help-providing intentions. In this study, a similar approach was not deemed appropriate; as one of the primary aims of this thesis is to provide a detailed account of adolescents' depression concepts, an elaborate

questionnaire was needed to capture young people's concepts. Thus, a questionnaire measuring young people's concepts of depression was developed for this study. The questionnaire contains two parts. The first part measures depression knowledge, using Leventhal et al.'s (1980) CSM of illness representations as a conceptual basis and therefore contains five categories: identity, causes, consequences, timeline and curability/control, the latter also including treatment options. The second part examines hypothetical help-seeking and help-providing intentions, as well as desired social distance.

#### **6.4.1 Depression knowledge.**

In the first section, 27 statements are used to measure the participant's agreement on a five-point Likert scale, from 0 (completely disagree) to 4 (completely agree) (see Appendix E). The statements involve: identity (3 items); causes (6 items); consequences (6 items); timeline (3 items) and cure/control (9 items). Identity further includes symptom recognition, where participants are asked to list three symptoms of depression. For causes, each statement measures different aspects of conceptualising depression aetiology, including: equifinality, social factors, genetic factors, personality factors, and life events. Similarly, the consequences are based on the interpersonal psychotherapy for depressed adolescents (IPT-A) (Moreau, Mufson, Weissman, & Klerman, 1991) and cognitive-behavioural theory of adolescent depression (Beck, 1979), including: interpersonal deficits, disputes, academic performance, social isolation and negative thinking. It was decided to use both frameworks, as these were considered to complement each other in capturing depression phenomenology in adolescence. While CBT frameworks connect the

cognitive, behavioural and emotional aspects of depression; IPT-A offers an explicit focus on the social context. Especially for adolescents, interpersonal relationships are of great importance and a source of emotional distress (Kenny, Dooley, & Fitzgerald, 2013). Thus, IPT-A has been adapted from the traditional IPT approach, to incorporate and prominently target interpersonal difficulties, the latter being developmentally and clinically relevant for depressed adolescents (Mufson, Dorta, Moreau, & Weissman, 2011). For personal control, three items measure perceived personal control over depression, with one item reversed. For curability/treatment control, three statements are included, of which one item is reversed. Similarly, three items measure timeline to recovery, each measuring agreement with a different time period to recovery (few days, few months, years). Finally, three items measure treatment options, including talking therapy, medication and a combination of both, according to evidence-based treatments (NICE, 2015).

#### **6.4.2 Help-seeking.**

Two questions measure personal help-seeking intentions. The first question is a multiple-choice question phrased as “*if you thought you had depression, what would you do?*” and possible choices include “tell someone”, “keep it a secret”, “I wouldn’t know what to do”. For participants that respond that they would tell someone, they are in turn asked to indicate personal hypothetical sources of help from a list, and to name which source of help would be the first point of contact. The listed sources of help are: parents, teachers, friends, doctors, school doctor/nurse, school counsellor, sibling, other family members and helplines.

### **6.4.3 Helpfulness of sources of help.**

Two scenarios are described, accompanied by a question each about the helpfulness of five sources of help, the latter being parent, teacher, friend, mental health professional (MHP) and doctor. These categories have been based on previous research, showing that adolescents suggest these sources of help for depression (Swords, Hennessy & Heary, 2011a). These options are rated on a ten-point Likert scale from 1 (not at all helpful) to 10 (extremely helpful). The presented scenarios include a hypothetical depressed friend with self-harming intentions and a control condition of a friend with a common emotional difficulty (relationship breakdown). The questions aim to capture whether young people recognise the different type of needed support for common emotional difficulties and for clinical depression.

### **6.4.4 Help-providing.**

A third scenario introduces a young person with suicidal thoughts and asks the participant whether they would tell someone, keep it a secret or whether they would not know what to do. This question is based on a similar question developed by Hart et al. (2014). One question measures the young person confidence in supporting a friend with depression, using a ten-point Likert scale from 1 (not at all confident) to 10 (completely confident). Previous research has explored confidence levels in relation to help-providing and stigma, reporting that participants with higher desired social distance were more likely to offer unhelpful responses, not engage an adult and report being less confident (Kelly & Jorm, 2007). In this study, confidence was measured to test whether participants feel more confident in providing help, after a psychoeducational session including help-providing information.

#### **6.4.5 Social distance.**

This part is included to explore whether the intervention has an indirect effect on social distance, as suggested in previous research (e.g. Milin et al., 2016). A fourth scenario is presented, followed by four questions regarding hypothetical desired social distance from a depressed classmate. The scale has been used in the first study of this thesis and has been adapted from previous research (Wright et al., 2011).

#### **6.4.6 Experience with depression.**

Personal experience is measured to examine whether experience is associated with conceptualisations of depression. In the previous study of this thesis, experience was not associated with children's conceptions. To examine the role of experience in adolescent depression concepts, the participant was asked if s/he has had depression or any other mental health problem in the past. Indirect experience is measured by asking whether the participant knows other people who have had depression or other mental health problems. It was decided to measure experience at post-test rather than pre-test in an attempt to increase the validity of self-reported experience. That is, it was considered possible that the adolescent construct of depression differs from the clinical term of depression, as indicated in the first study of this thesis and identified in previous research (Burns & Rapee, 2006). By asking participants following the session, it was expected that their responses would reflect an experience of clinical levels of depression more closely. The questionnaire is included in Appendix E.

## **6.5 Strengths and Limitations**

### **6.5.1 Intervention.**

The strength of the intervention lies upon the development process, which is based on: existing research on depression literacy, children's conceptualisations of depression as explored in the first study of this thesis, as well as on previously developed resources created by experienced mental health professionals. As such, the intervention is relevant to young people's baseline knowledge of depression and targets the majority of mental health literacy aspects outlined in the literature. In accordance with Kelly, Jorm and Wright (2007), who indicated effective components of mental health literacy interventions for young people, a references group of adolescents ( $N = 16$ ) was consulted before the delivery of the intervention to ensure that the content, language and tasks were acceptable to young people and relevant to their knowledge. A possible limitation of the intervention is the lack of focus on destigmatising depression. Although stigma is discussed as a potential barrier for treatment and certain depression myths are deconstructed (e.g. depression is a weakness), the focus on stigma is limited throughout the intervention. However, the short delivery time and specific focus on depression in adolescence would allow the intervention, proven its effectiveness, to be included as a module of a larger mental health literacy intervention within schools.

### **6.5.2 Evaluation questionnaire.**

Although developing a questionnaire to measure changes in young people's depression knowledge was necessary for this study, there are certain limitations when using a newly developed measure. Firstly, every research using a newly-developed questionnaire faces uncertainty regarding the validity and reliability of the measure.

Secondly, wording in certain statements related to treatment options could be problematic. Some of the statements had an absolute wording (e.g. “depression is *always* treated with anti-depressants”, emphasis added) while other statements were less deterministic (e.g. some young people *might* be prescribed medication and also have talking therapies”, emphasis added). Thus, validity for certain items might be compromised. However, apart from the statement mentioned above, no other statements were considered as absolute in their wording.

However, these limitations reflect that research in mental health literacy is in its infancy. Using existing standardised questionnaires for depression concepts was not possible, as the only existing questionnaire designed for adolescents measures both depression and bipolar disorder knowledge and would prohibit a thorough examination of adolescent’s conceptualisations of depression. The next steps would require examination of the psychometric properties of the questionnaire with a large sample of adolescents, as well as a comparison with existing measures where possible (e.g. help-seeking).

In the next two chapters, a study evaluating the effectiveness of the intervention is presented. Chapter 7 involves a descriptive analysis of participants’ baseline depression literacy. In Chapter 8, results from the evaluation are presented.

## **7 Study 2a: Adolescents' depression literacy and help-seeking: analysis of the baseline measurement**

In this chapter, the pre-test questionnaire results are presented. Descriptive analysis and questions related to age, gender, experience and depressive symptom differences are answered.

### **7.1 Introduction**

As research on mental health literacy is increasing, numerous studies have explored adolescents' depression literacy. Aiming to examine factors associated with help-seeking, most studies explore aspects of depression literacy in isolation, most commonly recognition of depression, sources of help and treatment timeline. Another stream of research explores causal attributions in relation to stigmatising attitudes (e.g. Coleman et al., 2009). Gaps in our understanding of adolescent depression literacy remain, imposing a need for a thorough examination of mental health concepts (Georgakakou-Koutsonikou & Williams, 2017). Thus, one of the aims of this study is to add to the evidence base on young people's depression concepts, providing a detailed account of adolescent concepts of depression, organised according to the CSM (Leventhal et al., 1980).

Secondly, studies have inconsistently reported gender differences in young people's mental health literacy (Burns & Rapee, 2006; Cotton et al., 2006). In studies that report

gender differences, girls show higher mental health literacy than boys and less stigmatising attitudes (e.g. Swords, Heary & Hennessy, 2011). The effect of age on mental health literacy is unclear. Some studies with adolescents have reported significant differences in, for example, suggested sources of help (e.g. Swords, Hennessy & Heary, 2011a) and perceived causes of depression (e.g. Essau et al., 2013). Research to date exploring age trends is very limited. To that end, age and gender effects are examined, as well as a possible interaction of the two variables, as suggested in a previous review (Georgakakou-Koutsonikou & Williams, 2017).

Even less is known about the role of an experience of depression, as well as the role of depressive symptoms, in young person's understanding of depression. For example, higher depressive symptoms are associated with higher levels of help-negation in young adults (Wilson & Deane, 2010). It is possible that depressive symptoms also affect specific aspects of the adolescent's depression conceptualisation that interfere with help-seeking. In this study, the association between depressive symptoms and depression literacy is explored.

Finally, little quantitative data exist on the role of experience in depression literacy; studies to date have explored experience in association with help-seeking intentions, rather than depression conceptualisations (Georgakakou-Koutsonikou & Williams, 2017). Adult studies show that experience and contact are related to higher depression literacy (Cutler et al., 2017; Dahlberg et al., 2008). Therefore, a further aim of the present study is to answer whether direct (personal) and indirect (contact) experience is associated with depression literacy.

## 7.2 Research Aim and Questions

The aim of the study is to explore adolescents' depression concepts, as measured by the ACDQ, including young people's depression knowledge, help-seeking and help-providing intentions, as well as desired social distance. Further, differences based on age, gender, current depressive symptomatology and experience are examined. The specific research questions and hypotheses are:

**Research Question 1:** What are young people's depression literacy and help-seeking and help-providing intentions?

**Research Question 2:** Are age group and gender differences in young people's depression literacy and help-seeking/help-providing intentions?

*Hypothesis 1:* It was hypothesised that female participants would show higher depression literacy, would be more likely to refer to an adult for help for oneself and for a friend, and they would be more likely to endorse personal sources of help than boys.

*Hypothesis 2:* It was hypothesised that older participant would show higher depression literacy, would be more likely to seek help from others for personal help-seeking and help- providing and would be more likely to endorse personal sources of help.

**Research Question 3:** Do young people differentiate between the helpfulness of sources of help for depression and "normal" emotional difficulties?

*Hypothesis 3:* It was hypothesised that young people would rate sources of help differently for the depression and control condition. It was expected that professional sources of help (teachers, MHPs and doctors) would be rated as more helpful for

depression than for emotional difficulties, and informal sources (parents, friends) as more helpful for emotional difficulties than depression.

**Research Question 4:** Do depressed and non-depressed young people have different levels of depression literacy and help-seeking intentions?

*Hypothesis 4:* It was hypothesised that current depressive symptomatology would be associated with higher depression literacy. In turn, it was expected that participants above the clinical cut-off would be less likely to refer to an adult for help.

**Research Question 5:** Is experience related to young people's depression literacy?

*Hypothesis 5:* It was expected that experienced participants would show higher depression literacy than non-experienced peers.

**Research Question 6:** Are age and gender associated with social distance from a depressed character?

*Hypothesis 6:* It was expected that female participants would show lower desired social distance. No hypothesis was developed for age.

The following operational definitions were used to guide the analysis:

*Depression literacy:* Depression literacy was defined as knowledge about depression, including depressive symptomatology and aspects of treatment. Depression literacy was measured by knowledge of depressive symptoms and ACDQ scores (see sections 7.4.4 and 7.5.1 in this chapter, as well as section 6.4 in the previous chapter).

*Help-seeking:* Help-seeking is defined as personal hypothetical help-seeking intentions and hypothetical personal sources of help.

### **7.3 Ethical Approval**

The study adheres to the British Psychological Society's (BPS) code of ethics and conduct and the Code of Practice for Research (UK Research Integrity Office, 2009) followed by the University of Edinburgh. Ethical approval was granted from the City of Edinburgh Council Ethics Committee (3.02.2016) and the University of Edinburgh (School of Health in Social Science, approval date: 18.12.2015). Agreement from the Head teacher as well as parental and child informed consent were required for participation. As the study presented here is part of the evaluation of the intervention, ethical considerations are discussed in detail in chapter 8.3. Approval letters and consent forms are presented in Appendices F and G respectively.

### **7.4 Methodology**

#### **7.4.1 Study design and procedure.**

The study design is cross-sectional. Participants were asked to complete the Adolescent Concepts of Depression Questionnaire (ACDQ) in class, during PSE class. For a detailed description of the ACDQ, see Chapter 6. Participants also completed the SMFQ (Angold et al., 1995), a self-report screening questionnaire of depression, which allowed to examine associations between depressive symptomatology and depression literacy.

Sample size calculation was conducted for the aims of the evaluation of the study and is presented in Chapter 8.4.2. Regarding the aims of the present analysis, 158 participants were needed for interaction effects of two-way ANOVAs (age and gender)

and 128 for independent sample t-tests, in order to detect a medium effect ( $d = .5$ ), for  $\alpha = .05$  and power of  $.80$ .

#### **7.4.2 Eligibility.**

Students in Years 2, 3 and 4 in the participating schools were eligible for participation. This age range was chosen, as most adolescents at this age attend school, before individualised pathways to other educational options and/or school leaving. As such, a universal intervention in Scotland is likely to reach the majority of young people if delivered at the early secondary school years. Additionally, an increase of depression prevalence during this age range has been identified, starting at the age of 13 years (Costello et al., 2003).

#### **7.4.3 Participants.**

Participants were 339 students (mean age  $M = 13.38$  years,  $SD = 0.83$ , 49.3% female) in mainstream education in Year 2 (13 year-olds) (mean age 12.91,  $SD = 0.54$ , 50.3% female), Year 3 (14 year-olds) ( $M = 13.60$  years,  $SD = 0.53$ , 44.4% female) and Year 4 (15-year-olds) ( $M = 14.84$ ,  $SD = 0.43$ , 59.1% female) from two schools in Edinburgh. There were unequal numbers of participants from each year group ( $p < .001$ ); approximately half of the participants were from the younger age group; 15 year-old participants are under-represented ( $N = 44$ , 13%). Table 21 provides more information on participant demographics. Among the participants that responded in the question measuring personal experience ( $N = 323$ ), 12 participants (3.7%) reported both an experience of depression and of other mental illness. Among the participants reporting

on levels of contact ( $N = 310$ ), 98 (31.6%) reported contact with people with depression as well as with people with other mental illness.

**Table 21:** *Participant Demographics*

		13 years (Year 2)		14 years (Year 3)		15 years (Year 4)		Total	
		N	%	N	%	N	%	N	%
Gender	male	91	49.7%	60	55.6%	17	39.5%	168	50.3%
	female	92	50.3%	48	44.4%	26	60.5%	166	49.7%
SMFQ	<8	137	74.1%	88	80.7%	31	70.5%	256	75.7%
	≥8	48	25.9%	21	19.3%	13	29.5%	82	24.3%
Depression experience	no	94	52.5%	76	72.4%	28	68.3%	198	60.9%
	yes	17	9.5%	12	11.4%	6	14.6%	35	10.8%
	don't know	68	38.0%	17	16.2%	7	17.1%	92	28.3%
MH experience	no	112	62.6%	80	76.2%	30	73.2%	222	68.3%
	yes	27	15.1%	10	9.5%	3	7.3%	40	12.3%
	don't know	40	22.3%	15	14.3%	8	19.5%	63	19.4%
Indirect depression experience	no	53	29.9%	37	35.2%	13	32.5%	103	32.0%
	yes	91	51.4%	48	45.7%	22	55.0%	161	50.0%
	don't know	33	18.6%	20	19.0%	5	12.5%	58	18.0%
Indirect MH experience	no	56	32.9%	48	45.7%	11	29.7%	115	36.9%
	yes	81	47.6%	39	37.1%	18	48.6%	138	44.2%
	don't know	33	19.4%	18	17.1%	8	21.6%	59	18.9%

*Note.* SMFQ: Short Moods & Feelings Questionnaire. MH: Mental Health

#### 7.4.4 Measures.

The measures are explained in detail in Chapter 6.4. Below, variables used for the present analysis are briefly presented.

#### ***7.4.4.1 Adolescent Concepts of Depression Questionnaire (ACDQ).***

The questionnaire development process is discussed in detail in Chapter 6. The questionnaire includes 27 Likert items measuring agreement with aspects of depression literacy, based on the five dimensions of the CSM (Leventhal et al., 1980). Knowledge of symptoms is measured by the total number of listed symptoms (ranging from zero to three). To measure ACDQ scores, an exploratory factor analysis was conducted to reveal the factor structure of the questionnaire and to examine areas where adolescents' mental health literacy might be higher or lower.

#### ***7.4.4.2 Short Moods and Feelings Questionnaire- child report (SMFQ).***

The SMFQ (Angold et al., 1995) was used to measure possible correlations between depressive symptomatology and depression literacy. The questionnaire comprises of 13 questions answered on a three-point Likert scale, thus the maximum total score is 26. Studies have indicated a cut-off point of eight (Angold et al., 1995; Thapar & McGuffin, 1998), which was the cut-off point used in this study. Reliability in this study was excellent, Cronbach's  $\alpha = .899$ .

#### ***7.4.4.3 Social distance.***

The scale has been developed previously (Kelly & Jorm, 2007) and has been adapted and used in the first study of this project. The scale involves four statements, measuring desired social distance from a hypothetical depressed peer on a four-item Likert scale. Reliability measured using Cronbach's alpha was excellent ( $\alpha = .894$ ). Each question was rated from 1 (definitely not) to 4 (definitely yes), thus the total score ranges from 4 to 16, with higher scores indicating less desired social distance.

#### ***7.4.4.4 Direct and indirect experience of depression and mental illness.***

Previous experience with depression and/or other mental illnesses was measured at post-test, however the variables are used in this section to explore the role of experience in depression literacy. Four variables measure experience; direct experience refers to a personal experience and indirect experience refers to contact. Direct experience of depression and mental illness other than depression are measured in two binary variables. To measure level of contact (depression contact and other mental illness contact), ordinal variables from zero (not knowing a person with depression/mental illness) to six (contact with a person on a daily basis) were created.

#### ***7.4.4.5 Helpfulness of sources of help.***

Five sources of help are presented: parents, teachers, friends, Mental Health Professionals (MHPs) and doctors. These are rated on a ten-point Likert scale from least helpful to most helpful. Two scenarios are presented, a hypothetical depressed friend with self-harming intentions and a control condition of a peer with a common emotional difficulty (relationship breakdown).

#### ***7.4.4.6 Help-seeking.***

Help-seeking was measured by a multiple-choice question phrased as (“*if you thought you had depression, what would you do?*”). Possible choices were “tell someone”, “keep it a secret”, “I wouldn’t know what to do”. For young people reporting that they would tell someone, options of sources of help are given to choose from. These include: parents, teachers, friends, doctors, school doctor/nurse, school counsellor,

sibling, other family members and helplines. Participants are also asked to indicate who they would talk to first. A total number of endorsed sources of help is calculated for each participant, to allow an examination of age and gender differences.

#### **7.4.4.7 *Help-providing.***

Help-providing was measured by a hypothetical scenario of a friend with suicidal thoughts. Participants are asked to decide what they would do, the options are the same as help-seeking question (tell someone, keep it a secret, I wouldn't know what to do).

### **7.4.5 Data analysis plan.**

#### **7.4.5.1 *Data preparation.***

First, missing value analysis is performed. Next, an exploratory factor analysis (EFA) is performed to explore the factor structure of the ACDQ and allow for total scores to be calculated. Both the total score as well as each subscale are analysed to examine specific areas of greater or lack of knowledge amongst participants. Preliminary analysis is conducted to test if the ACDQ meets the assumptions of parametric tests.

#### **7.4.5.2 *Main analysis.***

To answer question one, descriptive analysis of the ACDQ (total score and subscales) as well as of knowledge of depressive symptoms is conducted. In turn, two-way ANOVAs between age and gender on the ACDQ total score and separately for each subscale are performed to answer research question two. Effect sizes are measured by partial eta squared ( $\eta_p^2$ ). Similarly, for help-seeking and providing, frequency analysis for each possible response is presented first, followed by chi-square tests between age/

gender and each response. Effect sizes are calculated using Odds Ratios (OR) for gender and Standardised Residuals (SR) for age groups (Field, 2009). For personal sources of help, two-way ANOVA is conducted between age and gender on the total number of endorsed sources of help. Further analysis of age and gender for each category of sources of help separately is included in Appendix H (Tables 35 and 36). To answer question three, paired sample t-tests were performed to test whether participants rated each source of help differently for the depression and control condition. To answer question four, independent sample t-tests and chi-square between participants above and below the clinical cut-off point of the SMFQ were performed for ACDQ (total score and subscales), symptom knowledge and help-seeking intentions. To answer question five, two approaches were used. For a direct experience of depression and of other mental illness, independent sample t-tests were performed for ACDQ scores and symptom knowledge. Regarding contact, Spearman's Rho ( $r_s$ ) is used, to examine the association between each the ordinal variables developed (depression contact and mental illness contact) and the ACDQ total score and symptom knowledge. Finally, to answer question six, a two-way ANOVA was performed to test differences between age and gender in desired social distance scores.

## **7.5 Results**

### **7.5.1 Data preparation and preliminary analysis.**

#### **7.5.1.1 Missing value analysis.**

Little's MCAR test (Little, 1988) was conducted to test whether there were patterns to missing values. The test was not significant,  $\chi^2(4148) = 4254.01, p > .05$ , suggesting

that values were missing completely at random. Pairwise deletion of missing values was used.

### ***7.5.1.2 Exploratory factor analysis.***

Exploratory Factor Analysis (EFA) with a varimax rotation was conducted with a sample of 310 participants, which constitutes an acceptable sample size for EFA (Field, 2009). Bartlett's test of sphericity was significant,  $\chi^2(210) = 1048.96, p < .0001$ . Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .755. Based on the sample size, factor loadings greater than .3 were considered significant (Stevens, 2002, as cited in Field, 2009). Items loading below .3 were deleted. Based on eigenvalues and the scree test, four factors were retained. The final scale comprised of 21 items. The scale had questionable reliability at pre-test (Cronbach's  $\alpha = .682$ ). The four factors are:

- *Comprehension*: higher scores show a better understanding of the complexity of depression
- *Attitudes*: higher scores show more positive attitudes towards depression
- *Treatment*: higher scores show better knowledge of depression treatments and recovery timeline.
- *Curability*: higher scores show higher perceived curability and control over depression treatment.

Table 22 presents the rotated factor matrix, as well as the eigenvalues and reliability of each factor.

### ***7.5.1.3 Preliminary analysis.***

The ACDQ total score, the comprehension subscale as well as the treatment subscale were negatively skewed. Transformations using reflect and logarithmic as well as reflect and square root were attempted to normalise the data, however, these did not provide satisfactory values. In turn, outliers were detected through boxplots and were replaced with the next higher score plus one (Field, 2009). Two outliers were replaced for the comprehension subscale (0.65% of responses) and three for the treatment subscale (0.97% of responses). The attitudes and control subscale were normally distributed. This resulted in acceptable normality values for the two subscales. After recalculating the total score, the distribution was normal for the ACDQ total score. Descriptives for each subscale are presented in table 23.



**Table 22: Rotated Factor Matrix**

	Comprehension	Attitudes	Treatment	Curability
Young people with depression spend more time thinking about losses	.649			
Young people with depression can get stuck in unhelpful/negative thinking	.591			
Young people with depression find it difficult to manage relationships	.571			
Young people with depression avoid going out	.558			
Young people with depression spend a lot of time worrying about disputes they had with friends/family	.464			
Young people can get depression for different reasons	.437			
The social environment might play a role in depression	.416			
A young person's grades might drop as a result of depression	.382			
Young people have control over their depression (R)		.532		
You don't get depression if everything is going well in your life (R)		.516		
Depression is a sign of weakness (R)		.450		
Young people can overcome depression in a couple of days (R)		.415		
Depression is always treated with antidepressants (R)		.396		
Some YP might be prescribed with medication and also have talking therapy			.494	
Talking therapy is an effective treatment for depression			.464	
It is important to seek treatment for depression in order to recover			.434	
Most YP recover from depression after a few months of treatment			.365	
Most YP who are treated recover from depression			.313	
Young people cannot do anything about their depression (R)				.527
It takes years to recover from depression (R)				.508
Young people don't usually recover from depression (R)				.453
<b>Eigen Values</b>	3.572	2.255	1.664	1.366
<b>% of Variance</b>	17.01	10.74	7.92	6.51
<b>Reliability at baseline</b>	.741	.561	.498	.490

*Note.* All other item loadings were <.3



**Table 23: Descriptives of the ACDQ Subscales**

Factor	No of Items	Mean (SD)	Skewness (SE)	Kurtosis (SE)	Alpha
Comprehension (0-32)	8	22.77 (3.95)	-.312 (.136)	.016 (.271)	.741
Attitudes (0-20)	5	13.10 (2.42)	-.055 (.136)	-.674 (.271)	.561
Treatment (0-20)	5	13.41 (3.37)	-.191 (.135)	.214 (.268)	.498
Curability (0-12)	3	7.74 (2.10)	.106 (.135)	-.412 (.268)	.490
Total Score (0-84)	21	57.18 (7.14)	-.023(.138)	.017 (.276)	.682

## 7.5.2 Main analysis.

### 7.5.2.1 Research questions one and two: depression literacy and help-seeking.

Below, descriptive analysis for depression literacy and help-seeking is presented first for each measure (research question one), followed by age and gender differences (research question two).

**Depressive symptoms knowledge:** Participants were asked to list up to three symptoms of depression. Mean symptom recognition was 1.46 ( $SD = .964$ ) symptoms, 18.3% of participants listed no symptoms, 33.3% of participants listed one symptom, 32.7% of participants listed two symptoms and 15.6% of participants listed three symptoms.

**Age and gender differences:** Two-way ANOVA between age and gender on symptom identification was conducted to test age and gender differences. There was no significant main effect of gender,  $F(1, 328) = 2.43$ ,  $p > .05$ ,  $\eta_p^2 = .007$ . There was a significant main effect of age group,  $F(2, 328) = 3.55$ ,  $p < .05$ ,  $\eta_p^2 = .023$ , indicating a small effect. Post hoc comparisons using Bonferroni test indicated that 14 year-old

participants ( $M = 1.62$ ,  $SD = 1.027$ ) identified more symptoms than 13 year-olds ( $M = 1.33$ ,  $SD = .916$ ),  $p < .05$ . There was no significant difference between 14 year-olds and 15 year-olds ( $M = 1.46$ ,  $SD = .96$ ),  $p > .05$  or 13 and 15 year-olds,  $p > .05$ . There was no significant interaction of age and gender in symptom identification,  $F(2, 328) = 0.52$ ,  $p > .05$ ,  $\eta_p^2 = .003$ .

**ACDQ scores:** Mean scores of the ACDQ total score was 57.18 ( $SD = 7.14$ ). For the subscales, the means were: comprehension 22.77 ( $SD = 3.95$ ), attitudes 13.10 ( $SD = 2.42$ ), treatment 13.41 ( $SD = 3.37$ ) and curability 7.74 ( $SD = 2.10$ ). See also Table 23 for the range of each category.

**Age and gender differences:** Two-way ANOVA between age and gender on the ACDQ total score was conducted. A significant main effect for gender was found,  $F(1, 300) = 9.28$ ,  $p < .01$ ,  $\eta_p^2 = .03$ , which is a small effect. Girls ( $M = 58.75$ ,  $SD = 7.18$ ) scored significantly higher than boys ( $M = 55.46$ ,  $SD = 6.75$ ). No significant effect for age group was found,  $F(2, 300) = 1.56$ ,  $p > .05$ ,  $\eta_p^2 = .01$ . No significant interaction effect between age and gender was found,  $F(2, 300) = 0.86$ ,  $p > .05$ ,  $\eta_p^2 = .006$ .

Each subscale was also analysed separately. For comprehension, a significant main effect of age was found,  $F(2, 311) = 4.86$ ,  $p < .01$ ,  $\eta_p^2 = .03$ , representing a small effect. Post hoc tests showed that there was a significant difference between 13 year-olds and 14 year-olds. Surprisingly, 13 year-old participants ( $M = 23.13$ ,  $SD = 3.98$ ) scored significantly higher than 14 year-old participants ( $M = 21.76$ ,  $SD = 3.89$ ),  $p < .05$ . In turn, 14 year-olds scored significantly lower than 15 year-old participants ( $M = 23.77$ ,  $SD = 3.58$ ),  $p < .05$ . For attitudes, a significant gender effect was found,  $F(1, 313) = 20.98$ ,  $p < .001$ ,  $\eta_p^2 = .063$ , representing a medium effect. Girls ( $M = 14.34$ ,

$SD = 3.37$ ) scored significantly higher than boys ( $M = 12.43$ ,  $SD = 3.13$ ), indicating more positive attitudes towards depression. All other main and interaction effects were non-significant and are presented below in Table 24.

**Table 24:** ANOVA between Age and Gender on ACDQ Scores

	<b>df</b>	<b>F</b>	<b><math>\eta_p^2</math></b>	<b>p</b>
<b>ACDQ total Score</b>				
Age Group	2, 300	1.56	.010	.211
Gender	1, 300	9.28	.030	.003
Age x Gender	2, 300	.86	.006	.424
<b>Comprehension</b>				
Age Group	2, 311	4.86	0.30	.008
Gender	1, 311	1.77	.006	.184
Age x Gender	2, 311	0.87	.006	.421
<b>Treatment</b>				
Age Group	2, 317	1.19	.007	.307
Gender	1, 317	0.17	.001	.677
Age x Gender	2, 317	0.79	.005	.457
<b>Curability</b>				
Age Group	2, 317	1.11	.007	.331
Gender	1, 317	0.56	.002	.454
Age x Gender	2, 317	0.60	.004	.549
<b>Attitudes</b>				
Age Group	2, 313	0.95	.006	.388
Gender	1, 313	20.98	.063	<.001
Age x Gender	2, 313	0.06	.000	.943

**Help-seeking intentions:** Over half of the young people ( $N = 202$ , 59.6%) reported they would seek help from someone if they were experiencing depression, however approximately one in every five young people answered that they would not know what to do ( $N = 70$ , 20.6%), and 17.1% ( $N = 58$ ) reported they would keep it a secret.

**Age and Gender Differences:** Significantly more boys (69.9%) reported they would seek help from someone, in comparison to 53.1% of girls,  $\chi^2(1) = 9.75, p < .01, OR = 2.06$ . Conversely girls were significantly more likely to report that they would not know what to do (26.5%), than boys (16%),  $\chi^2(1) = 5.45, p < .05, OR = 1.9$ . No significant differences were found for keeping it a secret (14.1% of boys, 20.4% of girls),  $\chi^2(1) = 2.23, p > .05, OR = 0.64$ . No significant differences were found for age groups in telling someone ( $\chi^2(2) = 0.48, p > .05$ ), keeping it a secret ( $\chi^2(2) = 2.44, p > .05$ ), or not knowing what to do ( $\chi^2(2) = 0.43, p > .05$ ).

**Endorsed sources of help:** In order of frequency, sources of help are: parents ( $N = 254, 78.6%$ ), friends ( $N = 248, 76.8%$ ), sibling ( $N = 142, 44%$ ), teacher ( $N = 111, 34.4%$ ), other family member ( $N = 107, 33.1%$ ), doctor ( $N = 84, 26%$ ), school counsellor ( $N = 54, 16.7%$ ), helpline ( $N = 46, 14.2%$ ) and school doctor/nurse ( $N = 23, 7.1%$ ). Additionally, frequencies of each category as the first source of help are: parent ( $N = 140, 47.1%$ ), friend ( $N = 106, 35.7%$ ), sibling ( $N = 17, 5.7%$ ), teacher ( $N = 9, 3%$ ), and in turn doctor and helpline ( $N = 3, 1%$ ). The mean number of sources of help was 3.31 ( $SD = 1.78$ ).

**Age and gender differences:** Two-way ANOVA revealed that age group had a significant main effect on the total number of endorsed sources of help,  $F(2, 313) = 10.55, p < .001, \eta_p^2 = .063$ , which is a medium effect. Post-hoc tests using the Bonferroni test showed that 13 year-olds ( $M = 3.73, SD = 1.92$ ) scored significantly higher than 14 year-olds ( $M = 2.82, SD = 1.41, p < .001$ ) and than 15 year-olds ( $M = 2.85, SD = 1.58, p = .001$ ). No main effect for gender was found,  $F(1, 313) = 1.33, p > .05, \eta_p^2 = .004$ . No significant interaction effect was evident  $F(2, 313) = 0.31,$

$p > .05$ ,  $\eta_p^2 = .002$ . Minimal differences on separate analysis of each source of help were found. Results of chi-square tests are included in Appendix H (Tables 35 and 36).

**Help-providing:** 61.3% of participants would tell someone for a friend experiencing depression, 13.5% would keep it a secret and approximately one in four (25.2%) participants would not know what to do.

**Age and gender differences:** Significantly more boys (68.1%) than girls (56.5%) suggested that they would tell someone,  $\chi^2(1) = 4.60$ ,  $p < .05$ ,  $OR = 1.64$ . Conversely, more girls (31.1%) than boys (18.8%) reported that they would not know what to do,  $\chi^2(1) = 6.50$ ,  $p < .05$ ,  $OR = 1.97$ . No significant difference was found in the category «keep it a secret»,  $\chi^2(1) = 0.04$ ,  $p > .05$ ,  $OR = 0.94$ . No significant age differences were found (tell someone:  $\chi^2(2) = 2.66$ ,  $p > .05$ , keep it a secret:  $\chi^2(2) = 0.13$ ,  $p > .05$ , don't know:  $\chi^2(2) = 4.30$ ,  $p > .05$ ).

### **7.5.2.2 Research question three: helpfulness of sources of help.**

Paired-sample t-tests were conducted to test whether participants rated sources of help differently for depression and for common emotional difficulties. Significant differences were found for all categories, all p values were below  $<.001$  and effect sizes were medium to large (from 0.38 to 0.79). Confirming the hypothesis, the participants scored sources of help differently for depression and control condition. Formal sources of help were perceived as more helpful for the depression than control condition and friends were rated as more helpful for the control condition than depression. Interestingly, parents were rated as more helpful for depression than control condition, and moreover, they were perceived as the second most helpful

source of help, after MHPs. Results from the t-tests and effect sizes are presented in Table 25.

**Table 25:** Paired Sample T-Tests for the Helpfulness of Sources of Help

	<b>Depression</b> (M , SD)	<b>Control</b> (M , SD)	<b>df</b>	<b>t-test</b>	<b>r</b>
<b>Parent</b>	7.72 (2.16)	6.55 (2.67)	284	6.99	.38
<b>Teacher</b>	5.69 (2.27)	3.32 (2.31)	285	16.09	.69
<b>Friend</b>	6.89 (2.16)	8.05 (2.11)	283	-7.67	.41
<b>MHPs</b>	8.05 (2.19)	4.26 (2.85)	283	21.41	.79
<b>Doctor</b>	7.10 (2.41)	3.25 (2.61)	284	21.33	.78

*Note.* MHPs: Mental Health Professionals.

### 7.5.2.3 Research question four: depressive symptomatology.

Participants were divided based on the SMFQ scores; “higher score participants” are those scoring eight or higher on the SMFQ and “lower score participants” are participants that scored lower than eight.

**Depression literacy:** There was no significant difference in symptom recognition for higher score participants ( $M = 1.63, SD = .91$ ) and lower score participants ( $M = 1.40, SD = .98$ ),  $t(336) = 1.93, p > .05, r = .10$ . In the ACDQ total score, there was no significant difference in the total score,  $t(307) = 1.91, p > .05, r = .11$ . Higher score participants ( $M = 14.59, SD = 1.34$ ) scored significantly higher in the attitudes scale than lower score participants ( $M = 13.04, SD = 3.37$ ), indicating more positive attitudes,  $t(320) = 3.63, p < .001, r = .20$ , which is a small effect. Similarly, in the curability scale, higher score participants ( $M = 7.11, SD = 2.12$ ) scored lower than lower score participants ( $M = 7.94, SD = 2.07$ ),  $t(325) = 3.11, p < .01, r = .17$ , which

is a small effect. This indicates that higher score participants viewed depression as less curable than lower score participants. No significant differences were found for the comprehension subscale ( $t(319) = 1.54, p > .05, r = .09$ ) and for the treatment subscale ( $t(325) = 0.45, p > .05, r = .03$ ). T-test results and effect sizes are presented in Table 26.

**Table 26:** *ACDQ Scores by Depressive Symptoms Group*

	SMFQ	N	M	SD	df	t	p	r
Total Score	<8	232	56.76	6.96	307	-1.91	.057	.11
	≥8	77	58.55	7.55				
Comprehension	<8	243	22.59	3.79	319	-1.54	.124	.09
	≥8	78	23.38	4.40				
Treatment	<8	247	13.07	2.32	325	-0.48	.655	.03
	≥8	80	13.21	2.75				
Attitudes	<8	243	13.04	3.37	320	-3.63	.0003	.20
	≥8	79	14.59	3.14				
Curability	<8	247	7.94	2.07	325	3.11	.002	.17
	≥8	80	7.11	2.12				

*Note.* SMFQ: Short Moods and Feelings Questionnaire.

**Help-seeking:** A significantly smaller number of higher score participants (40.7%) reported that they would seek help from someone else for depression than lower score participants (67.7%),  $\chi^2(1) = 18.73, p < .001, OR = .33$ . Conversely, more high score participants reported that they would keep it a secret (37%) than their lower-scoring peers (11.3%),  $\chi^2(1) = 27.87, OR = 4.62$ . There was no significant difference in the number of high score participants (22.2%) and low score participants (21%) that would not know what to do,  $\chi^2(1) = 0.06, p > .05, OR = 1.08$ .

#### **7.5.2.4 Research question five: experience differences in depression literacy.**

Associations with direct (personal) experience of depression and other mental illness are examined first, followed by indirect experience (contact) with depression and other mental illness.

**Direct experience and depression literacy:** Experience of depression ( $t(337) = 0.18, p > .05$ ) as well as an experience of other mental illness ( $t(336) = 1.03, p > .05$ ) was not associated with knowledge of symptoms of depression. Participants with personal depression experience ( $M = 59.3, SD = 6.24$ ) and non-experienced participants ( $M = 56.96, SD = 7.20$ ) did not score significantly differently on the ACDQ total score,  $t(308) = 1.71, p > .05$ . Participants with an experience of other mental illness ( $M = 60.26, SD = 6.60$ ) scored significantly higher than those without an experience of other mental illness ( $M = 56.73, SD = 7.12$ ) on the ACDQ total score,  $t(307) = 2.893, p < .01, r = .16$ , which is a small effect. In subscale analysis, participants with a direct experience of depression scored significantly higher in comprehension ( $t(320) = 2.00, p < .05, r = .11$ , small effect) and attitudes ( $t(41.504) = 2.58, p < .05, r = .37$ , medium effect) than non-experienced participants. Participants with an experience of other mental illness scored significantly higher in the comprehension subscale, ( $t(319) = 2.37, p < .05, r = .13$ ), the attitudes subscale ( $t(320) = 2.40, p < .004, r = .13$ ) and the treatment subscale ( $t(325) = 2.130, p < .05, r = .12$ ). All effect sizes of experience of other mental illness are small. T-test results are presented in Table 27.

**Contact and depression literacy:** Depression contact was not significantly related to symptom recognition ( $r_s = .05$ ). Surprisingly, contact with other mental illness was significantly related to symptom recognition ( $r_s = .15, p < .01$ ). Depression contact

was associated with ACDQ scores ( $r_s = .22, p < .01$ ), as was mental illness contact ( $r_s = .28$ ). In subscale analysis, depression contact was significantly associated with comprehension ( $r_s = .12, p < .05$ ) and attitudes ( $r_s = .29, p < .01$ ) Mental illness contact was significantly related to comprehension ( $r_s = .145, p < .01$ ), attitudes ( $r_s = .28, p < .01$ ) and treatment ( $r_s = .15, p < .01$ ).

#### **7.5.2.5 Research question six: desired social distance.**

ANOVA between age group and gender was performed on the total social distance score. There was no main effect of age,  $F(2, 315) = 1.27, p > .05, \eta_p^2 = .008$ . There was a significant main effect for gender,  $F(1, 315) = 8.96, p < .01, \eta_p^2 = .028$ , representing a small effect. Girls ( $M = 12.34, SD = 2.86$ ) scores significantly higher than boys ( $M = 11.08, SD = 2.95$ ) indicating that girls showed lower desired social distance from depressed peers than boys. There was no interaction effect between age and gender,  $F(2, 315) = 0.06, p > .05, \eta_p^2 = 0$ .



**Table 27:** *Direct Experience Differences on ACDQ Scores*

Scale	Exp.	Depression							Other mental illness						
		N	M	SD	df	t	p	r	N	M	SD	df	t-test	p	r
Total Score	No	280	56.96	7.20	308	-1.71	.088	.09	271	56.73	7.12	307	-2.89	.004	.16
	Yes	30	59.30	6.24					38	60.26	6.60				
Comprehension	No	290	22.63	3.96	320	-2.00	.046	.11	281	22.58	3.96	319	-2.37	.018	.13
	Yes	32	24.09	3.73					40	24.15	3.70				
Treatment	No	295	13.17	2.37	326	1.55	.122	.09	287	12.99	2.34	325	-2.13	.034	.12
	Yes	33	12.48	2.82					40	13.85	2.83				
Attitudes	No	292	13.28	3.42	41.504	-2.58	.014	.37	283	13.24	3.30	320	-2.40	.017	.13
	Yes	31	14.61	2.64					39	14.62	3.70				
Curability	No	295	7.77	2.07	326	0.83	.406	.05	288	7.77	2.09	325	0.64	.525	.04
	Yes	33	7.45	2.41					39	7.54	2.28				



## **7.6 Discussion**

This study examined adolescent concepts of depression, based on the CSM of illness representation with the use of a detailed questionnaire (ACDQ) developed for this study. Exploratory factor analysis revealed a four-factor solution, including comprehension, treatment, curability and attitudes. The ACDQ was in turn used to compare between age, gender, depressive symptoms and experience with depression literacy. Help-seeking and help-providing as well as social distance are also explored. Main results, as well as areas where mental health literacy could be improved are discussed below, followed by recommendations for future research steps in the mental health literacy field.

### **7.6.1 Depression literacy and help-seeking.**

Based on the mean scores of subscales and symptom knowledge, adolescents in this study showed moderate depression literacy. That is, in each subscale, mean scores were above the midpoint of the range; as the five-level Likert scales used were phrased from completely disagree to completely agree, a score below the midpoint of the range of each subscale would show misconceptions in the specific subscale. In turn, most participants listed one or two symptoms of depression. The percentages are lower than studies using a similar method, where approximately 40% listed two to three symptoms and another 43% listed four to five (Swartz et al., 2010).

Participants differentiated between the helpfulness of sources of help for depression and emotional difficulties, rating MHPs and doctors as highly helpful for depression, in line with hypothesis three. However, parents were rated as more helpful for

depression, closely after MHPs, a finding that highlights the need to support parental ability to identify depression in their child and have knowledge about appropriate help available.

Studies support that recognition of depression from a cluster of presented symptoms predicts appropriate help-seeking recommendations (Coles et al., 2016; Wright et al., 2007). Additionally, improving mental health literacy is conceived as a facilitator of help-seeking (Gulliver et al., 2010; Jorm, 2012). From this standpoint, Scottish adolescents' symptom knowledge is one area for further improvement. Regarding help-seeking, 60% of participants in this study would engage another person if they thought they had depression. Previous studies using a comparable question type (yes, no, don't know) and similar age groups report higher percentages of adolescents reporting they would seek help, ranging from 68% to 89% (Lam, 2014; Olsson & Kennedy, 2010; Ruble et al., 2013).

Regarding help-providing, the majority of participants (61%) would refer to others, a small percentage would intentionally not share the information (13%), and one in every four would not know what to do. One interpretation is that the young people do not want to object to the friend's wish not to tell (as presented in the scenario). In this case, participants' intention would show that young people do not understand the necessity to engage others, which is concerning especially in the presence of suicidality. Taking into consideration research showing that young adults are more likely to seek help for mental health difficulties upon recommendation from a friend (Vogel et al., 2007), it has been argued that help-providing education is needed, in the

form of educating young people on the necessity to encourage a friend to refer to an adult for mental health problems (Byrne et al., 2015). Under this rationale, help-providing information could possibly indirectly facilitate formal help to be sought. The present findings support this notion, especially considering that friends constitute one of the primary sources of help for adolescents. This is evident in this study, but also acknowledged in previous research (Bokhorst, Sumter, & Westenberg, 2010). However, sensitivity in delivering this information is essential, in that young people should not perceive oneself responsible for a depressed peer. With this consideration in mind, it is important to convey the message that consulting with a responsible adult is necessary for depression, especially in the presence of suicidal ideation.

#### **7.6.2 Age group differences.**

Age differences were overall minimal, contrary to hypothesis two. A significant effect of age was found in the comprehension subscale. Surprisingly, 14 year-olds scored significantly lower than 13 year-old and 15 year-old participants. In symptom recognition, 13 year-olds scored significantly lower than 14 year-olds. This difference in symptom knowledge is in line with a previous study, conducted in Norway, exploring mental health literacy in equivalent school grades. Skre et al. (2013) report that 15 year-olds were more knowledgeable about symptoms of mental illness than 13 year-olds. Considering together the two significant differences described above, it is difficult to argue that any one year group had higher knowledge than another, as comprehension subscale also includes items related to symptoms. Finally, age group was not related to social distance or attitudes, which contradicts the findings of Skre

et al. (2013), who report more negative beliefs among lower-grade than higher-grade students.

The small age difference between the compared age groups (approximately one year older for each school year) possibly accounts for the small number of significant age differences found. In previous studies examining age differences, a wider age range has been used (Essau et al., 2013; Fox et al., 2010; Swords, Hennessy & Heary, 2011a). Based on the present results, adolescent depression literacy does not significantly increase between the ages of approximately 13 to 15 years. Further, differences between age groups do not precisely reflect actual age differences. Participants were one school grade older in each age group; in Scotland, there is variability in the age of entrance in education, thus same-age participants might be in a different grade. Nonetheless, the findings show that grade (and thus education) does not substantially differentiate adolescents' depression literacy between Year 2 and Year 4 (13 to 15 years of age). Therefore, delivering similar mental health literacy interventions in these grades is appropriate in Scotland, as similar levels of knowledge were found.

### **7.6.3 Gender differences.**

Gender differences were found in depression literacy, help-seeking/providing intentions and social distance. Girls scored significantly higher in the ACDQ total score; when factors were examined in isolation, a significant difference was found in the attitudes subscale, partially supporting hypothesis one. In turn, they showed less desired social distance from a depressed peer, confirming hypothesis six. These findings closely resemble previous research, showing that girls have higher mental

health literacy (Coles et al., 2016; Cotton et al., 2006), more positive attitudes (O'Driscoll et al., 2012; Swords, Heary & Hennessy, 2011) and less social distance (Kaushik et al., 2016; Kelly & Jorm, 2007).

In terms of help-seeking, girls were found less likely to endorse engaging another person, both for personal help-seeking and for help-providing to a friend, which contradicts hypothesis one. These findings do not indicate an agreement with findings suggesting that “higher” mental health literacy is related to help-seeking (Coles et al., 2016), nor the findings that boys are less likely to seek help for depression (Sen, 2004). It could be that girls consider more barriers to seeking help than boys (Hernan et al., 2010; Lubman et al., 2017). It is also possible that, as help-seeking intentions were measured rather than behaviour, the impact of stigma is diminished. In other words, although being male is associated with greater stigma towards seeking help (Topkaya, 2014) and more negative attitudes towards seeking help (Nam et al., 2010), this might not affect responses of intentionality to seek help. Moreover, the direct link between mental health literacy and help-seeking was not examined. With this limitation in mind, the findings of this study indicate that the association between mental health literacy and help-seeking is complex; more close examination of the relationship between the two variables is needed. To that end, robust study designs including measures of stigma, detailed measures of help-seeking attitudes and ideally actual help-seeking behaviour is likely to provide insight into how mental health literacy informs (or fails to) help-seeking behaviour. Nonetheless, the question arises as to whether mental health literacy should be a sole target of interventions aiming to facilitate help-seeking.

#### **7.6.4 Depressive symptoms and depression conceptualisations.**

Depressive symptoms were not significantly related to depression literacy, in terms of total scores, comprehension, treatment and knowledge of symptoms, in contrast to hypothesis four. It should be noted that a small effect on the total score was found, with participants with higher scores on the SMFQ scoring higher ( $r = .11$ ) than participants in the lower score group, though this did not reach significance. High score participants scored significantly lower in the curability scale, indicating that they perceived depression as less curable and controllable. This finding echoes adult research; depressed adults hold more “pessimistic” views of recovery (Fortune et al., 2004; Glattacker, Heyduck, & Meffert, 2013). This is not a surprising finding, as negative affect can impact on cognition and thus explain the more negative expectations for recovery. Further, higher scoring participants were less likely to report that they would refer to others for help with depression, which is in line with research on help-negation (Wilson & Deane, 2010; Wilson, Rickwood, & Deane, 2007), in line with hypothesis four. It is concerning that the higher score group, defined as participants scoring higher than eight on the SMFQ, did not have significantly higher depression literacy than participants with lower scores on the SMFQ. Although it should be acknowledged that the SFMQ score does not equal a diagnosis, it is evident that young people need to be more knowledgeable about depression, if early intervention is to be achieved. It is possible that perceived curability is involved in the decision to seek help; however, this hypothesis exceeds the aims of the present study. Considering the help-seeking findings and curability subscale results, it is intriguing to suggest that knowledge alone might not be sufficient and that targeted messages for young people with depressive symptoms might be required.

### **7.6.5 Experience and contact associations with mental health literacy.**

The findings on the role of experience and contact are mixed. Overall, previous direct experience was associated with certain aspects of depression literacy. Specifically, a previous experience of depression was not significantly associated with the ACDQ total score or knowledge of symptoms, and only with the comprehension and attitudes subscale. Direct experience of other mental illness and contact (both depression and other mental illness) were significantly related to higher ACDQ scores. On one hand, it has been proposed that experience of or knowledge about other mental illness might be generalised to depression; for example, an experience of treatment, information received from mental health professionals or information sought for a friend or family member might inform people's understanding of mental illness in general (Cutler et al., 2017). On the other hand, the directionality of such relations is unknown. It is possible that those with higher knowledge of symptoms and other aspects of depression literacy may be better able to realise that they have contact with someone with depression or other mental illness. Importantly, all effect sizes were small (apart from a medium strength of the relationship between attitudes and mental illness experience as well as attitudes and both variables of contact); thus, the significant relationships found were not strong. Based on these findings, it is difficult to conclude whether experience is associated with depression literacy; some forms of experience are significantly however weakly related to certain aspects of depression literacy. Therefore, the hypothesis that there would be a positive association between experience and depression literacy is only partially supported. This finding highlights that apart from a personal experience, contact should be further examined in studies aiming to identify factors that contribute to mental health literacy. Additionally, when

specific mental illnesses are under examination (e.g. depression literacy alone) researchers should not exclude the possibility that experience of other mental illness may be related to knowledge.

#### **7.6.6 Methodological considerations.**

Methodological considerations involve primarily the use of the ACDQ to measure depression literacy, its factor structure and reliability. To date, there exists no other measure assessing adolescent depression literacy in a comprehensive manner (see Chapter 5). As the questionnaire was developed for this study, comparison with other studies is challenging. The use of a questionnaire developed for the specific intervention is common practice in mental health literacy interventions, reflecting that research in the field is in its early years. The need to use tailored questionnaires derives from the variability of mental health aspects addressed in each study, which fall under the broad mental health literacy umbrella (Jorm, 2015).

While the use of CSM as a framework allowed for the inclusion of items measuring a variety of aspects of depression knowledge and attitudes, the factors found through the EFA did not correspond directly to the CSM dimensions. The first subscale, named “comprehension” includes items that were initially developed for the dimensions of causes and consequences. Perceived causes, consequences and symptoms of depression are difficult to separate. Although both causes and consequences were based on psychological theories (CBT and IPT-A) certain factors defined as consequences could also be interpreted as symptoms. For example, social isolation, in this study conceived as a consequence, might result from a diminished interest in activities, which is a DSM criterion for major depression. Thus, the finding that these

were collapsed to form one subscale mirrors the difficulty to separate the two dimensions in depression representations.

The reliability of certain subscales of the questionnaire was problematic, especially for curability. It should be noted however that the number of items, sample size and tau equivalence affect the sensitivity of alpha, which is found to underestimate reliability (Trizano-Hermosilla & Alvarado, 2016). It is also possible that reverse scoring of certain items might have affected the factor structure of the ACDQ, as in the latter reversely scored items tended to load on two specific subscales (Podsakoff, MacKenzie, Lee, & Podsakoff, 2004; Weijters, Baumgartner, & Schillewaet, 2013). Acknowledging these limitations, the decision to proceed with the use of the ACDQ was based on the fact that alternative measures capturing adolescent depression literacy are lacking (see also Chapters 5.4.2 and 6.4). Further measurement of the psychometric qualities of the scale is needed, for the questionnaire to be further used in the measurement of adolescent depression literacy. The present questionnaire benefits from including various dimensions of depression literacy, being based on theoretical frameworks of illness representations and depression development (e.g. CBT and IPT) and measuring mental health literacy of adolescent depression. In retrospect, for the measure of help-seeking intentions, a standardised and more detailed questionnaire could have been used, as for example the general help-seeking questionnaire (Wilson, Deane, Ciarrochi, & Rickwood, 2005) or the help-seeking subscale of the mental health literacy scale (O'Connor & Casey, 2015).

Further, it should be acknowledged that a variety of factors that were not examined in this study may affect mental health literacy and help-seeking. These include: demographic factors (ethnicity and socio-economic status), measurement of past help-seeking experiences and use of mental health services (Rickwood et al., 2005) and stigma. Despite these limitations, this study is the first to explore depression literacy in a sample of Scottish adolescents. The use of the CSM as an organisational framework allowed to broaden the range of examined areas of knowledge and beliefs, in comparison to those examined in previous research. Additionally, this is one of the few studies to explore the association between current depressive levels and depression literacy in adolescence.

## **8 Study 2b: Evaluation of the Depression in Young People Mental Health Literacy Intervention**

### **8.1 Introduction**

An interest in the evaluation of mental health literacy interventions is evident in recent research. Schools constitute an ideal platform to access most adolescents for the delivery of universal interventions with the aim to promote understanding of mental illness and effective help-seeking. To date, the evidence base on school based interventions is limited for strong conclusions to be drawn, however research indicates promising results (Wei et al., 2013). Nonetheless, most studies derive from Australia, the United States and Canada.

Public understanding of mental illness differs between countries (Jorm, 2012). Especially for children and adolescents, previous mental health education and national mental health promotion campaigns are likely to shape young people's mental health concepts. Thus, interventions need to be tailored according to the previous knowledge and beliefs of the target population. Very few psycho-educational interventions have been developed and evaluated in the UK, and even less are focused on depression literacy (Kelly et al., 2007; Wei et al., 2013). Previous specific depression literacy interventions in the UK have focused on university students (Merritt et al., 2007) or generic approaches to mental health literacy, destigmatisation and help-seeking (Bentham et al., 2013; Pinfold et al., 2003).

In Scotland, health and well-being constitute key aims of the educational curriculum, the latter stating that *“learning in health and wellbeing ensures that children and young people develop the knowledge and understanding, skills, capabilities and attributes which they need for mental, emotional, social and physical wellbeing now and in the future”* (Curriculum for Excellence, 2009, p.72). At the same time, there is a lack of guidelines and resources to achieve this goal. Thus, mental health promotion and education varies significantly amongst schools and depends upon the resources available, choices, knowledge and effort of individual educators. Evidence-based and standardised interventions and resources are thus needed to facilitate and promote mental health education.

To that end, the present study aims to evaluate a psycho-educational intervention on depression in adolescence. In this chapter, the methodology and results of the pilot evaluation are presented. Further information about the development and content of the intervention is discussed in Chapter 6.

## **8.2 Aims of the Study**

The aim of the study is to evaluate a psycho-educational intervention in informing adolescent depression literacy and help-seeking. Specifically, the research questions are:

**Research Question 1:** Does the intervention increase young people’s depression literacy?

*Hypothesis 1:* It was hypothesised that intervention participants would be able to name more symptoms of depression at post-test in comparison to control participants.

*Hypothesis 2:* It was expected that the intervention group would demonstrate higher depression literacy as captured by the ACDQ.

**Research Question 2:** Does the intervention affect young people's help-seeking and help-providing knowledge and intentions?

*Hypothesis 3:* It was hypothesised that the intervention group would be more likely to endorse telling others in help-seeking and help-providing intentions, as well endorse a larger number of potential sources of help for depression.

*Hypothesis 4:* It was expected that participants' perceived helpfulness of formal sources of help for depression would increase.

**Research Question 3:** Does the intervention affect young people's level of desired social distance from a depressed peer?

*Hypothesis 5:* it was expected that participants would report lower desired social distance from a depressed peer.

**Research Question 4:** Does the intervention have a different effect on participants' depression literacy and help-seeking intentions depending on their scores on the SMFQ?

**Research Question 5:** Is the intervention acceptable by the students?

*Depression literacy:* Depression literacy was measured by knowledge of depressive symptoms and ACDQ scores (total score and subscales).

*Help-seeking and help-providing:* Help-seeking includes help-seeking intentions, endorsed personal sources of help, help-providing intentions, perceived helpfulness of sources of help and confidence in providing help.

### **8.3 Ethical Considerations and Approval**

#### **8.3.1 Ethical approval.**

The study adheres to the British Psychological Society's (BPS) code of ethics and conduct and the Code of Practice for Research (UK Research Integrity Office, 2009) adopted by the University of Edinburgh. Ethical approval was granted from the City of Edinburgh Council Ethics Committee (3.02.2016) and the University of Edinburgh (School of Health in Social Science, approval date: 18.12.2015). Both approval letters are included in Appendix F.

#### **8.3.2 Informed consent.**

Parental and child informed consent were required for participation. Parents were sent information sheet and consent forms in electronic format using a secure online survey tool (Bristol Online Survey), distributed to parents through the school's e-mail service of parent communication. For classes that there was uncertainty about whether all parents had internet/computer access, consent forms in paper format were used instead. Reminders were sent to parents by school staff to ensure that all parents were informed about the study and the deadline to return the forms. At least one week was allowed between distribution of information and last day to return forms, in order for all parents to be able to consider the study, to contact the researchers in case of questions, and to opt-out on the child's behalf. In turn, information about the study were presented to

the students by school staff, information sheets and consent forms were distributed to pupils. The information sheets and consent forms explained the nature and aims of the study, the data collection process, anonymity, the voluntary nature of participation in the study and the right to withdraw at any point. Additionally, the researcher was present in the school and visited classes at the start of baseline data collection, to ensure students had understood the information and to allow students to ask questions. Participants that opted-out of the study were given alternative options by their teacher. Consent forms are included in Appendix G.

### **8.3.3 Confidentiality.**

To ensure confidentiality, questionnaires were anonymous. To match the pre-test and post-test questionnaire of each participant, students were asked to write the last two digits of their postcode in the questionnaire, their age, gender and school class.

### **8.3.4 Safeguarding.**

Because of the nature of data collection (anonymous pen and paper questionnaire administered in class), it was not expected that participants would disclose information that require a breach of confidentiality.

*Questionnaires:* It was not anticipated that participants would feel any distress or discomfort during the completion of questionnaires; however, the information sheet emphasised that the participant could withdraw at any stage. In turn, a debriefing sheet was distributed to participants, including a variety of sources of support in case of discomfort. These include named school staff, external support services (e.g. helplines) and websites with more information. Nonetheless, the Pupil Support

Department or Head Teacher were consulted in advance about safeguarding procedures and a person to contact in case of safeguarding concerns were identified.

*Intervention:* Considering the prevalence of depression in young people, it was expected that there would be students with symptoms of depression participating in the study. Thus, there was a possibility that students could identify symptoms of depression or low mood in themselves that had not been acknowledged previously and for which support had not been sought. As one of the aims of the intervention is to inform students about help-seeking, the intervention includes a specific section on seeking help, encouraging students to seek support. The section covers a variety of sources of help, including school points of contact, external support services (e.g. GP, helplines), informal support (e.g. parents), as well as the process of referral to CAMHS. The need to share concerns with a trusted adult is highlighted throughout the training.

## **8.4 Methodology**

The purpose of this study is to assess the effectiveness of a single session classroom-based psycho-educational session on depression in informing young people's depression literacy.

### **8.4.1 Design.**

The study design is controlled before-and-after. Allocation was conducted on a class level. Allocation on a school level was not considered appropriate due to the different total number of participants from each school. Allocation was conducted randomly by teaching staff, based on the curriculum timetable. Blinding was not practically

possible, due to the fact that the control group attended class as usual and that the intervention was delivered and the results collected and analysed by the author (Schulz & Grimes, 2002). The measures were administered in class one week before and one week after the intervention for both groups, during PSE class.

#### **8.4.2 Sample size calculation.**

A sample size calculation was conducted using G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007) to specify the number of participants needed. As this is the first study to evaluate the intervention, the expected effect size was calculated based on previous similar intervention studies. No previous one-hour depression psycho-educational intervention was identified. Thus, previous mental health literacy programmes were consulted if they consisted of a one-hour intervention or a depression intervention. Effect sizes ranged from small to medium (Ng & Chan, 2002; Pinto-Foltz, Logsdon, & Myers, 2011; Rickwood, Cavanagh, Curtis, & Sakrouge, 2004; Ruble et al., 2013). The only intervention specific to depression reports large effects (Ruble et al., 2013) however constitutes a three-hour curriculum delivered over three weeks. It is intuitively expected that longer interventions would have a larger effect, allowing a wider variety of information to be covered, a range of pedagogical methods to be adopted as well as repetition of key messages to take place. Due to the limited evidence base, it has not been determined whether duration of mental health literacy interventions has any effect on knowledge acquisition or change in attitudes (Wei et al., 2013). Similarly, research on school-based stigma interventions is inconclusive regarding effective intervention designs, including optimal duration (Mellor, 2014). Due to the lack of evidence and range of effect sizes of similar interventions, it was

decided for a small effect size to be used. For a 2 (groups) x 2 (time) mixed ANOVA, to detect a small effect ( $f = .10$ ) between groups, the total required sample size was 200, for  $\alpha = .05$ , and power of .80.

#### **8.4.3 Eligibility.**

13 to 15 year-old students (Year 2 to Year 4) in the participating schools were eligible for participation. This age range was chosen, as most adolescents at this age attend school before following individualised pathways to other educational options and/or school leaving. As such, a universal intervention in Scotland is likely to reach the majority of young people if delivered at the early secondary school years. Additionally, depression prevalence increases during adolescence, starting at the age of 13 years (Costello et al., 2003), which is the age of the younger age group included in this study.

#### **8.4.4 Allocation.**

Allocation was conducted on a class level, as it was not practical to randomise participants individually. The control group intervention was class as usual. Students from the intervention group that opted out of the study were given alternative work to complete in class by their teacher. Allocation was performed by teaching staff, based on class timetables and availability; thus, although complete randomisation was not achieved, reasons of allocation were not related to specific classroom or participant characteristics. However, due to unavailability of the older year group (Year 4) due to timetable restrictions in relation to school exams, this year group is under-represented in the sample.

#### **8.4.5 Participants.**

Participants were 339 students (mean age  $M = 13.38$  years,  $SD = .829$ , 49.3% female) in mainstream education from two schools in Edinburgh. Further information about the participants is presented in Table 28. Approximately half of the participants were from the younger age group; Year 4 participants are underrepresented ( $N = 44$ , 13%). There were no significant differences between groups (intervention, control) in age group, (Mann Whitney  $U = 13083$ ,  $z = -1.588$ ,  $p > .05$ ) or gender ( $\chi^2(1) = 1.20$ ,  $p > .05$ ). Similarly, there was no difference between groups in previous depression experience ( $\chi^2(2) = 0.29$ ,  $p > .05$ ), experience of other mental illness ( $\chi^2(2) = 3.54$ ,  $p > .05$ ) indirect depression experience ( $\chi^2(2) = 0.40$ ,  $p > .05$ , level of contact:  $U = 13401$ ,  $z = 0.88$ ,  $p > .05$ ) and indirect mental health experience ( $\chi^2(2) = 1.19$ ,  $p > .05$ , level of contact:  $U = 13804$ ,  $z = 0.49$ ,  $p > .05$ ). There were no significant differences between intervention groups in relation to depressive symptoms groups,  $\chi^2(1) = 1.46$ ,  $p > .05$  or level of depressive symptoms,  $t(336) = 1.26$ ,  $p > .05$ .

#### **8.4.6 Measures.**

##### ***8.4.6.1 Adolescent concepts of depression questionnaire.***

The questionnaire development process is discussed in detail in Chapter 6. The questionnaire includes 27 Likert items measuring agreement with aspects of depression literacy, based on the five dimensions of the CSM (Leventhal et al., 1980). Exploratory factor analysis revealed four factors, namely comprehension, attitudes, treatment and curability (see Chapter 7.5.12). Subsequently, help-seeking and help-providing intentions are explored. At post-test, the questionnaire also includes a

measure of previous experience with depression and/or other mental illnesses. The questionnaire is included in Appendix E.

**Table 28: Participant Demographics**

		Intervention Group		Control Group		Total	
		N	%	N	%	N	%
Gender	male	90	53.3%	78	46.4%	168	49.9%
	female	79	46.7%	87	51.8%	166	49.3%
	other	0	0.0%	2	1.2%	2	0.6%
	missing	0	0.0%	1	0.6%	1	0.3%
Age group	13 year-olds	105	61.4%	81	48.2%	186	54.9%
	14 year-olds	39	22.8%	70	41.7%	109	32.2%
	15 year-olds	27	15.8%	17	10.1%	44	13.0%
SMFQ	<8	124	72.9%	132	78.6%	256	75.7%
	≥8	46	27.1%	36	21.4%	82	24.3%
Depression experience	no	100	60.2%	98	61.6%	198	60.9%
	yes	17	10.2%	18	11.3%	35	10.8%
	don't know	49	29.5%	43	27.0%	92	28.3%
Mental health experience	no	109	65.7%	113	71.1%	222	68.3%
	yes	26	15.7%	14	8.8%	40	12.3%
	don't know	31	18.7%	32	20.1%	63	19.4%
Depression indirect experience	no	55	33.3%	48	30.6%	103	32.0%
	yes	82	49.7%	79	50.3%	161	50.0%
	don't know	28	17.0%	30	19.1%	58	18.0%
Mental health indirect experience	no	54	34.0%	61	39.9%	115	36.9%
	yes	74	46.5%	64	41.8%	138	44.2%
	don't know	31	19.5%	28	18.3%	59	18.9%

*Note.* SMFQ: Short Moods and Feelings Questionnaire- Child Version.

#### 8.4.6.2 Social distance.

The scale involves four statements, measuring desired social distance from a hypothetical depressed peer on a four-item Likert scale, ranging from 4 to 16. Higher scores show less desired social distance. Reliability measured using Cronbach's  $\alpha$  was excellent both at pre-test ( $\alpha = .894$ ) and at post-test ( $\alpha = .916$ ).

#### ***8.4.6.3 Short Moods and Feelings Questionnaire- child report (SMFQ).***

The questionnaire comprises of 13 questions with a three-point Likert scale and total score of 26. A cut-off point of eight is indicated in the literature (Angold et al., 1995; Thapar & McGuffin, 1998), which is the point used in this study. Reliability in this study was excellent, Cronbach's  $\alpha = .899$ .

#### ***8.4.6.4 Evaluation feedback.***

To measure feedback on the session, a feedback sheet was developed and distributed to participants after the intervention. During the first round of the intervention, participants were asked to provide qualitative feedback, in addition to the Likert items. This includes a control class that was administered the intervention after the end of data collection. Using a traffic-light metaphor, the feedback sheet asked participants to describe aspects which they would prefer for the authors remove from the intervention (stop), aspects that they considered useful (keep) and recommendations for additions to the intervention (start). Two Likert response items were also used with all participants. The first question measured whether the session informed participants' understanding of depression on a five-point Likert response scale (1=completely disagree to 5=completely agree). A second question measured overall benefit from the session on a ten-point scale, 1=not at all beneficial to 10=extremely beneficial. For the remaining participants, a feedback sheet with the Likert scales and optional comments was used.

#### **8.4.7 Data analysis plan.**

##### ***8.4.7.1 Research question one: Depression literacy.***

Depression Literacy is defined as symptom knowledge and scores on the ACDQ. For symptoms identification, one point was given for each correct symptom reported (total of 3 points), according to ICD-10 and DSM-IV criteria for major depression. A mixed ANOVA between time (pre-test and post-test) and group (intervention and control) was conducted to examine whether symptom recognition increased significantly at post-test because of the intervention. Age, gender and depressive symptoms were included as covariates. It was hypothesised that there would be a significant increase of symptom identification for the intervention group in comparison to the control group (*hypothesis 1*).

It has been argued that ANOVA is a valid test for Likert-scale measures (Norman, 2010). Likert scales are by nature non-parametric and as such criticism has been raised regarding the use of parametric tests with Likert scale data. The debate is ongoing, however various researchers have argued and indicated that Likert scales can be robustly analysed using ANOVA designs (Carifio & Perla, 2008; Carifio & Perla, 2007; Norman, 2010; Sullivan & Artino, 2013). Additionally, it has been argued that Likert scales, in contrast to individual response items, can be considered as interval rather than ordinal measures (Carifio & Perla, 2007). Mixed ANOVA was conducted with time (pre-test and post-test) being a within subject independent factor, group (intervention and control) as a between subject independent factor and total score of the ACDQ being the dependent factor. As found in the results of Study 2a (Chapter 7) and further indicated by previous research, age, gender and depressive symptoms are

likely to affect young people's depression concepts (e.g. Burns & Rapee, 2006; Skre et al., 2013); therefore, age group, gender and depressive symptoms group were added as covariates. In turn, mixed ANOVA between the same independent variables was conducted for each factor of the ACDQ separately, to indicate whether the intervention has a greater effect on certain of the aspects of depression literacy.

#### **8.4.7.2 Research question two: Help-seeking and help-providing**

To answer question two, help-seeking intentions, help-providing intentions, perceived helpfulness of sources of help for a depressed peer, as well as endorsed personal sources of help are analysed.

**Personal Help-Seeking.** Dummy categories for the multiple-choice response of personal help-seeking were created. Chi-square was used to measure changes in the frequency of participants between groups endorsing each answer at pre-test and post-test. Where significant differences were found, McNemar test was used for each group separately to examine significant changes within groups in endorsing each category.

**Personal Sources of Help.** Similarly, for each possible source of help (Parent, Teachers, Friends, Doctor, School doctor/welfare assistant, School counsellor, Sibling, Other family member and Helpline) chi-square tests comparing pre-test and post-tests differences were conducted, followed by McNemar tests within groups for each time point separately. In turn, Mixed ANOVA between time, group and total number of sources of help is used to test whether the number of endorsed sources of help increased as a result of the intervention.

**Help-providing:** Similarly to personal help-seeking, dummy categories were created for each option on help-providing. Chi-square test between group were conducted at

pre-test and post-test to examine significant differences between groups. In turn, McNemar tests were conducted within group to test differences within groups.

***Helpfulness of Sources of Help:*** Mixed ANOVA was used to explore significant interaction between time and group in ratings for each source of help for the two scenarios.

#### ***8.4.7.3 Research question three: Desired social distance.***

A Mixed ANOVA between time (pre-test and post-test) and group (intervention and control) on the social distance total score was performed to examine whether the intervention had an effect on desired levels of social distance. Age, gender and symptoms group are added as covariates.

#### ***8.4.7.4 Research question four: Depressive symptoms and intervention effect.***

To examine if the intervention has a different effect on participants with and without depressive symptomatology, participants were divided in two symptoms groups. The group of “higher score participants” includes participants that scored eight or higher on the SFMQ. The group of “lower score participants” includes those who scored below eight. Mixed ANOVA between symptoms groups (higher score and lower score) and time (pre-test and post-test) on the ACDQ scores and subscales were run for the intervention group only.

#### ***8.4.7.5 Research question five: Evaluation feedback***

Frequency analysis of the Likert-response questions was conducted. Responses to the qualitative questions were analysed using content analysis (Krippendorff, 2004) for

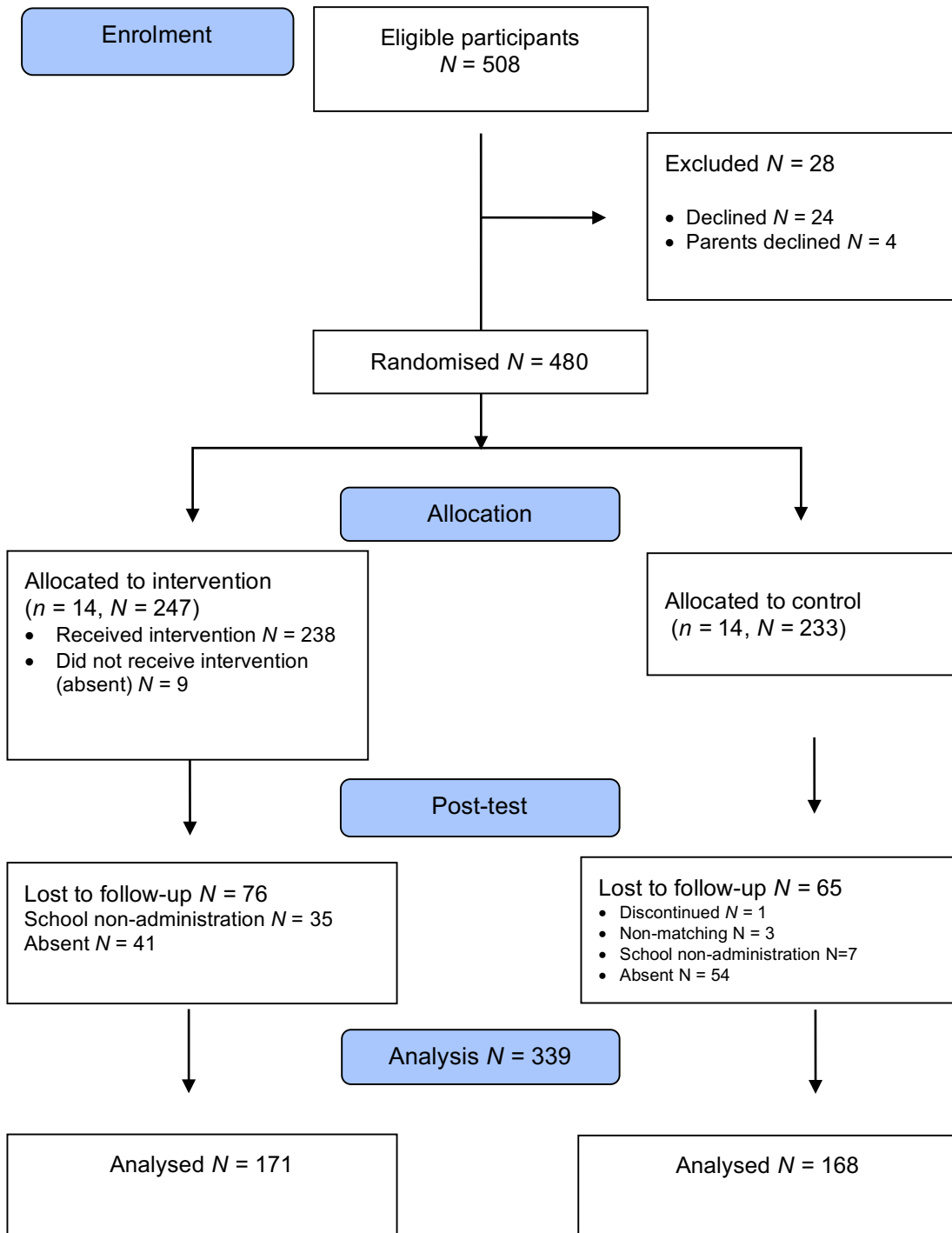
each of the three areas (stop, keep, start). Frequency analysis is presented to indicate common responses between participants.

#### **8.4.8 Recruitment.**

508 participants were invited to participate. 24 participants opted out (4.7%) and four parents/guardians (0.8%) declined participation of their child. The response rate is 94.5%. 480 participants completed the baseline questionnaire. From the 480 participants, 247 were allocated to the intervention group and 233 to the control group. From the intervention group, 238 participants received the intervention, while 9 participants were absent during the day. These were analysed in the intervention group, following Intention-To-Treat analysis. In total, 76 participants did not complete the post questionnaire, 35 were not administered the questionnaire due to school misapprehension and 41 were absent during the post-questionnaire completion. The final intervention sample is 171. From the control group, 233 completed the pre-questionnaire and 171 completed the post-questionnaire. 3 participants completed the post-test however did not provide essential information so that their questionnaire could be matched to the pre-questionnaire and were thus excluded from the analysis. 62 participants did not complete the post-test questionnaire, 54 were absent during post-test questionnaire administration, 1 participant opted out and 7 were not administered the questionnaire in class. Thus, the final analysed sample of the control group is 168. The total sample is 339 participants. Total attrition rate is 29.4% including absences ( $N = 95$ , 19.8%), school non-administration ( $N = 42$ , 8.8%), withdrawal ( $N = 1$ , 0.2%) and missing information ( $N = 3$ , 0.6%). The flow chart is presented in Figure 4.



**Figure 4: Flow Chart**





## 8.5 Results

### 8.5.1 Preliminary analysis.

*Missing value analysis:* Little's MCAR test was conducted to test whether there were patterns to missing values. The test was not significant,  $\chi^2(7415) = 6,234.14, p > .05$ , suggesting that values were missing completely at random. As the main objective of the study is to test changes in different dimensions of depression concepts, it was acceptable to use pairwise deletion of missing values.

Histograms, box-plots, values of skewness and kurtosis as well as z scores were used to examine assumptions of normality. Slightly negative kurtosis was found using the z-score for the attitudes subscale ( $z = -2.63$ ) and the social distance total score ( $z = -3.11$ ). Looking at the histograms, box-plots, values of skewness and kurtosis, and Q-Q plots, no outliers were identified and it was evident that the values were normally distributed; thus no transformation were performed (Field, 2009). Reliability of the ACDQ was questionable at pre-test (Cronbach's  $\alpha = .682$ ) and adequate at post-test (Cronbach's  $\alpha = .757$ ). Reliability of subscales measured using Cronbach's alpha at post-test were: comprehension  $\alpha = .783$ , attitudes  $\alpha = .537$ , treatment  $\alpha = .547$ , curability  $\alpha = .533$  (see Chapter 7.5.1 for descriptives of the measure at pre-test).

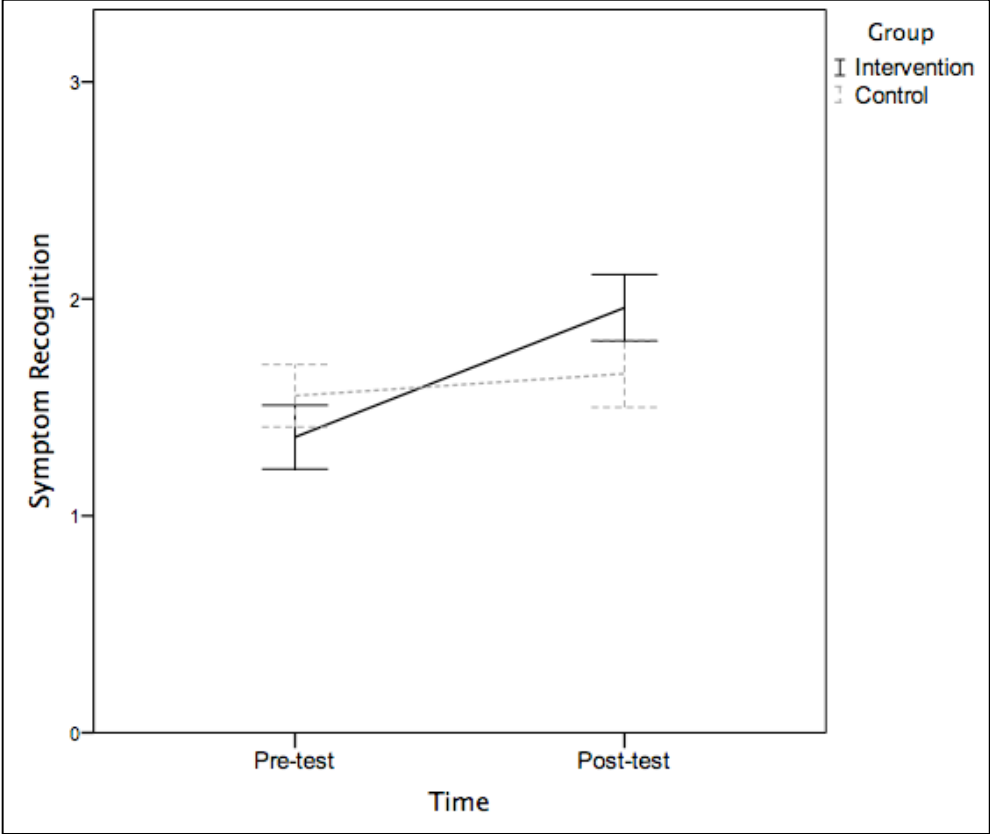
### 8.5.2 Main analysis: intervention effectiveness.

#### 8.5.2.1 Research question one: Depression literacy.

There was a significant interaction effect between time (pre- and post-test) and group (intervention and control) on symptom recognition,  $F(1, 328) = 16.62, p < .001, \eta_p^2 = .05$  which is a medium effect, suggesting that for the intervention group, symptom

recognition was higher after the intervention ( $M = 1.95$ ,  $SD = 1.02$ ) than before the intervention ( $M = 1.37$ ,  $SD = .98$ ), whereas for the control group the change was smaller ( $M = 1.55$ ,  $SD = .94$ ) and after ( $M = 1.66$ ,  $SD = 1.01$ ). Means for each group at pre-test and post-test are presented in figure 5.

**Figure 5:** Symptom Recognition at Baseline and Post-Test by Group



Mixed ANOVA was conducted between group (intervention, control) and time points (baseline, post-test) on the ACDQ total score. Age, gender and SFMQ group were added as covariates. There was a main effect of time,  $F(1, 280) = 3.99$ ,  $p < .05$ ,  $\eta_p^2 = .014$ . At post-test participants scored higher ( $M = 57.79$ ,  $SD = 8.08$ ) than pre-test ( $M = 57.38$ ,  $SD = 7.08$ ). A significant interaction effect between time and group was

found,  $F(1, 280) = 6.97, p < .01, \eta_p^2 = .024$ , which is a small effect. Total score increased for the intervention group after the intervention, whereas for the control group the total score decreased.

Further, mixed ANOVA was conducted on each subscale to explore whether the intervention was more effective in improving certain aspects of young people's depression concept over others. No significant interaction effect between group and time was found for Comprehension, ( $F(1, 295) = 2.94, p > .05, \eta_p^2 = .01$ ) and Attitudes ( $F(1, 308) = 0.36, p > .05, \eta_p^2 = .001$ ). Regarding Treatment, there was a significant interaction effect between group and time,  $F(1, 308) = 12.18, p = .001, \eta_p^2 = .038$ , which represents a small to medium effect indicating that after the intervention, the intervention group reported significantly higher understanding of depression treatment in comparison to the control group. Finally, a significant interaction effect between group and time was found for perceived Curability,  $F(1, 311) = 4.42, p < .05, \eta_p^2 = .014$ , which is a small effect. Intervention group participants' perceived curability increased at post-test, whereas for control group participants it decreased. Table 29 presents means for each group at each time point for each subscale and for the total score, as well as the time x group interaction result of the ANOVA. There were no main effects for time, and no interaction effects between time and age, gender or SFMQ group (see Table 37, Appendix H).



**Table 29:** *Mixed ANOVA Between Group and Time on ACDQ Scores*

			Baseline				Post-test				ANOVA			
	<i>N</i> Int.	<i>N</i> Con	Intervention		Control		Intervention		Control		F	df	p	$\eta_p^2$
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Comprehension	153	147	23.12	3.71	22.76	4.03	23.50	4.12	22.42	4.28	2.94	1, 295	.087	.010
Attitudes	160	153	13.56	3.44	13.30	3.36	13.64	3.12	13.56	3.25	0.36	1, 308	.551	.001
Treatment	160	153	13.19	2.38	13.04	2.47	13.99	2.45	12.75	2.59	12.18	1, 308	.001	.038
Curability	161	155	7.78	2.18	7.69	2.05	8.09	2.14	7.47	2.30	4.42	1, 311	.036	.014
Total Score	146	139	57.55	7.27	57.20	6.90	59.09	8.34	56.42	7.59	6.97	1, 280	.009	.024



### 8.5.2.2 *Research question two: Help-seeking and help-providing.*

Help-seeking includes: help-seeking intentions, help-providing intentions, perceived helpfulness of sources of help for a depressed adolescent, confidence in providing help to a friend with depression and perceived personal sources of help.

**Help-providing:** A significantly higher number of participants from the intervention group (76.8%) reported that they would engage another person for a friend experiencing depression with suicidal thoughts at post-test, in comparison to the control group (61.6%) ( $\chi^2(1) = 8.83, p < .01, OR = 2.06$ ) and in comparison to pre-test (59%), McNemar test:  $p < .001$ . Significantly less participants from the intervention group reported they would keep it a secret, in comparison to the control group ( $\chi^2(1) = 5.07, p < .05, OR = 0.45$ ) and to pre-test,  $p < .05$  (binomial distribution used). No significant difference between groups at post-test was found for the category “*I wouldn’t know what to do*” ( $\chi^2(1) = 2.73, p > .05, OR = 0.63$ ). For the intervention group, significantly less participants reported they would not know what to do at post-test in comparison to pre-test,  $p < .01$ . For the control group, no differences were found when baseline and post-test frequencies were compared (help-seeking:  $p = .472$ , keep it a secret:  $p = 1$ , don’t know:  $p = .344$ ).

Regarding confidence, no significant interaction effect between time and group was found, ( $F(1, 302) = 3.39, p > .05, \eta_p^2 = .01$ ), indicating that felt confidence did not change significantly as a result of the intervention.

**Personal Help-Seeking Intentions:** A significantly higher number of participants from the control group reported they would keep it a secret if they were depressed in comparison to the intervention group ( $\chi^2(1) = 6.37, p < .05, OR = 2.32$ ) at post-test. McNemar tests for each group separately showed that the difference in the frequency of participants reporting they would keep it a secret was not significant between pre-test and post-test for the intervention group ( $p = .210$ ) or control group ( $p = 1$ ). No other significant differences were found at post-test (Table 30). For both groups, no significant differences were found when baseline and post-test scores were measured using McNemar test.

**Table 30:** *Group Differences in Help-Seeking/providing Intentions at Post-Test*

		<b>Intervention</b>	<b>Control</b>	$\chi^2(1)$	<b>p value</b>	<b>OR</b>
<b>Help-Providing</b>	Tell someone	129 (76.8%)	98 (61.6%)	8.83	.003	2.06
	Keep it secret	13 (7.7%)	25 (15.7%)	5.07	.024	0.45
	Don't know	26 (15.5%)	36 (22.6%)	2.73	.099	0.63
<b>Help-Seeking</b>	Tell someone	114 (69.5%)	94 (61.4%)	2.29	.130	1.43
	Keep it secret	15 (9.1%)	29 (19%)	6.37	.012	0.43
	Don't know	35 (21.3%)	30 (19.6%)	0.15	.702	1.11

**Personal Sources of Help:** A Mixed ANOVA was conducted between group and time on the total number of sources of help, controlling for age, gender and depressive symptoms, to examine whether the total number of sources of help endorsed by the participants changed as a result of the intervention. No significant interaction effect was found between time and group,  $F(1, 288) = 0.94, p > .05, \eta_p^2 = .003$ . For individual sources of help, significant differences between groups were found for three categories at post-test: teachers ( $\chi^2(1) = 10.15, p = .001, OR = 2.16$ ), doctors ( $\chi^2(1) = 4.58, p < .05, OR = 1.81$ ) and school doctor/welfare assistant ( $\chi^2(1) = 4.179, p < .05, OR = 2.86$ ) (see Table 31). McNemar tests were run for each group separately; no significant differences were found between baseline and post-test scores for either group in these categories (Table 32).

**Table 31:** *Chi-square between Groups for Personal Sources of Help at Post-Test*

	<b>Intervention</b>		<b>Control</b>		$\chi^2$	<b>p</b>	<b>OR</b>
<b>Parent</b>	129	82.2%	119	78.8%	0.55	.457	1.24
<b>Teacher</b>	70	44.6%	41	27.2%	10.15	.001	2.16
<b>Friend</b>	125	79.6%	120	79.5%	0.001	.974	1.01
<b>Doctor</b>	43	27.4%	26	17.2%	4.58	.032	1.81
<b>School Doctor</b>	14	8.9%	5	3.3%	4.18	.041	2.86
<b>School Counsellor</b>	20	12.7%	15	9.9%	0.60	.438	1.32
<b>Sibling</b>	72	45.9%	79	52.3%	1.29	.257	0.77
<b>Family</b>	44	28.0%	45	29.8%	0.12	.731	0.92
<b>Helpline</b>	20	12.7%	10	6.6%	3.28	.070	2.06

**Table 32: McNemar Tests between Pre-test and Post-test  
In Personal Sources of Help**

	<b>Intervention</b>	<b>Control</b>
<b>Parent</b>	.458	.845
<b>Teacher</b>	.222	.216
<b>Friend</b>	.860	.281
<b>Doctor</b>	.864	.059
<b>School Doctor</b>	.804 <sup>a</sup>	.180 <sup>a</sup>
<b>School Counsellor</b>	.108 <sup>a</sup>	.064 <sup>a</sup>
<b>Sibling</b>	1.000	.009
<b>Family</b>	.337	.440
<b>Helpline</b>	.201	.092 <sup>a</sup>

Note. <sup>a</sup> Binomial distribution used, two-tailed

**Perceived helpfulness of sources of help:** Mixed ANOVA between time and group was performed to examine changes in perceived helpfulness of each source of help for depression and for emotional difficulties, controlling for age, gender and depressive symptoms. A significant interaction effect between time and group was found for friends in the depression scenario,  $F(1, 273) = 5.03, p < .05, \eta_p^2 = .018$ , which is a small effect. Perceived helpfulness of friends increased significantly more for the intervention group between baseline ( $M = 6.95, SD = 2.07$ ) and post-test ( $M = 7.61, SD = 2.04$ ) than the control group (pre-test:  $M = 6.84, SD = 2.22$ . post-test:  $M = 6.95, SD = 2.37$ ). No other significant effects were found (Table 38 in appendix H).

### **8.5.2.3 Research question three: Desired social distance**

A significant main effect was found for time,  $F(1, 305) = 4.00, p < .05, \eta_p^2 = .013$ . Participants scored higher at post-test ( $M = 11.94, SD = 3.05$ ) than pre-test ( $M = 11.58, SD = 3.00$ ) indicating that they desired less social distance. No interaction effect between time and group was found,  $F(1, 305) = 1.55, p > .05, \eta_p^2 = .005$ .

#### **8.5.2.4 Research question four: Depressive symptoms and intervention effect.**

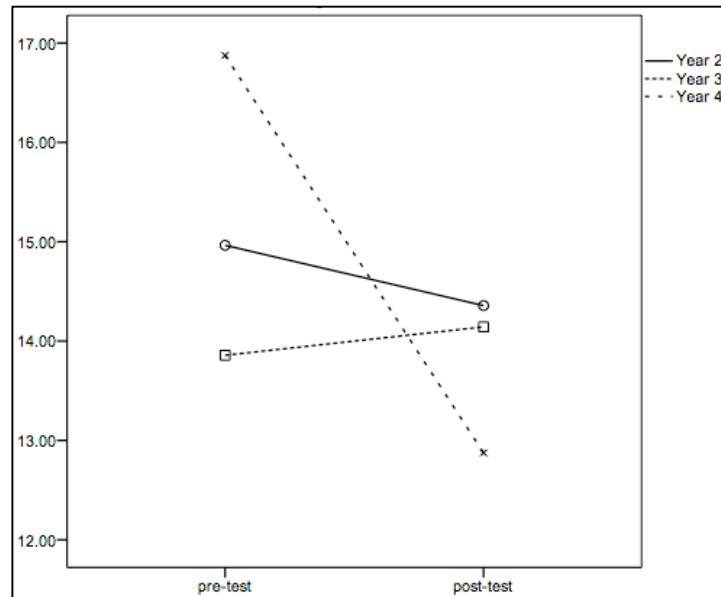
**Depression Literacy:** To examine whether the intervention had a different effect on depressed and non-depressed adolescents, a series of mixed ANOVAs was conducted between depressive symptoms groups (higher score participants and lower score participants) and time (pre-test and post-test) on ACDQ and symptom knowledge, within the intervention group only. No significant interaction effect was found between symptom group and time on symptom knowledge,  $F(1, 164) = 0.39, p > .05, \eta_p^2 = .002$ . No significant time and symptom group interaction was found for the ACDQ total score,  $F(1, 142) = 0.83, p > .05, \eta_p^2 = .006$ . When subscales were analysed separately, the only significant difference found was an interaction effect between symptom group and time for the attitudes subscale,  $F(1, 156) = 7.39, p < .01, \eta_p^2 = .045$ , which represents a medium effect. Attitudes scores increased at post-test for the group of lower score participants ( $M = 13.47, SD = 3.05$ ) in comparison to pre-test ( $M = 12.97, SD = 3.42$ ). For higher score participants, attitudes decreased between pre-test ( $M = 15.21, SD = 2.98$ ) and post-test ( $M = 14.12, SD = 3.30$ ).

**Secondary analysis of symptom group differences:** To further examine this finding, two mixed ANOVAs were conducted between depressive symptoms (higher score and lower score participants), time (pre-test and post-test) and age groups (13, 14 and 15 year-olds) or gender (male and female) on the attitudes subscale, for the intervention group only.

**Age:** A significant interaction effect between time and depressive symptoms was found,  $F(1, 156) = 13.89, p < .001, \eta_p^2 = .082$ , which represents a medium effect. A

significant interaction effect between age group, depressive symptoms and time was also found,  $F(2, 156) = 6.97, p = .001, \eta_p^2 = .082$ , indicating that depressive symptoms affected participants of different age groups differently between time points. To break down the interaction, two one-way ANOVAs were conducted to test the effect of age group on attitudes gain scores (post-test minus pre-test) for the depressed and non-depressed groups individually. For the lower score group, attitudes improved after the intervention for all age groups, there was no significant main effect of age,  $F(2, 116) = 1.78, p > .05, \eta_p^2 = .03$ . For the higher score group, a significant effect of age group was found,  $F(2, 40) = 5.30, p < .01, \eta_p^2 = .21$ , which is a large effect. Post hoc Bonferroni tests showed a significant difference in change scores between 13 year-olds and 15 year-olds. Attitudes decreased significantly more for 15 year-old participants ( $M = -4.0, SD = 4.34$ ) than 13 year-olds ( $M = -.61, SD = 2.64$ ),  $p < .05$ . Similarly, a significant difference in change scores was found between 15 year-olds and 14 year-olds, whose attitudes increased at post-test ( $M = .29, SD = 1.25$ ),  $p < .05$ . No difference between 13 and 14-year-olds was found,  $p > .05$  (figure 6).

**Figure 6:** Change in Attitudes Scores for Depressed Participants by Age Group



**Gender:** Similarly, a mixed ANOVA between time (pre-test and post-test), depressive symptoms (higher score and lower score) and gender (male and female) was conducted. As expected, the results show a significant interaction of time,  $F(1, 156) = 6.32, p < .05, \eta_p^2 = .039$ . No significant interaction was found between time and gender,  $F(1, 156) = 2.00, p > .05, \eta_p^2 = .013$ , or between time, depressive symptoms and gender,  $F(1, 156) = 1.26, p > .05, \eta_p^2 = .008$ .

**Help-Seeking:** To examine difference in help-seeking intentions, chi-square tests were performed in each question category (tell someone, keep it a secret, don't know) at pre-test and post-test. As shown in Table 33, higher score participants were significantly less likely to tell someone at pre-test and 5.35 times more likely to keep it a secret. At post-test, higher score participants were 3 times more likely to keep it a secret than lower score participants. McNemar tests between pre-test and post-test for each group separately were non-significant, indicating that the intervention did not

significantly affect young people’s intentions to seek help for either group. (see Table 39 in Appendix H).

**Table 33:** *Chi-square between Symptoms Groups in Help-Seeking Intentions*

		<b>Non-depressed</b>	<b>Depressed</b>	$\chi^2$ (1)	<b>p</b>	<b>OR</b>
Pre-test	Tell someone	82 (68.9%)	23 (50%)	5.13	.024	0.45
	Keep it a secret	9 (7.6%)	13 (30.4%)	14.47	< .001	5.35
	Don’t know	28 (23.5%)	9 (19.6%)	0.30	.584	0.79
Post-test	Tell someone	87 (73.1%)	27 (61.4%)	2.11	.147	0.58
	Keep it a secret	7 (5.9%)	7 (15.9%)	4.11	.043	3.02
	Don’t know	25 (21%)	10 (22.7%)	0.06	.812	1.11

**8.5.2.5 Research question five: Evaluation feedback.**

Two questions were used to elicit feedback from the participants. Participants reported that their understanding of depression improved as a result of the session ( $N = 185$ ,  $M = 4.14$ ,  $SD = .98$ ). Similarly, participants found the session beneficial ( $N = 140$ ,  $M = 7.06$ ,  $SD = 1.79$ ).

**Qualitative Feedback:** 67 participants were asked to provide qualitative feedback, including identifying what they enjoyed about the session (keep), was they wished to be removed (stop) and recommendations for further additions (start). 62 participants responded to the open-ended questions. Regarding suggested changes, 25 participants did not reply (blank), 18 indicated that they did not have any suggestions for changes, and 19 provided recommendations. Changes participants indicated include: fewer tasks ( $N = 8$ ), not using videos ( $N = 4$ ), not asking participants questions ( $N = 2$ ), less group work ( $N = 2$ ), not using a visual presentation ( $N = 2$ ) and less teaching ( $N = 1$ ).

In turn, the most common response regarding what the participants enjoyed in the session involved the videos, suggested by 33 participants. Participants explained that the videos provided examples that facilitated their understanding (“*the videos because it gives as a good idea of depression*”, “*the videos to make good examples*”). In terms of delivery, participants additionally indicated aspects they enjoyed in the session: group discussions ( $N = 2$ ), questions to the whole class ( $N = 2$ ) and visual presentation ( $N = 1$ ). Regarding the content, young people indicated help-providing information ( $N = 2$ ), aetiology of depression ( $N = 2$ ), signs and symptoms ( $N = 2$ ), helpful coping strategies ( $N = 1$ ), addressing stigma ( $N = 1$ ). Eight participants reported that they enjoyed everything in the session and the remaining participants did not provide an answer ( $N = 8$ ).

Regarding recommendations, 28 participants did not provide any, either indicating that they were satisfied with the session in its current form ( $N = 8$ ), or leaving the answer blank ( $N = 20$ ). 19 participants recommended additional group tasks and discussion to be added to the session (“*creating more group discussions*”, “*more writing activities*”, “*to put into groups and give scenarios to deal with*”). Five participants indicated that they would like more videos to be added to the session. Additional recommendations regarding the delivery method involved more writing activities ( $N = 2$ ), asking more questions to the class ( $N = 1$ ), using additional examples ( $N = 2$ ) having a quiz to test knowledge ( $N = 1$ ) and having more time ( $N = 1$ ). In terms of content, recommendations involved: more advice on providing help to a friend ( $N = 1$ ), more information in general ( $N = 1$ ), talking more about life events ( $N = 1$ ).

## 8.6 Discussion

The aim of this study was to evaluate a single-session classroom-based psychoeducational intervention on depression in adolescence. The findings of the study are promising, although in some areas changes were not significant. Participants showed significant improvements in depression literacy as measured by the ACDQ total score as well as the symptom knowledge question. Specifically, significant improvements were found in the depression treatment and curability subscales. Some changes in help-seeking and providing intentions were also identified. After the intervention, participants were less likely to intend to keep their difficulties to themselves and more likely to suggest certain adult personal sources of help. Each area is discussed below, in comparison to previous research and future steps.

Knowledge of depressive symptoms significantly improved after the intervention. This finding is in line with similar interventions where participants were asked to list symptoms of depression (Swartz et al., 2010), or identify symptoms of depression from a list (Bentham et al., 2013). This finding is particularly important if considered in relation to help-seeking. Both for adult (Andrade et al., 2014) and adolescent populations (Gulliver et al., 2010) low perceived need for help is a significant barrier to seeking help. A systematic review of cross-sectional studies on young people's depression literacy reports that less than half of adolescents are able to recognise depression from a cluster of symptoms presented in a vignette (Georgakakou-Koutsonikou & Williams, 2017). Increasing recognition of symptoms is thus an essential first step (though possibly not sufficient) in the help-seeking process.

The results of this study show that help-seeking and help-providing intentions significantly improved for the participants, with more clear results evident in help-providing responses. In help-seeking, control group participants were significantly more likely to endorse “keep it a secret” than intervention participants at post-test, a difference that was not observed at baseline. When baseline and post-test scores were examined for each group separately, no significant differences were found. One interpretation could be that a single-session intervention is not sufficient to produce change in help-seeking intentions, as also suggested by others in significantly longer programmes (Perry et al., 2014). A second explanation could be that as the intervention did not address stigma, the latter being a key barrier to help-seeking (Gulliver et al., 2010), it is possible that stigma impedes any significant improvement in intentions to seek help from others. Indeed, the finding that significant improvements in the treatment and curability subscales were found signifies that participants’ knowledge of effective treatments and their belief that depression is curable increased. A single-item was used to evaluate intentions to seek help. A more detailed tool might have provided further insight into which aspects of help-seeking may change following a depression literacy intervention. Finally, previous help-seeking behaviour was not explored; future evaluations of the intervention should incorporate previous experiences of help-seeking in the analysis.

It is encouraging that significant improvements in help-providing intentions were found, considering the importance of friends as a source of support in the adolescent years. Young people systematically show that friends are valued as people to seek help from for depression (Georgakakou-Koutsonikou & Williams, 2017). Previous cross-

sectional studies highlight the need to educate adolescents on available sources of help and to emphasise the need to engage adults, in order to close the treatment gap in CAMHS (Byrne et al., 2015). Nonetheless, help-seeking and providing intentions are likely to differ from actual behaviour, especially if one experiences depressive symptoms. For example, perceived stigma and help-negation (Rickwood et al., 2007; Wilson et al., 2007) are likely to affect an adolescent's decision, over and above the identified need for help.

Similarly, no significant changes in desired social distance were found following the intervention. On one hand, studies in mental health literacy suggest that knowledge is likely to reduce stigmatising attitudes (Wright et al., 2011). Education is found to be more effective than contact-based interventions in stigma reduction amongst adolescents (Corrigan et al., 2012). On the other hand, it could be that the duration of single-session interventions is insufficient to address stigma (Pinto-Foltz et al., 2011). Moreover, in this intervention, stigma reduction was not a primary aim, the effect on social distance was explored as a possible secondary effect of the intervention. A specific focus on addressing prejudiced beliefs associated with depression stigma could have provided greater, significant change. Additionally, the only stigma-related measure in this study was that of social distance, measuring possible discrimination against hypothetical peers with depression. The need to use a variety of measures of attitudes when examining stigma has been acknowledged (Heary et al., 2017; Hinshaw, 2005).

Overall, the intervention showed some promising results, although for some aspects change was not significant, including the comprehension of depression and attitudes towards depression subscales. For comprehension, this finding is unclear, considering that knowledge of symptoms increased following the intervention. For attitudes, it is possible that, similar to social distance (discussed above), changing attitudes might require a more targeted approach.

This is the first study in the UK to evaluate a classroom-based depression literacy intervention for adolescents, showing that a brief psychoeducational session is effective in improving depression literacy. From the perspective of mental health literacy, it could be argued that the intervention did not completely address the dimensions of the construct (Kutcher et al., 2016), in that there were minimal positive mental health strategies introduced and stigma-reduction was not an aim of this intervention. With the lack of follow-up, it is unsure if the intervention has a long-lasting effect on adolescent depression literacy. However, the promising results lead to argue that, subject to further evaluation, the present session could constitute a module of a wider in content and longer in duration mental health literacy intervention. Currently, it appears that other mental health problems are somewhat overlooked in the mental health literacy field. Based on the findings of a systematic review on school-based interventions (Wei et al., 2013), it is evident that depression and schizophrenia constitute the target disorders for the majority of mental health literacy interventions, when a specific approach is used rather than a generic mental health focus. At the same time, the evidence base on adolescent mental health literacy for disorders other than depression appears to be even more limited, whilst young people might struggle more

with misconceptions (Coles et al., 2016; Mond et al., 2007). Multiple session interventions, focusing on a variety of mental health difficulties encountered by adolescents, and additional sessions on maintaining mental well-being and targeting stigma are likely to be more effective as a first step in promoting adolescent mental health through educational settings.

Further, school-based interventions need to be sustainable, requiring a standardised delivery process. For the current session, the next step would involve manualising the intervention and material used. Sessions delivered by teachers are likely to increase sustainability and allow delivery to a wider number of schools. Research studies show that mental health literacy interventions delivered by teachers in secondary education are effective (Kutcher, Wei, & Morgan, 2015; Milin et al., 2016). However, teacher-delivered interventions require training to be provided to teachers and thus time-investment, and would therefore be meaningful if mental health literacy interventions were incorporated into the curriculum and applied systematically.

While the intervention was equally effective in improving young people's knowledge, it had a different effect on the attitudes subscale, based on participants' scores on the SMFQ, especially for the older age group (Year 4, 15 year-olds). This indicates that perhaps targeted interventions or messages are needed for students with higher levels of depressive symptoms in this age. However, the sample of 15 year-olds was small ( $N = 44$ , 13% of total sample) in comparison to the other two age groups, therefore this finding does not necessarily generalise to other samples of adolescents.

Finally, based on the quantitative and qualitative adolescent feedback, it appears that the intervention is acceptable to the participants. Future modifications should consider the inclusion of additional interactive tasks, including more group discussions and activities. However, this might prove challenging, due to the limited time available. An intervention delivered over more than one teaching hour might prove beneficial, in terms of making the delivery more engaging and including more group, interactive and creative elements. Additionally, the use of videos appears to be engaging for the participants and useful for their learning. Interactive approaches appear to be engaging for students in Scotland, being in line with the pedagogical methods fostered by the Scottish curriculum as part of active learning (Scottish Executive, 2006a).

#### **8.6.1 Limitations.**

Limitations of the study should be acknowledged. Firstly, a delayed post-test assessment was not performed to assess if changes identified were sustained in the longer-term. Secondly, randomisation of intervention condition was not achieved (see also Chapter 8.3.5), a randomised controlled design is needed in further evaluations. Third, internal consistency of the ACDQ was moderate. Although relevant depression literacy measures were not identified in the literature, standardised questionnaires for stigmatising attitudes and help-seeking could have been used, instead of single items (for a review, see Wei et al., 2015). Nonetheless, the study benefits from a robust design and adequately large sample size. The measures used allowed to examine in detail changes in young people's knowledge and indicate the areas where further focus is needed.

## **8.7 Conclusion**

This is the first study to measure the effectiveness of a single-session depression literacy intervention in a sample of students in Scotland. The intervention found positive results; compared to the control group, intervention participants showed higher depression knowledge and improvement in appropriate help-seeking and providing intentions following the intervention. Particularly, the intervention informed participants' knowledge of the curability and treatment subscales. In turn, the intervention was acceptable by participants, who provided overall positive feedback. The findings show that the intervention was overall equally effective regardless of gender, age, and depressive symptoms indicating that a universal approach to mental health literacy interventions is appropriate in improving knowledge. Concerning attitudes, adolescents with higher levels of depressive symptoms might benefit more from targeted interventions. While the current study constitutes a pilot evaluation, the intervention –subject to wider evaluation- could be manualised and used in Scottish high schools.

## 9 General Discussion

The main aim of this thesis was to provide a comprehensive account of children's and adolescents' conceptualisations of depression. It provides a detailed examination of conceptualisations of depression in different ages, as well as associations with gender and experience of depression. In turn, a psychoeducational intervention on depression was developed and evaluated. In this final chapter, the findings are discussed, aiming to achieve a concise synthesis and synopsis of evidence and to indicate implications for clinical practice and education. Limitations of the project are acknowledged, indicating future research directions.

The necessity to explore children's concepts of mental health and illness has been emphasised for various reasons. Gaining an understanding of how children conceptualise mental illness can: facilitate effective communication with health professionals (Bibace & Walsh, 1980; Rushforth, 1999) enhance children's active involvement in decision-making about their health (Day, 2008), inform our understanding of the mechanisms of stigma and peer exclusion (Hennessy et al., 2008; Hinshaw, 2005), contribute to the understanding of help-seeking processes (Rickwood et al., 2005), as well as inform the development of mental health literacy interventions aimed at children and young people (Wahl, 2002). Research evidence to date is limited; there is considerably less focus on children and young people's understanding of mental health and illness in comparison to physical health (Ormshaw et al., 2013),

as well as an imbalance between studies targeting child populations in comparison to adolescent groups (e.g. Georgakakou-Koutsonikou & Williams, 2017).

This thesis aimed to expand our understanding of how children and adolescents conceptualise depression, the latter being more prevalent in adolescence. Depression with an early onset in childhood or adolescence is associated with various adverse effects (Chapter 1) and is usually accompanied by significant stigma that further hinders help-seeking (Gulliver et al., 2010) and contributes to peer exclusion. By adopting a theoretical framework of illness representations, but also informed by the mental health literacy framework and literature, the included studies explore a variety of aspects related to depression conceptualisations. Below, key findings are discussed, in comparison to previous research.

## **9.1 Summary and synthesis of main findings**

### **9.1.1 Recognition of depression and its symptomatology.**

The findings of this thesis demonstrate that from a young age, children are able to recognise that a depressed character is experiencing difficulties, as well as to distinguish between a depressed and control condition in terms of the existence of a problem (Study 1a), the need for help (Study 1b) or the helpfulness of formal sources of help (Study 2a). Children's ability to label depression increases from 8-9 years to 11-12 years; nonetheless, less than one in five children correctly label depression from a cluster of symptoms presented. Further, children struggle to categorise depression as a mental health problem, their ability to do so does not significantly improve from the age of 8-9 to 11-12 years. In turn, adolescents have limited knowledge of the symptoms

of depression, with the majority being able to list one or two symptoms; a small improvement was found between the ages of 13 and 14 years (Study 2a).

The findings indicate a confusion about the nature of depression and its classification as a mental illness, echoing previous qualitative research with adolescents (Leighton, 2009; Secker et al., 1999). Children's conceptions varied between viewing depression as a short-lived emotional state to a condition with long-lasting effects if untreated. The results also support Burns and Rapee's (2006) argument that what young people actually mean when they do label depression from symptoms presented in a vignette is unknown. This finding has implications for clinical practice, mental health education, as well as research. Exploring young people's definition of depression, and more broadly of mental health and illness is essential for effective communication in educational programmes and clinical practice (discussed below). Methodologically, in addition to exploring young people's ability to identify and label depression (and/or other mental illness), further insight into whether these labels reflect the clinical conceptualisation is needed. Children might not have the vocabulary to label mental illness, however other aspects of their conceptions show sophisticated understanding.

In turn, the extent to which there is a need to correctly name a mental illness is uncertain. On one hand, correct labelling has been found to predict more appropriate help-seeking for depression amongst young people (Wright et al., 2007). On the other hand, the present studies show that children and adolescents realise the need for help and have some knowledge of appropriate sources of help (Studies 1b and 2a). From this perspective, it is questionable whether it is utterly necessary to be able to label the disorder (Coles et al., 2016). For example, in Wright et al.'s study (2007) correct

identification and labelling of depression was associated with appropriate help-seeking; however, for psychosis, labelling the problem as mental illness equally predicted appropriate help-seeking recommendations. Additionally, debate on the helpfulness of labelling has been generated in stigma research, under the premise that categorising a person experiencing difficulties as having a mental illness might trigger greater stigma. Although specifically for depression these associations have not been supported by research in samples of young people (Wright et al., 2011) or adults (Angermeyer & Matschinger, 2003), further understanding of the benefits of labelling on help-seeking is required.

### **9.1.2 Depression treatment and informal sources of help.**

This thesis has been based on the notion that gaining an understanding of how children and adolescents conceptualise depression is essential for effective communication with professionals, stigma reduction, and timely help-seeking. However, the role of key adults in supporting children who encounter mental health difficulties should not be diminished. The findings confirm the importance of informal sources of help for depression (Studies 1b and 2a), in line with previous studies in child and adolescent populations (Burns & Rapee, 2006; Coles et al., 2016; Hennessy & Heary, 2009; Leighton, 2010; Swords, Hennessy & Heary, 2011a). Meanwhile, only 58% of adults are able to recognise depression in a vignette presenting a child with depression (Pescosolido et al., 2008).

Parents constitute the primary source of help for depression amongst both the child and the adolescent sample, being endorsed by 80% of participants in both studies

presented in this thesis (Studies 1b and 2a). However, little research has been conducted on parental mental health literacy. Parental understanding of the child's difficulties is associated with help-seeking, engagement in treatment and treatment outcome (Morrissey-Kane & Prinz, 1999; Teagle, 2002; Zwaanswijk et al., 2003). Parents of adolescents receiving treatment for mental health problems show ambiguity or uncertainty in their conceptualisation of their child's condition (Moses, 2011). Further research is needed to define how parental mental health literacy is associated with child health outcomes, and also how parental knowledge and attitudes affect children's conceptualisations of mental health and illness.

Teachers were endorsed as personal sources of help for depression almost twice as frequently by adolescents (34.4% of participants, Study 2a) than children (18.6% of participants, Study 1b) in this thesis. Teachers' role is essential for the well-being of students in terms of both promoting emotional well-being of all students, as well as in assessing the needs of individual pupils and making referrals for professional help (Department of Health, 2004; Scottish Executive, 2004; Scottish Government, 2012). At the same time, teachers express feeling inadequately skilled to cope with the mental health needs of students (Reinke et al., 2011; Rothi, Leavey, & Best, 2008). A study in Scottish schools shows that approximately only 50% of teachers correctly identified students with depression (Moor et al., 2007). In the present research, one in five children and one in three adolescents would refer to a teacher for help with depression. The results indicate that there is scope to support teachers in their help-providing role, but also to better inform pupils in teachers' ability to support students in the help-seeking process. Promising initiatives are identified towards this direction, as for

example the recent introduction of training in mental health first aid for teachers in secondary education in the UK (Department of Health, 2017).

Teachers are suitable candidates to provide mental health education. In comparison to expert-led programmes, teacher-led ones are likely to enhance sustainability, and have the potential to be incorporated in the curriculum, thus normalising teaching on mental health and illness. Early evaluations of teacher-led mental health literacy programmes are met with success (e.g. Milin et al., 2016; Perry et al., 2014). Talking about mental illness is characterised by hesitation and fear from teachers in primary education. In a qualitative study with primary school teachers, in addition to feeling that they are lacking necessary knowledge, teachers also reported feeling a need to “protect” children from exposure to information about and people with mental illness. This reluctance stemmed from fear that discussing mental illness could have a negative effect on the pupils and also from worry about the reactions of parents (Cooke, King, & Greenwood, 2016). Therefore, in the implementation of mental health education, it is important to enable teachers by providing the appropriate training and ongoing support.

The findings of this thesis also reveal that even though friends are considered as a source of help for depression in childhood (Study 1b), it is in the early adolescent years that they become a primary source of support (endorsed by 77% of participants in Study 2a). This is closely in line with previous research on adolescent help-seeking (Jorm, Wright, & Morgan, 2007; Lubman et al., 2017; Rickwood et al., 2005) and reflects the importance of peer relationships during adolescence (Steinberg & Morris, 2001). Adolescents in the current sample showed high confidence in their ability to

provide support to their peers. While young people should not be expected to have all the necessary skills to support a friend with depression, basic knowledge (including appropriate referral to adult help) is needed (Jorm et al., 2007). Young people have also voiced the wish for peer support to be available for mental health difficulties; in the UK, the potential benefits of peer support schemes have been identified on a policy level (Department for Education, 2016b, 2017). Well-designed adult-led peer support programmes and first aid training for young people (Hart, Mason, Kelly, Cvetkovski, & Jorm, 2016) are two promising avenues to enhance young people's knowledge, help-seeking and attitudes towards peers.

In this section, children and adolescents' informal sources of help for depression have been discussed. The necessity to expand research on the mental health literacy of parents and teachers is identified, as is the need to improve their mental health knowledge. Focusing on parents and teachers alike is likely to facilitate timely help-seeking for children in need of professional help, which is an essential first step for early intervention. Similarly, an equal focus on the knowledge and skills of young people is required, as peer support is valued and desired.

### **9.1.3 Group differences in conceptualisations of depression.**

#### ***9.1.3.1 Age.***

Age differences were consistently found in children between the ages of 9 and 12 years in Study 1. Older children showed more sophisticated concepts of depression, which reflected the clinical construct more closely. Briefly, Study 1a shows that 11-12 year-olds were more likely to identify depression in a vignette, suggest more causal factors,

expect more negative consequences, report risk-behaviours as a consequence and expect longer timeline to recovery. Study 1b reveals that 11-12 year-olds are more likely to suggest mental health professionals as source of help. Conversely 8-9 year-olds were more likely to suggest informal treatment options (Study 1b) and use tautological responses to explain the cause of depression (Study 1a). The findings show that there is a marked change in how depression is perceived between 8-9 and 11-12 years. The results are in line with previous research and suggest that mental illness becomes a distinct domain, separated from physical illness towards the end of middle childhood (Fox et al., 2010; Spitzer & Cameron, 1995).

In the adolescent sample (13 to 15 years) included in Study 2a, however, few age differences were evident; moreover, these do not follow a linear trend. For example, 14-year-olds showed higher knowledge of symptoms of depression than 13-year-olds, whilst scoring significantly lower than both 13 year-olds and 15-year-olds in the comprehension of depression subscale of the ACDQ. Overall, between the early to mid-adolescent years (13 to 15 years), knowledge of depression is fairly similar. Perhaps the absence of significant age trends is due to the small age differences between the age groups (three subsequent grades, one-year difference). Similar to our findings, significant age differences were not identified in the perceived need for help and suggested sources of help between 12 and 14-year-olds in another study (Swords, Hennessy & Heary, 2011a). The fact that participants of all grades had similar levels of knowledge could explain the findings that the intervention was equally effective for all age groups. The results contrast those of Skre et al. (2013) who found age differences in baseline knowledge and effectiveness of a mental health literacy

intervention between 13 and 15-year-olds, leading them to suggest that 13-year-olds might not be cognitively mature to understand aspects of the content of the intervention related to symptoms.

#### **9.1.3.2 Gender.**

Gender does not appear to have a central role in children's depression concepts as shown in Study 1; differences in knowledge, help-seeking and attitudes become more evident in adolescence. Regarding depression concepts, very few gender differences were found amongst the child sample, in line with previous research in a same-age group (Fox et al., 2010). In Study 2a focusing on an adolescent sample, small to medium effects for gender were found. Adolescent girls scored higher in knowledge and reported lower desired social distance (Study 2a), which confirms previous research in knowledge (e.g. Coles et al., 2016; Cotton et al., 2006), attitudes (e.g. Dolphin & Hennessy, 2014; Swords, Heary & Hennessy, 2011) and social distance (Kelly & Jorm, 2007). Conversely, adolescent boys were more likely than girls to respond that they would refer to someone else for help-seeking and help-providing (Study 2a), a finding that contradicts previous studies. For example, it has been reported that adolescent boys are more likely to endorse dealing with depression alone (Jorm et al., 2006) and less likely to report intentions to seek help (e.g. Raviv et al., 2000; Rickwood et al., 2005). Hypotheses for the gender differences in mental health literacy include gender socialisation and greater contact/familiarity or experience between women (Burns & Rapee, 2006; Holzinger et al., 2012). The present findings showing that gender differences become apparent in adolescence are not contrasting such hypotheses, as adolescence is associated with gender intensification (Hill &

Lynch, 1983) and a sudden increase of depression amongst girls (Hankin et al., 1998). However, these factors could not explain the help-seeking differences found; conversely, under the mental health literacy rationale, it would be expected that girls would be more willing to seek help. Nonetheless, Holzinger et al. (2012) note that in over half of the gender comparisons conducted in their systematic review, no significant gender differences were found. Therefore, gender trends described in the literature are not salient; further investigation is needed. Based on the current findings, identifying at what age gender differences become evident would be an interesting future examination.

### ***9.1.3.3 Experience.***

This thesis provides one of the first examinations of the role of experience in children's and adolescents' depression conceptualisations. While no substantial differences were evident in the child sample (Study 1), experience was associated with adolescents' knowledge and attitudes (Study 2a). Interestingly, a personal experience of depression was not related to adolescents' total scores on the ACDQ measure or to their knowledge of symptoms of depression. Experience of other mental illness and contact with people with depression and other mental illness were associated with higher scores than non-experienced peers (Study 2a). These initial findings signify the need for a closer examination of how experience and contact affect depression conceptualisations. For example, in children's understanding of physical illness, having an experience does not automatically translate into a more sophisticated understanding of illness (Burbach & Peterson, 1986). Similarly, adult studies report mixed results (Cutler et al., 2017) or no significant association between personal

experience of depression and mental health literacy (Goldney, Fisher, & Wilson, 2001). Implications of the role of experience are discussed below, in Chapter 9.3.1.

#### ***9.1.3.4 Depressive symptoms.***

Similarly, the association between current depressive symptomatology and depression literacy has rarely been tested. Participants with depressive symptoms over the cut-off score of the SMFQ viewed depression as less curable than those who scored below the cut-off score. This finding resembles research reporting that depressed adults conceived depression as less controllable by treatment and by oneself than non-depressed participants (Fortune et al., 2004; Vollmann et al., 2010). A conceptualisation of depression as less curable could interpret the finding that adolescents with higher scores on the SMFQ reported less helpful help-seeking intentions in the present study (Study 2a). Previous research also shows that young people are less likely to seek help in the presence of depressive or suicidal symptoms (Rickwood et al., 2007). It is possible that depressive symptoms impact on cognitive representations of depression (Glattacker et al., 2013).

Regarding the intervention effect, few studies have taken into consideration the participant's current mental health status in school-based mental health literacy interventions (Wei et al., 2013). The present findings show that the intervention is equally effective for participants with higher or lower levels of depressive symptoms, apart from an effect in the attitudes subscale, which was strongly related to the age of the participants (Study 2b). One limitation is that depressive symptoms were not measured at post-test and as such it is unknown whether students with depressive

symptoms prior to the intervention (baseline score) continued to experience such symptoms during and following the session. Nonetheless, it is possible that targeted interventions are needed for young people with depressive symptomatology, emphasising messages around curability, help-seeking and stigma (Study 2).

## **9.2 Contribution of the Thesis.**

To the author's best knowledge, this is the first project to attempt a detailed investigation of depression concepts in middle childhood and early adolescence.

The strength of the project lies in the methodological approach and the wide age range of participants involved. Firstly, a thorough examination of children's concepts of depression was conducted, identifying key areas of focus for psychoeducation. Thus, the foci of the intervention and developed material closely correspond to children's level of understanding of depression. In turn, the intervention developed is equally informed by clinical expertise (based on previous material developed by mental health professionals), research evidence (both from Study 1 and previous literature) and theories of depression development (e.g., CBT, IPT). The intervention findings are very encouraging, in that even a single-session intervention contributes to young people's knowledge and help-seeking intentions. Subject to wider evaluation, ideally involving a randomised-controlled trial design including a long-term follow-up, the intervention is, to our knowledge, the first evaluated depression psycho-educational intervention designed for adolescents in the UK.

The contribution of this intervention is significant when considering the wider context. Young people request to be more knowledgeable about mental health and illness

(Department for Education, 2016a). Specifically in Scotland, adolescents in secondary education have articulated their wish to be more knowledgeable about depression, its prevention and strategies to cope with depressive symptoms (Woolfson, Woolfson, Mooney, & Bryce, 2009). At the same time, there is paucity of evaluated and standardised teaching resources for mental health-related teaching (Department for Education, 2016b). The intervention developed is appropriate to fill this gap by providing a time-limited resource that could be easily standardised and adapted to be delivered either by tier two mental health professionals or teaching staff.

The use of Leventhal et al.'s framework (1980) allowed to expand the aspects of children's concepts examined in previous research and to provide an elaborate account of their conceptualisations. One potential limitation of the framework is that it does not link mental health knowledge with behaviour and attitudes. Considering the dearth of research in children's concepts of mental illness, the CSM is a useful and appropriate model to use at this early stage, for a comprehensive investigation of children's conceptions (Fox et al., 2010). Future steps would require the adoption of frameworks that explicitly draw the links between knowledge and behaviour/ attitudes, to understand how knowledge translates into help-seeking or stigma (Georgakakou-Koutsonikou & Williams, 2017). Such theories have recently been proposed within stigma research, as for example the developmental inter-group theory (Heary et al., 2017).

Finally, considering the scarcity of validated tools to measure adolescent mental health literacy (Wei et al., 2015, 2016) one contribution of the thesis is the development of a

detailed and theory-driven tool to measure adolescent depression literacy. While further standardisation is needed, this tool would be of use to researchers wishing to measure adolescent depression concepts in detail.

### **9.3 Implications for Clinical Practice and Education**

In the previous chapter, an overview of the main findings was presented. The findings of this thesis have important implications for clinical practice and mental health education, which are discussed below.

#### **9.3.1 Clinical practice.**

The contribution of this thesis for clinical practice is twofold. Firstly, it adds to the limited evidence base in children's knowledge about depression, that could inform practitioners about what beliefs and knowledge children and adolescents already hold. Secondly, gaps in children's concepts or areas where children's concepts diverge from clinical concepts are identified, directing towards areas for psycho-education in the treatment process.

The principal finding related to clinical practice is that children from the age of 8-9 years demonstrate detailed conceptions of depression. With age, children's understanding aligns more closely to the clinical conceptualisation. Depression is conceptualised as a difficulty deriving from a variety of psychosocial causes, in line with developmental psychopathology models of depression (e.g. Cicchetti & Toth, 1998; Hammen, 1992). It is perceived as a curable condition; left untreated, depression is considered to have behavioural, cognitive, social and emotional impact. Areas where

children's conceptualisation diverges from the conceptualisation of professionals include the categorisation of depression as a mental illness, aspects of treatment and perceived timeline to recovery.

While children and adolescents realise that help should be sought, informal sources of help are preferred (Study 1b). Clinicians working with children affected by depression should thus be aware that children do not necessarily understand the role of professionals. In turn, treatment duration expectations were shorter than average depression recovery duration (NICE, 2015) (Study 1a). These findings show that it would be beneficial for clinicians to explore these aspects with children, explain the course of treatment and foster realistic expectations. Qualitative research reflects uncertainty in adolescents' experience when attending mental health services for the first time, with regard to one's and the professional's role, as well as in relation to the therapeutic process (Watsford, Rickwood, & Vanags, 2013).

Similarly, young people and carers consider that the information shared with them is limited and that their involvement in treatment is not up to the desired level (Coyne, 2008; Simmons et al., 2011). In physical health research, professionals' perceptions of the child's understanding of illness does not necessarily respond to children's actual understanding and it is thus over or under-estimated (Rushforth, 1999; Vacik et al., 2001). Further insight into how professionals perceive children's understanding of mental illness is required; only one study has been identified in this direction (Mendenhall, Frauenholtz, & Conrad-Hiebner, 2014). Professionals identified that children's knowledge is not at the desired level; gaps between what providers consider

children should know and what they think children already know involve aspects of treatment, services and risk factors. Surprisingly, over half of the participants viewed that children's lack of knowledge had no or little effect on their work (Mendenhall et al., 2014). The study involved social workers working with children with mental health problems; the perceptions of professionals in a therapeutic role have not been explored. The present findings would be of use to clinicians wishing to gain a further understanding of how children conceptualise depression. As children's participation in decisions affecting their health care constitutes a fundamental right of all children (United Nations, 1989), a greater understanding of how children conceptualise mental illness can facilitate professionals to involve children of different ages in treatment decisions.

### **9.3.2 Mental health education and psychoeducation.**

Research shows that stigma develops early in life, and therefore the necessity to develop mental health education and anti-stigma interventions for children under the age of twelve has been emphasised (Cooke et al., 2016; Heary et al., 2017; Mueller et al., 2016). The outlined gaps in children's concepts of depression could inform mental health educational programmes aiming to facilitate children's understanding and target negative beliefs in the primary school years.

Specifically, general mental health literacy or mental health promotion programmes should be aware of the language used and of children's definitions of relevant terms (e.g. "mental health problem", "depression") (Study 1a). Children are aware of a variety of self-help or informal-help strategies for a peer with mental health difficulties

(Study 1b). While some of these reflect evidence-based and effective coping strategies (e.g. cognitive restructuring), others might be unrealistic or overly simplistic (see Chapter 4.4.4). Mental health promotion programmes would benefit from exploring and acknowledging children's beliefs about coping strategies and managing misconceptions. Regarding secondary education, adolescent participants showed average comprehension of depression, its curability and treatment, as well as positive attitudes towards depression (Study 2a). Evidently, there are areas to further enhance adolescents' understanding. The fact that the current intervention had positive outcomes is promising (Study 2b). Previous studies also show that low-cost, single-session interventions are effective in improving knowledge about symptoms and sources of help, as well as attitudes (Skre et al., 2013).

In regard to the delivery of mental health literacy interventions, the results indicate that universal interventions are appropriate. For children, gender or experience do not systematically differentiate children's concepts (Study 1). For adolescents, a single-session universal intervention, using active methods and collaborative tasks is effective and well-received by students (Study 2b). Concurrently, targeted interventions for young people with mental health symptoms or greater focus on areas where young people with mental health symptoms show differentiated knowledge might prove beneficial; the current findings direct towards targeting areas of perceived curability and helpfulness of treatments, as well as barriers to seeking help from others (Study 2).

## **9.4 Limitations of the Thesis**

### **9.4.1 Theoretical limitations.**

One potential limitation involves the operationalisation of the conceptualisation of depression and the measurement of depression literacy. In Study 1, the use of the Leventhal framework as a guide for the development of the questions broadens out the areas of children's understanding explored, while by using an open-ended format of questions, imposing predefined options was avoided. The quantification of depression knowledge in study two was a more complex task. Items used were based on previous research and theoretical models of the development of depression in childhood and adolescence. However, defining what is considered as "correct" or "higher" knowledge is a complex undertaking in mental health, where there is uncertainty around how mental illness develops. Mental illness is idiosyncratic in nature, it originates from multi-causal and diverse pathways and there is no wide consensus on optimal treatment. Thus, specifying what is considered as correct knowledge of mental illness is subject to the perspective of the developers of the measure. To ensure accurate portrayal and measurement of depression (development, aetiology and phenomenology), the latter was conceptualised according to developmental psychopathology models (Cicchetti & Toth, 1998), cognitive (Beck, 1979) and interpersonal theories (Moreau et al., 1991) of depression development.

The use of a framework based on adult conceptualisations of health and illness introduces certain limitations. The framework, as well as the subsequent questionnaires based on the five components of illness representations (i.e. IPQ, Weinman et al., 1996), do not necessarily correspond to how children's

conceptualisations of mental illness are structured. For that reason, standardised questionnaires based on the model did not apply to the examination of children's understanding of depression and thus were not utilised.

Therefore, the CSM was used in this thesis as an organisational framework, upon which to base the focus areas in both studies. The five dimensions of the model (identity, causes, consequences, timeline and cure/control) were used to guide the structure of the interview schedule in Study 1 and thus to achieve a detailed exploration of children's depression conceptualisations. As research on child mental health literacy is in its infancy, this framework proved useful in broadening the areas of focus from those examined in previous research. In turn, the CSM was used to organise the components of the ACDQ in the second study of the thesis. As evident in the factor analysis presented in Chapter 7, the identified factors do not correspond to the five dimensions of the CSM. While the CSM provided a useful guide for the aims of this thesis, there is a lack of research that inductively explores the content of children's concepts of health and illness.

#### **9.4.2 Methodological limitations.**

A potential limitation of this thesis lies upon the sample selection. First, convenience sampling was used in both studies. Secondly, a difficulty to engage schools was evident, primarily in the first study but also in the second study of this thesis. Although for both studies the reasons to decline participation involved time restrictions due to a busy curriculum, numerous schools did not respond. From the participating schools, there was hesitation in one of the three primary schools to conduct the research with

the younger age group in Study 1. It is possible that there is potential self-selection bias; schools willing to engage in mental health research might be more sensitive to the importance of mental health research in comparison to non-responding schools. For example, stigma of mental illness constitutes one of the barriers to participation in mental health research (Woodall, Morgan, Sloan, & Howard, 2010). Steps to improve representativeness of the sample were taken, including sampling from more than one school for each study and aiming for schools of diverse socioeconomic backgrounds, indicated by the Scottish Index of Multiple Deprivation (Scottish Executive, 2006b). The majority of measures employed were developed for the specific aims of the included studies. As such, the measures did not allow for sophisticated statistical analyses, especially in Study 1. This, however, reflects that the research field is in its infancy, as such, standardised measures are scarce (Wei et al., 2016) and moreover are created in their vast majority for adult samples.

The ACDQ, developed for the measurement of adolescent depression literacy in this thesis presented certain limitations. The measure showed weak reliability, especially in certain subscales at the pre-test measurement, therefore the interpretation of the findings should be treated with caution. While the findings of the pilot evaluation of the intervention are promising, further evaluation of the intervention, as well as further examination of the psychometric properties and factor structure of the ACDQ is needed.

A social distance scale (Wright et al., 2011) was used in both studies as an indicator of stigma, specifically discrimination towards peers with depression. Retrospectively, a measure involving both attitudes and discrimination, as well as a measure of self-stigma would have provided more meaningful data. For the intervention study, follow-up was not completed, therefore it is unclear whether benefits from the session last over time. In turn, the measurement of help-seeking intentions, rather than behaviour, raises questions about whether these intentions would translate into actual help-seeking behaviour if depressed.

The age of participants ranges between eight to sixteen years, thus providing a developmental perspective in children's understanding of depression. However, Study 1 involved children under the age of twelve years, while Study 2 included adolescents of twelve to sixteen years. Had a combined sample been included in Study 1, wider age comparisons would have been possible.

#### **9.4.3 Future research directions.**

To better determine how children's concepts of depression develop, an ideal study would involve a prospective longitudinal design (Hinshaw, 2005). A longitudinal design could also shed light on how help-seeking intentions translate into actual help-seeking behaviour for those participants that do develop mental health difficulties, as well as how stigma and discrimination progress through development.

Regarding the intervention presented in this thesis, the next step requires a randomised controlled trial (RCT) including a follow-up measurement of participants' concepts,

to establish if knowledge acquired during the session is sustained. Very few RCTs have examined school-based mental health literacy interventions to date; moreover, no studies meet requirements for low risk of bias (Wei et al., 2013). The need to improve adolescents' mental health literacy and help-seeking has been systematically emphasised (Jorm, 2015; Kutcher et al., 2016; Rickwood et al., 2005). Meanwhile, the evidence is not clear to date on the effectiveness of school-based interventions. Robust study designs and methodologies in the field are needed; requiring high quality measurement tools. In this thesis, the ACDQ developed for the measurement of adolescent depression concepts benefits from the inclusion of a variety of dimensions related to depression conceptualisation that have not been previously explored (see Chapter 5.4.2). Reliability in the current sample was acceptable; further measurement of the psychometric properties is needed.

Although not directly tested, the findings indicate that despite knowledge, personal sources of help might differ from help suggested for a depressed peer, in line with previous research (Raviv et al., 2000); therefore, barriers to seeking help for oneself merit further investigation.

This thesis explored children's and adolescents' concepts of paediatric and adolescent depression. Children's concepts might be different for adult depression, and as such the findings do not necessarily generalise to children's conceptions of depression affecting an adult, as for example parental depression. Research on children of depressed parents consistently highlights that children of parents with mental health problems request information to better understand the parental condition (Cogan et al.,

2005; Garley et al., 1997; Meadus & Johnson, 2000). Interestingly, no research on sibling's understanding of depression was identified. A recent qualitative study on young siblings' experiences of their brother/sister's mental health difficulties (including but not specific to depression) suggests that siblings struggle to understand the mental health difficulty (Liegghio, 2016). An interesting next step would be to explicitly investigate differences in children's conceptualisations, between children with and without a depressed sibling. The methodology of Study 1 would be suitable, as it does not require that participants discuss personal experience, instead focuses on paediatric and adolescent depression in general. Lastly, as identified above (Chapter 9.1.2.) a focus on teacher and parent mental health literacy is warranted, for a holistic approach to child mental health prevention and early intervention.

The study of children's conceptualisations of mental illness is currently at an early stage, while in the last decade there has been a promising increase of focus on adolescent mental health literacy. The limitations and opportunities for future research described above reflect that there is a need to extend research focus to include child populations.

## **9.5 Conclusions**

Depression is a mental illness that affects children and especially adolescents, however little is known about child and adolescent conceptualisations of depression. This thesis provides a detailed account of child and adolescent understanding of depression, facilitated by the adoption of the Leventhal common-sense model of illness representations. Differences in children's conceptualisations from the clinical conceptualisation were identified. With age, children's concepts become more sophisticated. Gender differences become more evident in early adolescence, as are differences based on experience with depression or other mental illness. Findings were used to guide the development of a depression literacy intervention. An evaluation of the intervention showed promising results; there were significant improvements in participants' knowledge, as measured by the ACDQ, the treatment and curability subscales, as well as in help-seeking and help-providing responses in comparison to the control group.

The findings of this thesis contribute to the development of mental health education programmes for children in primary education and could also be of benefit to clinicians working with depressed children and adolescents. Although further evaluation is needed, the intervention presented in this thesis offers a single-session universal intervention programme on depression literacy that could be more widely delivered to adolescents throughout Scotland and the UK.

## References

- Abramson, L. Y., Seligman, M. E., & Teasdale, J. D. (1978). Learned helplessness in humans: critique and reformulation. *Journal of Abnormal Psychology, 87*(1), 49-74.
- Adler, A. K., & Wahl, O. F. (1998). Children's beliefs about people labeled mentally ill. *American Journal of Orthopsychiatry, 68*(2), 321-326. doi:10.1037/h0080341
- Allen, N. B., & Sheeber, L. B. (2008). The importance of affective development for the emergence of depressive disorders during adolescence. In N. B. Allen & L. B. Sheeber (Eds.), *Adolescent emotional development and the emergence of depressive disorders* (pp. 1-10). Cambridge: Cambridge University Press.
- American Psychiatric Association. (1980). *Diagnostic and Statistical Manual of Mental Disorders* (3<sup>rd</sup> ed.). Washington DC: Author.
- American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). Washington, DC: Author.
- Andrade, L., Alonso, J., Mneimneh, Z., Wells, J., Al-Hamzawi, A., Borges, G., . . . de Graaf, R. (2014). Barriers to mental health treatment: results from the WHO World Mental Health surveys. *Psychological medicine, 44*(06), 1303-1317. doi:10.1017/S0033291713001943
- Angermeyer, M. C., & Matschinger, H. (2003). The stigma of mental illness: effects of labelling on public attitudes towards people with mental disorder. *Acta Psychiatrica Scandinavica, 108*(4), 304-309. doi:10.1034/j.1600-0447.2003.00150.x
- Angermeyer, M. C., Matschinger, H., & Riedel-Heller, S. G. (1999). Whom to ask for help in case of a mental disorder? Preferences of the lay public. *Social psychiatry and psychiatric epidemiology, 34*(4), 202-210. doi:10.1007/s001270050134
- Anglin, D. M., Alberti, P. M., Link, B. G., & Phelan, J. C. (2008). Racial differences in beliefs about the effectiveness and necessity of mental health treatment. *American journal of community psychology, 42*(1-2), 17-24.
- Angold, A., Costello, E. J., Messer, S. C., Pickles, A., Winder, F., & Silver, D. (1995). The development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research, 5*, 237-249.
- Australian Government. (2009). Mental Health Policy 2008. Retrieved from <http://www.health.gov.au/internet/publications/publishing.nsf/Content/mental-pubs-n-pol08-toc>
- Avenevoli, S., Knight, E., Kessler, R. C., & Merikangas, K. R. (2008). Epidemiology of depression in children and adolescents. In J. R. Abela & B. L. Hankin (Eds.), *Handbook of depression in children and adolescents* (pp. 6-32). New York: The Guilford Press.

- Avenevoli, S., Swendsen, J., He, J.-P., Burstein, M., & Merikangas, K. R. (2015). Major depression in the National Comorbidity Survey–Adolescent Supplement: prevalence, correlates, and treatment. *Journal of the American Academy of Child & Adolescent Psychiatry*, *54*(1), 37-44. doi:10.1016/j.jaac.2014.10.010
- Babooram, M., Mullan, B. A., & Sharpe, L. (2011). Children's perceptions of obesity as explained by the common sense model of illness representation. *British Food Journal*, *113*(2), 234-247. doi:10.1108/00070701111105321
- Baines, T., & Wittkowski, A. (2013). A Systematic Review of the Literature Exploring Illness Perceptions in Mental Health Utilising the Self-Regulation Model. *Journal of Clinical Psychology in Medical Settings*, *20*(3), 263-274. doi:10.1007/s10880-012-9337-9
- Barker, G. (2007). *Adolescents, social support and help-seeking behaviour: an international literature review and programme consultation with recommendations for action*. Geneva: World Health Organization.
- Bassani, D. G., Padoin, C. V., Philipp, D., & Veldhuizen, S. (2009). Estimating the number of children exposed to parental psychiatric disorders through a national health survey. *Child and adolescent psychiatry and mental health*, *3*(1), 1-7. doi:10.1186/1753-2000-3-6
- Battaglia, J., Coverdale, J., & Bushong, C. (1990). Evaluation of a Mental Illness Awareness Week program in public schools. *American Journal of Psychiatry*, *147*(3), 324-329. doi:10.1176/ajp.147.3.324
- Beck, A. T. (1964). Thinking and depression: II. Theory and therapy. *Archives of general psychiatry*, *10*(6), 561-571.
- Beck, A. T. (1979). *Cognitive therapy of depression*. New York: Guilford press.
- Bellanca, F. F., & Pote, H. (2013). Children's attitudes towards ADHD, depression and learning disabilities. *Journal of Research in Special Educational Needs*, *13*(4), 234-241. doi:10.1111/j.1471-3802.2012.01263.x
- Bentham, C., Daunt, A., Taylor, S., & Simmons, M. (2013). Mental health workshops delivered by medical students in Cambridge secondary schools: an evaluation of learning. *Psychiatria Danubina*, *25*, S224-230.
- Bibace, R., Schmidt, L. R., & Walsh, M. E. (1994). Children's perceptions of illness. In G. N. Penny, P. Bennett, & M. Herbert (Eds.), *Health psychology: a lifespan perspective* (pp. 13-30). Chur: Harwood Academic Publishers.
- Bibace, R., & Walsh, M. E. (1980). Development of children's concepts of illness. *Pediatrics*, *66*(6), 912-917.
- Birmaher, B., Ryan, N. D., Williamson, D. E., Brent, D. A., Kaufman, J., Dahl, R. E., . . . Nelson, B. (1996). Childhood and adolescent depression: a review of the past 10 years. Part I. *Journal of the American Academy of Child & Adolescent Psychiatry*, *35*(11), 1427-1439.
- Bokhorst, C. L., Sumter, S. R., & Westenberg, P. M. (2010). Social support from parents, friends, classmates, and teachers in children and adolescents aged 9 to 18 years: Who is perceived as most supportive? *Social development*, *19*(2), 417-426. doi:10.1111/j.1467-9507.2009.00540.x
- Botha, F. B., & Dozois, D. J. (2015). The influence of emphasizing psychological causes of depression on public stigma. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, *47*(4), 313-320. doi:10.1037/a0039611

- Bradley, K. L., McGrath, P. J., Brannen, C. L., & Bagnell, A. L. (2010). Adolescents' attitudes and opinions about depression treatment. *Community Mental Health Journal, 46*(3), 242-251. doi:10.1007/s10597-009-9224-5
- British Psychological Society. (2009). BPS Code of Ethics and Conduct Retrieved from <https://beta.bps.org.uk/news-and-policy/bps-code-ethics-and-conduct>
- Brodzinsky, D. M., Elias, M. J., Steiger, C., Simon, J., Gill, M., & Hitt, J. C. (1992). Coping scale for children and youth: Scale development and validation. *Journal of Applied Developmental Psychology, 13*(2), 195-214. doi:10.1016/0193-3973(92)90029-H
- Brohan, E., Gauci, D., Sartorius, N., & Thornicroft, G. (2011). Self-stigma, empowerment and perceived discrimination among people with bipolar disorder or depression in 13 European countries: the GAMIAN-Europe study. *Journal of affective disorders, 129*(1-3), 56-63. doi:10.1016/j.jad.2010.09.001
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*(7), 513-531. doi:10.1037/0003-066X.32.7.513
- Brown, B. B., & Larson, J. (2009). Peer relationships in adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of Adolescent Psychology, Volume 2, Contextual Influences on Adolescent Development* (3rd ed., pp. 74-103).
- Brown, B. B., & Lohr, M. J. (1987). Peer-group affiliation and adolescent self-esteem: an integration of ego-identity and symbolic-interaction theories. *Journal of personality and social psychology, 52*(1), 47-55. doi:10.1037/0022-3514.52.1.47
- Brown, C., Dunbar-Jacob, J., Palenchar, D. R., Kelleher, K. J., Bruehlman, R. D., Sereika, S., & Thase, M. E. (2001). Primary care patients personal illness models for depression: a preliminary investigation. *Family Practice, 18*(3), 314-320.
- Bruno, M., McCarthy, J., & Kramer, C. (2015). Mental Health Literacy and Depression among Older Adolescent Males. *Journal of Asia Pacific Counseling, 5*(2), 53-64. doi:10.18401/2015.5.2.1
- Burbach, D. J., & Peterson, L. (1986). Children's concepts of physical illness: a review and critique of the cognitive-developmental literature. *Health Psychology, 5*(3), 307-325.
- Burns, B. J., Costello, E. J., Angold, A., Tweed, D., Stangl, D., Farmer, E., & Erkanli, A. (1995). Children's mental health service use across service sectors. *Health affairs, 14*(3), 147-159.
- Burns, J. R., & Rapee, R. M. (2006). Adolescent mental health literacy: young people's knowledge of depression and help seeking. *J Adolesc, 29*(2), 225-239. doi:10.1016/j.adolescence.2005.05.004
- Byrne, S., Swords, L., & Nixon, E. (2015). Mental Health Literacy and Help-Giving Responses in Irish Adolescents. *Journal of Adolescent Research, 30*(4), 477-500. doi:10.1177/0743558415569731
- Caporino, N. E., & Karver, M. S. (2012). The acceptability of treatments for depression to a community sample of adolescent girls. *J Adolesc, 35*(5), 1237-1245. doi:10.1016/j.adolescence.2012.04.007
- Carey, S. (1985). *Conceptual change in childhood*. Cambridge: MIT Press.
- Carifio, J., & Perla, R. (2008). Resolving the 50- year debate around using and misusing Likert scales. *Medical Education, 42*(12), 1150-1152. doi:10.1111/j.1365-2923.2008.03172.x

- Carifio, J., & Perla, R. J. (2007). Ten common misunderstandings, misconceptions, persistent myths and urban legends about likert scales and likert response formats and their antidotes. *Journal of Social Sciences*, 3(3), 106. doi:10.3844/jssp.2007.106.116
- Carlton, P. A., & Deane, F. P. (2000). Impact of attitudes and suicidal ideation on adolescents' intentions to seek professional psychological help. *Journal of Adolescence*, 23(1), 35-45. doi:10.1006/jado.1999.0299
- Carr, A. (2005). *The Handbook of Child and Adolescent Clinical Psychology: A Contextual Approach*. New York: Routledge.
- Causey, D. L., & Dubow, E. F. (1992). Development of a self-report coping measure for elementary school children. *Journal of Clinical Child and Adolescent Psychology*, 21(1), 47-59. doi:10.1207/s15374424jccp2101\_8
- Chelonis, J. J., Flake, R. A., Baldwin, R. L., Blake, D. J., & Paule, M. G. (2004). Developmental aspects of timing behavior in children. *Neurotoxicology and teratology*, 26(3), 461-476.
- Cicchetti, D., & Toth, S. L. (1998). The development of depression in children and adolescents. *American psychologist*, 53(2), 221-241. doi:10.1037/0003-066X.53.2.221
- Cogan, N., Riddell, S., & Mayes, G. (2005). The understanding and experiences of children affected by parental mental health problems: a qualitative study. *Qualitative Research in Psychology*, 2(1), 47-66. doi:10.1191/1478088705qp024oa
- Coleman, D., Walker, J. S., Lee, J., Friesen, J., B., & Squire, P. N. (2009). Children's Beliefs About Causes of Childhood Depression and ADHD: A Study of Stigmatization. *Psychiatric Services*, 60(7), 950-957. doi:10.1176/ps.2009.60.7.950
- Coleman, J. S. (2011). *The nature of adolescence* (4th ed.). London: Taylor and Francis.
- Coles, M. E., & Coleman, S. L. (2010). Barriers to treatment seeking for anxiety disorders: initial data on the role of mental health literacy. *Depression and Anxiety*, 27(1), 63-71. doi:10.1002/da.20620
- Coles, M. E., Ravid, A., Gibb, B., George-Denn, D., Bronstein, L. R., & McLeod, S. (2016). Adolescent Mental Health Literacy: Young People's Knowledge of Depression and Social Anxiety Disorder. *Journal of Adolescent Health*, 58(1), 57-62. doi:10.1016/j.jadohealth.2015.09.017
- Collins, P. Y., Patel, V., Joestl, S. S., March, D., Insel, T. R., Daar, A. S., . . . Fairburn, C. (2011). Grand challenges in global mental health. *Nature*, 475(7354), 27-30. doi:10.1038/475027a
- Connolly, J., Geller, S., Marton, P., & Kutcher, S. (1992). Peer responses to social interaction with depressed adolescents. *Journal of Clinical Child Psychology*, 21(4), 365-370. doi:10.1207/s15374424jccp2104\_6
- Conrad, I., Dietrich, S., Heider, D., Blume, A., Angermeyer, M. C., & Riedel-Heller, S., i. (2009). "Crazy? So what!" A school programme to promote mental health and reduce stigma- results of a pilot study. *Health Education*, 109(4), 314-328. doi:10.1108/09654280910970893

- Cooke, A., King, J., & Greenwood, K. (2016). "We could end up in a lot of trouble": teachers' communications with young children about mental health. *Journal of Public Mental Health, 15*(2), 103-114. doi:10.1108/JPMH-01-2016-0006
- Corrigan, P. W., Lurie, B. D., Goldman, H. H., Slopen, N., Medasani, K., & Phelan, S. (2005). How adolescents perceive the stigma of mental illness and alcohol abuse. *Psychiatric Services, 56*(5), 544-550. doi:10.1176/appi.ps.56.5.544
- Corrigan, P. W., Morris, S. B., Michaels, P. J., Rafacz, J. D., & Rüsçh, N. (2012). Challenging the public stigma of mental illness: a meta-analysis of outcome studies. *Psychiatric services, 63*(10), 963-973. doi:10.1176/appi.ps.201100529
- Costello, J. E., Erkanli, A., & Angold, A. (2006). Is there an epidemic of child or adolescent depression? *Journal of Child Psychology and Psychiatry, 47*(12), 1263-1271. doi:10.1111/j.1469-7610.2006.01682.x
- Costello, J. E., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of general psychiatry, 60*(8), 837-844. doi:10.1001/archpsyc.60.8.837
- Cotton, S. M., Wright, A., Harris, M. G., Jorm, A. F., & McGorry, P. D. (2006). Influence of gender on mental health literacy in young Australians. *Australian and New Zealand Journal of Psychiatry, 40*(9), 790-796. doi:10.1080/j.1440-1614.2006.01885.x
- Coyne, I. (2008). Children's participation in consultations and decision-making at health service level: a review of the literature. *International journal of nursing studies, 45*(11), 1682-1689. doi:10.1016/j.ijnurstu.2008.05.002
- Coyne, I., & Gallagher, P. (2011). Participation in communication and decision-making: children and young people's experiences in a hospital setting. *Journal of clinical nursing, 20*(15-16), 2334-2343. doi:10.1111/j.1365-2702.2010.03582.x
- Crisp, J., Ungerer, J. A., & Goodnow, J. J. (1996). The impact of experience on children's understanding of illness. *Journal of Pediatric Psychology, 21*(1), 57-72.
- Curriculum for Excellence. (2009). Curriculum for Excellence: Experiences and Outcomes. Retrieved from <https://www.education.gov.scot/Documents/all-experiences-and-outcomes.pdf>
- Currie, C., Molcho, M., Boyce, W., Holstein, B., Torsheim, T., & Richter, M. (2008). Researching health inequalities in adolescents: the development of the Health Behaviour in School-Aged Children (HBSC) family affluence scale. *Social Science & Medicine, 66*(6), 1429-1436. doi:10.1016/j.socscimed.2007.11.024
- Cutler, T. L., Reavley, N. J., & Jorm, A. F. (2017). How 'mental health smart' are you? Analysis of responses to an Australian Broadcasting Corporation News website quiz. *Advances in Mental Health, 1*-14. doi:10.1080/18387357.2017.1317581
- Cyranowski, J. M., Frank, E., Young, E., & Shear, M. K. (2000). Adolescent onset of the gender difference in lifetime rates of major depression: a theoretical model. *Archives of general psychiatry, 57*(1), 21-27. doi:10.1001/archpsyc.57.1.21
- Dahlberg, K. M., Waern, M., & Runeson, B. (2008). Mental health literacy and attitudes in a Swedish community sample—Investigating the role of personal experience of mental health care. *BMC Public Health, 8*(1), 8. doi:10.1186/1471-2458-8-8

- Damon, W., & Hart, D. (1982). The development of self-understanding from infancy through adolescence. *Child development*, 841-864.
- Day, C. (2008). Children's and Young People's Involvement and Participation in Mental Health Care. *Child and Adolescent Mental Health*, 13(1), 2-8. doi:10.1111/j.1475-3588.2007.00462.x
- Dedoose Software. (2016). *Dedoose Version 7.0.23, web application for managing, analyzing, and presenting qualitative and mixed method research data*. Los Angeles, LA: SocioCultural Research Consultants, LLC (<http://www.dedoose.com/>).
- Department for Education. (2016a). Children and young people's mental health: peer support. Retrieved from <https://www.gov.uk/government/consultations/children-and-young-peoples-mental-health-peer-support>
- Department for Education. (2016b). Mental health and behaviour in schools. Departmental advice for school staff. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/508847/Mental\\_Health\\_and\\_Behaviour\\_-\\_advice\\_for\\_Schools\\_160316.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/508847/Mental_Health_and_Behaviour_-_advice_for_Schools_160316.pdf).
- Department for Education. (2017). Peer support and children and young people's mental health. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/603107/Children\\_and\\_young\\_people\\_s\\_mental\\_health\\_peer\\_support.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/603107/Children_and_young_people_s_mental_health_peer_support.pdf)
- Department of Health. (2015). Future in Mind: Promoting, protecting and improving our children and young people's mental health and well-being. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/414024/Childrens\\_Mental\\_Health.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/414024/Childrens_Mental_Health.pdf)
- Department of Health. (2017). The Government's response to the Five Year Forward View for Mental Health. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/582120/FYFV\\_mental\\_health\\_government\\_response.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/582120/FYFV_mental_health_government_response.pdf).
- Dise-Lewis, J. E. (1988). The life events and coping inventory: an assessment of stress in children. *Psychosomatic medicine*, 50(5), 484-499.
- Dixon, C., Murray, C., & Daiches, A. (2013). A qualitative exploration into young children's perspectives and understandings of emotional difficulties in other children. *Clinical Child Psychology and Psychiatry*, 18(1), 72-90. doi:10.1177/1359104511433194
- Dolphin, L., & Hennessy, E. (2014). Adolescents' perceptions of peers with depression: An attributional analysis. *Psychiatry Research*, 218(3), 295-302. doi:10.1016/j.psychres.2014.04.051
- Donker, T., Griffiths, K. M., Cuijpers, P., & Christensen, H. (2009). Psychoeducation for depression, anxiety and psychological distress: a meta-analysis. *BMC Medicine*, 7(1), 1-9. doi:10.1186/1741-7015-7-79
- Droit-Volet, S., & Zélanti, P. S. (2013). Development of time sensitivity and information processing speed. *PloS one*, 8(8), e71424.
- Dundon, E. E. (2006). Adolescent depression: a metasynthesis. *Journal of Pediatric Health Care*, 20(6), 384-392. doi:10.1016/j.pedhc.2006.02.010
- Dunlop, B. W., Kelley, M. E., Mletzko, T. C., Velasquez, C. M., Craighead, W. E., & Mayberg, H. S. (2012). Depression beliefs, treatment preference, and outcomes

- in a randomized trial for major depressive disorder. *J Psychiatr Res*, 46(3), 375-381. doi:10.1016/j.jpsychires.2011.11.003
- Erikson, E. (1968). *Identity, youth and crisis*. New York: Norton.
- Essau, C. A. (2005). Frequency and patterns of mental health services utilization among adolescents with anxiety and depressive disorders. *Depression and anxiety*, 22(3), 130-137. doi:10.1002/da.20115
- Essau, C. A., Olaya, B., Pasha, G., Pauli, R., & Bray, D. (2013). Iranian adolescents' ability to recognize depression and beliefs about preventative strategies, treatments and causes of depression. *Journal of affective disorders*, 149(1), 152-159. doi:10.1016/j.jad.2013.01.016
- Farley, J. P., & Kim-Spoon, J. (2014). The development of adolescent self-regulation: Reviewing the role of parent, peer, friend, and romantic relationships. *Journal of Adolescence*, 37(4), 433-440. doi: 10.1016/j.adolescence.2014.03.009
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G\* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior research methods*, 39(2), 175-191. doi:10.3758/BF03193146
- Fergusson, D. M., & Woodward, L. J. (2002). Mental health, educational, and social role outcomes of adolescents with depression. *Archives of general psychiatry*, 59(3), 225-231. doi:10.1001/archpsyc.59.3.225
- Ferrari, A. J., Charlson, F. J., Norman, R. E., Patten, S. B., Freedman, G., Murray, C. J., . . . Whiteford, H. A. (2013). Burden of depressive disorders by country, sex, age, and year: findings from the global burden of disease study 2010. *PLoS Med*, 10(11), e1001547.
- Field, A. (2009). *Discovering statistics using IBM SPSS statistics* (3rd ed.). London: Sage.
- Field, T., Miguel, D., & Sanders, C. (2001). Adolescent depression and risk factors. *Adolescence*, 36(143), 491-498.
- Fombonne, E., Wostear, G., Cooper, V., Harrington, R., & Rutter, M. (2001). Developmental psychopathology papers part 2- The Maudsley long-term follow-up of child and adolescent depression. 2. Suicidality, criminality and social dysfunction in adulthood. *British Journal of Psychiatry*, 179, 218-223. doi:10.1192/bjp.179.3.218
- Ford, T., Hamilton, H., Meltzer, H., & Goodman, R. (2008). Predictors of Service Use for Mental Health Problems Among British Schoolchildren. *Child and Adolescent Mental Health*, 13(1), 32-40.
- Fortune, G., Barrowclough, C., & Lobban, F. (2004). Illness representations in depression. *British Journal of Clinical Psychology*, 43(4), 347-364. doi:10.1348/0144665042388955
- Fox, C., Buchanan-Barrow, E., & Barrett, M. (2010). Children's conceptions of mental illness: A naïve theory approach. *British Journal of Developmental Psychology*, 28(3), 603-625. doi:10.1348/026151009x461366
- Fox, C., Buchanan-barrow, E., & Barrett, M. (2008). Children's understanding of mental illness: an exploratory study. *Child: Care, Health and Development*, 34(1), 10-18. doi:10.1111/j.1365-2214.2007.00783.x
- Frydenberg, E., & Lewis, R. (2011). *Adolescent Coping Scale-(ACS-2)*. Melbourne: Australian Council for Educational Research.

- Furnham, A., & Hamid, A. (2014). Mental health literacy in non-western countries: a review of the recent literature. *Mental Health Review Journal*, *19*(2), 84-98.
- Garley, D., Gallop, R., Johnston, N., & Pipitone, J. (1997). Children of the mentally ill: a qualitative focus group approach. *Journal of Psychiatric and Mental Health Nursing*, *4*, 97-103. doi:10.1046/j.1365-2850.1997.00036.x
- Georgakakou-Koutsonikou, N., & Williams, J. (2017). Children and young people's conceptualizations of depression: a systematic review and narrative meta-synthesis. *Child: care, health and development*, *43*(2), 161-181. doi:10.1111/cch.12439
- Glattacker, M., Heyduck, K., & Meffert, C. (2013). Illness beliefs and treatment beliefs as predictors of short and middle term outcome in depression. *Journal of health psychology*, *18*(1), 139-152. doi:10.1177/1359105311433907
- Goldney, R. D., Fisher, L. J., & Wilson, D. H. (2001). Mental health literacy: an impediment to the optimum treatment of major depression in the community. *Journal of Affective Disorders*, *64*(2), 277-284. doi:10.1016/S0165-0327(00)00227-5
- Goldstein, B., & Rosselli, F. (2003). Etiological paradigms of depression: The relationship between perceived causes, empowerment, treatment preferences, and stigma. *Journal of Mental Health*, *12*(6), 551-563. doi:10.1080/09638230310001627919
- Gould, D. (1996). Using vignettes to collect data for nursing research studies: how valid are the findings? *Journal of clinical nursing*, *5*(4), 207-212. doi:10.1111/j.1365-2702.1996.tb00253.x
- Grealish, A., Tai, S., Hunter, A., Emsley, R., Murrells, T., & Morrison, A. P. (2017). Does empowerment mediate the effects of psychological factors on mental health, well-being, and recovery in young people? *Psychology and Psychotherapy: Theory, Research and Practice*, *90*(3), 314-335. doi:10.1111/papt.12111
- Grealish, A., Tai, S., Hunter, A., & Morrison, A. P. (2013). Qualitative Exploration of Empowerment from the Perspective of Young People with Psychosis. *Clinical Psychology & Psychotherapy*, *20*(2), 136-148. doi:10.1002/cpp.785
- Green, H., McGinnity, A., Meltzer, H., Ford, T., & Goodman, R. (2005). Mental health of children and young people in Great Britain, 2004. Retrieved from <http://content.digital.nhs.uk/catalogue/PUB06116/ment-heal-chil-youn-peop-gb-2004-rep2.pdf>
- Griffiths, K. M., Carron-Arthur, B., Parsons, A., & Reid, R. (2014). Effectiveness of programs for reducing the stigma associated with mental disorders. A meta-analysis of randomized controlled trials. *World psychiatry*, *13*(2), 161-175. doi:10.1002/wps.20129
- Griffiths, K. M., Christensen, H., & Jorm, A. F. (2008). Predictors of depression stigma. *BMC psychiatry*, *8*(1), 25. doi:10.1186/1471-244X-8-25
- Griffiths, K. M., Christensen, H., Jorm, A. F., Evans, K., & Groves, C. (2004). Effect of web-based depression literacy and cognitive-behavioural therapy interventions on stigmatising attitudes to depression. *The British Journal of Psychiatry*, *185*(4), 342-349.

- Gulliver, A., Griffiths, K., & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review. *BMC Psychiatry, 10*. doi:10.1186/1471-244x-10-113
- Hagell, A., Coleman, J., & Brooks, F. (2013). Key Data on Adolescence. In London: Association for Young People's Health.
- Hagger, M. S., & Orbell, S. (2003). A Meta-Analytic Review of the Common-Sense Model of Illness Representations. *Psychology and Health, 18*(2), 141-184. doi:10.1080/088704403100081321
- Hammen, C. (1992). Cognitive, life stress, and interpersonal approaches to a developmental psychopathology model of depression. *Development and Psychopathology, 4*(1), 189-206. doi:10.1017/S0954579400005630
- Hammen, C., Brennan, P. A., Keenan-Miller, D., & Herr, N. R. (2008). Early onset recurrent subtype of adolescent depression: Clinical and psychosocial correlates. *Journal of Child Psychology and Psychiatry, 49*(4), 433-440. doi:10.1111/j.1469-7610.2007.01850.x
- Hammen, C., Rudolph, K. D., & Abaied, J. L. (2014). Child and Adolescent Depression. In E. J. Mash & R. A. Barkley (Eds.), *Child Psychopathology* (3rd ed., pp. 225-263). New York: Guildford Press.
- Hankin, B. L., & Abramson, L. Y. (2001). Development of gender differences in depression: An elaborated cognitive vulnerability–transactional stress theory. *Psychological bulletin, 127*(6), 773-796.
- Hankin, B. L., Abramson, L. Y., Moffitt, T. E., Silva, P. A., McGee, R., & Angell, K. E. (1998). Development of depression from preadolescence to young adulthood: emerging gender differences in a 10-year longitudinal study. *Journal of abnormal psychology, 107*(1), 128-140. doi:10.1037/0021-843X.107.1.128
- Hart, L. M., Mason, R. J., Kelly, C. M., Cvetkovski, S., & Jorm, A. F. (2016). ‘teen Mental Health First Aid’: a description of the program and an initial evaluation. *International journal of mental health systems, 10*(3), 1-18. doi:10.1186/s13033-016-0034-1
- Hart, S. R., Kastelic, E. A., Wilcox, H. C., Beaudry, M. B., Musci, R. J., Heley, K. M., . . . Swartz, K. L. (2014). Achieving Depression Literacy: The Adolescent Depression Knowledge Questionnaire (ADKQ). *School Mental Health, 6*(3), 213-223. doi:10.1007/s12310-014-9120-1
- Hawker, D. S., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: a meta-analytic review of cross-sectional studies. *Journal of child psychology and psychiatry, 41*(4), 441-455. doi:10.1111/1469-7610.00629
- Hawton, K., Saunders, K. E. A., & O'Connor, R. C. (2012). Self-harm and suicide in adolescents. *Lancet, 379*(9834), 2373-2382.
- Heary, C., Hennessy, E., Swords, L., & Corrigan, P. (2017). Stigma towards Mental Health Problems during Childhood and Adolescence: Theory, Research and Intervention Approaches. *Journal of Child and Family Studies, 1*-11. doi:10.1007/s10826-017-0829-y
- Hennessy, E., & Heary, C. (2009). The development of children’s understanding of common psychological problems. *Child and Adolescent Mental Health, 14*(1), 42-47. doi:10.1111/j.1475-3588.2008.00494.x

- Hennessy, E., Swords, L., & Heary, C. (2008). Children's understanding of psychological problems displayed by their peers: a review of the literature. *Child: care, health and development*, 34(1), 4-9. doi:10.1111/j.1365-2214.2007.00772.x
- Hernan, A., Philpot, B., Edmonds, A., & Reddy, P. (2010). Healthy minds for country youth: help-seeking for depression among rural adolescents. *Aust J Rural Health*, 18(3), 118-124. doi:10.1111/j.1440-1584.2010.01136.x
- Hetherington, J. A., & Stoppard, J. M. (2002). The theme of disconnection in adolescent girls' understanding of depression. *Journal of adolescence*, 25(6), 619-629.
- Hill, J. P., & Lynch, M. E. (1983). The intensification of gender-related role expectations during early adolescence. In J. Brooks-Gunn, & Peterson, A. C. (Ed.), *Girls at puberty* (pp. 201-228). New York: Springer.
- Hinshaw, S. P. (2005). The stigmatization of mental illness in children and parents: Developmental issues, family concerns, and research needs. *Journal of Child Psychology and Psychiatry*, 46(7), 714-734. doi:10.1111/j.1469-7610.2005.01456.x
- Hodson, R. (1999). *Analyzing Documentary Accounts*. Thousand Oaks: Sage.
- Holzinger, A., Floris, F., Schomerus, G., Carta, M., & Angermeyer, M. (2012). Gender differences in public beliefs and attitudes about mental disorder in western countries: A systematic review of population studies. *Epidemiology and Psychiatric Sciences*, 21(1), 73-85. doi: 10.1017/S2045796011000552
- Horowitz, J. L., & Garber, J. (2006). The prevention of depressive symptoms in children and adolescents: A meta-analytic review. *Journal of consulting and clinical psychology*, 74(3), 401-415. doi:10.1037/0022-006X.74.3.401
- Hughes, R., & Huby, M. (2002). The application of vignettes in social and nursing research. *Journal of advanced nursing*, 37(4), 382-386. doi:10.1046/j.1365-2648.2002.02100.x
- Hughes, R., & Huby, M. (2004). The construction and interpretation of vignettes in social research. *Social work & social sciences review*, 11(1), 36-51. doi:10.1921/17466105.11.1.36
- Hyde, J. S., Mezulis, A. H., & Abramson, L. Y. (2008). The ABCs of depression: integrating affective, biological, and cognitive models to explain the emergence of the gender difference in depression. *Psychological review*, 115(2), 291-313. doi:10.1037/0033-295X.115.2.291
- Hämäläinen, R., & Vähäsantanen, K. (2011). Theoretical and pedagogical perspectives on orchestrating creativity and collaborative learning. *Educational Research Review*, 6(3), 169-184. doi:http://dx.doi.org/10.1016/j.edurev.2011.08.001.
- Jané-Llopis, E., & Braddick, F. E. (2000). *Mental Health in Youth and Education. Consensus paper*. Luxembourg: European Communities.
- Jaycox, L. H., Asarnow, J. R., Sherbourne, C. D., Rea, M. M., LaBorde, A. P., & Wells, K. B. (2006). Adolescent primary care patients' preferences for depression treatment. *Administration and Policy in Mental Health and Mental Health Services Research* 33(2), 198-207. doi:10.1007/s10488-006-0033-7
- Jorm, A. F. (2000). Mental health literacy: Public knowledge and beliefs about mental disorders. *The British Journal of Psychiatry*, 177(5), 396-401. doi:10.1192/bjpp.177.5.396

- Jorm, A. F. (2012). Mental health literacy: empowering the community to take action for better mental health. *American Psychologist*, 67(3), 231-243. doi:10.1037/a0025957
- Jorm, A. F. (2015). Why we need the concept of "Mental Health Literacy". *Health communication*, 30(12), 1166-1168. doi:10.1080/10410236.2015.1037423
- Jorm, A. F., Kelly, C. M., Wright, A., Parslow, R. A., Harris, M. G., & McGorry, P. D. (2006). Belief in dealing with depression alone: results from community surveys of adolescents and adults. *Journal of Affective Disorders*, 96(1-2), 59-65. doi:10.1016/j.jad.2006.05.018
- Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, H., Rodgers, B., & Pollitt, P. (1997). "Mental health literacy": A survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia*, 166(4), 182-186.
- Jorm, A. F., & Wright, A. (2008). Influences on young people's stigmatising attitudes towards peers with mental disorders: national survey of young Australians and their parents. *The British Journal of Psychiatry*, 192(2), 144-149. doi:10.1192/bjp.bp.107.039404
- Jorm, A. F., Wright, A., & Morgan, A. J. (2007). Beliefs about appropriate first aid for young people with mental disorders: findings from an Australian national survey of youth and parents. *Early Intervention in Psychiatry*, 1(1), 61-70. doi:10.1111/j.1751-7893.2007.00012.x
- Jose, P. E., & Brown, I. (2008). When Does the Gender Difference in Rumination Begin? Gender and Age Differences in the Use of Rumination by Adolescents. *Journal of Youth and Adolescence*, 37(2), 180-192. doi:10.1007/s10964-006-9166-y
- Kalish, C. W. (1999). What young children's understanding of contamination and contagion tells us about their concepts of illness. In M. Siegal & C. Peterson (Eds.), *Children's understanding of biology and health* (pp. 99-130). Cambridge: Cambridge University Press.
- Kataoka, S. H., Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among US children: Variation by ethnicity and insurance status. *American Journal of Psychiatry*, 159(9), 1548-1555. doi:10.1176/appi.ajp.159.9.1548
- Kaushik, A., Kostaki, E., & Kyriakopoulos, M. (2016). The stigma of mental illness in children and adolescents: A systematic review. *Psychiatry Research*, 243, 469-494. doi:10.1016/j.psychres.2016.04.042
- Kelly, C. M., & Jorm, A. F. (2007). Adolescents' intentions to offer assistance to friends with depression or conduct disorder: associations with psychopathology and psychosocial characteristics. *Early Intervention in Psychiatry*, 1(2), 150-156. doi:10.1111/j.1751-7893.2007.00009.x
- Kelly, C. M., Jorm, A. F., & Rodgers, B. (2006). Adolescents' responses to peers with depression or conduct disorder. *Australian and New Zealand Journal of Psychiatry*, 40(1), 63-66. doi:10.1111/j.1440-1614.2006.01744.x
- Kelly, C. M., Jorm, A. F., & Wright, A. (2007). Improving mental health literacy as a strategy to facilitate early intervention for mental disorders. *Medical Journal of Australia*, 187(7 Suppl), S26-30.
- Kenny, R., Dooley, B., & Fitzgerald, A. (2013). Interpersonal relationships and emotional distress in adolescence. *Journal of adolescence*, 36(2), 351-360. doi:10.1016/j.adolescence.2012.12.005

- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of general psychiatry*, 62(6), 593-602. doi:10.1001/archpsyc.62.6.593
- Khalsa, S. R., McCarthy, K. S., Sharpless, B. A., Barrett, M. S., & Barber, J. P. (2011). Beliefs about the causes of depression and treatment preferences. *Journal of Clinical Psychology*, 67(6), 539-549. doi:10.1002/jclp.20785
- Kickbusch, I. S. (2001). Health literacy: addressing the health and education divide. *Health promotion international*, 16(3), 289-297. doi: 10.1093/heapro/16.3.289
- Kohn, R., Saxena, S., Levav, I., & Saraceno, B. (2004). The treatment gap in mental health care. *Bulletin of the World Health Organization*, 82(11), 858-866. doi:10.1590/S0042-96862004001100011
- Kolvin, I., & Sadowski, H. (2001). Childhood depression: clinical phenomenology and classification. In I. Goodyer (Ed.), *The depressed child and adolescent* (2nd ed., pp. 119-142). Cambridge: Cambridge University Press.
- Kovacs, M. (1986). A developmental perspective on methods and measures in the assessment of depressive disorders: The clinical interview. *Depression in young people: Developmental and clinical perspectives*, 1, 435-465.
- Kovacs, M. (1996). Presentation and course of major depressive disorder during childhood and later years of the life span. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35(6), 705-715. doi:10.1097/00004583-199606000-00010
- Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Thousand Oaks: Sage.
- Kutcher, S., Wei, Y., Costa, S., Gusmão, R., Skokauskas, N., & Sourander, A. (2016). Enhancing mental health literacy in young people. *European Child and Adolescent Psychiatry*, 25(6), 567-569. doi:10.1007/s00787-016-0867-9
- Kutcher, S., Wei, Y., & Morgan, C. (2015). Successful application of a Canadian mental health curriculum resource by usual classroom teachers in significantly and sustainably improving student mental health literacy. *The Canadian Journal of Psychiatry*, 60(12), 580-586. doi:10.1177/070674371506001209
- La Greca, A. M., Davila, J., & Siegel, R. (2008). Peer relations, friendships, and romantic relationships: Implications for the development and maintenance of depression in adolescents. In N. B. Allen & L. B. Sheeber (Eds.), *Adolescent emotional development and the emergence of depressive disorders* (pp. 318-336). Cambridge: Cambridge University Press.
- La Greca, A. M., & Harrison, H. M. (2005). Adolescent peer relations, friendships, and romantic relationships: Do they predict social anxiety and depression? *Journal of Clinical Child and Adolescent Psychology*, 34(1), 49-61. doi:10.1207/s15374424jccp3401\_5
- Lakdawalla, Z., Hankin, B. L., & Mermelstein, R. (2007). Cognitive theories of depression in children and adolescents: A conceptual and quantitative review. *Clinical child and family psychology review*, 10(1), 1-24. doi:10.1007/s10567-006-0013-1
- Lam, L. T. (2014). Mental health literacy and mental health status in adolescents: a population-based survey. *Child and Adolescent Psychiatry and Mental Health*, 8(1), 26. doi:10.1186/1753-2000-8-26

- Larson, R. W., & Verma, S. (1999). How children and adolescents spend time across the world: work, play, and developmental opportunities. *Psychological bulletin*, *125*(6), 701-736. doi:10.1037/0033-2909.125.6.701
- Lau, R. R., & Hartman, K. A. (1983). Common sense representations of common illnesses. *Health psychology*, *2*(2), 167.
- Lauber, C., Nordt, C., Falcato, L., & Rössler, W. (2003). Do people recognise mental illness? *European archives of psychiatry and clinical neuroscience*, *253*(5), 248-251. doi:10.1007/s00406-003-0439-0
- Leighton, S. (2009). Adolescents' understanding of mental health problems: conceptual confusion. *Journal of public mental health*, *8*(2), 4-14.
- Leighton, S. (2010). Using a vignette-based questionnaire to explore adolescents' understanding of mental health issues. *Clinical Child Psychology and Psychiatry*, *15*(2), 231-250. doi:10.1177/1359104509340234
- Leventhal, H., Diefenbach, M., & Leventhal, E. (1992). Illness cognition: Using common sense to understand treatment adherence and affect cognition interactions. *Cognitive Therapy and Research*, *16*(2), 143-163. doi:10.1007/BF01173486
- Leventhal, H., Leventhal, E., & Contrada, R. (1998). Self-regulation, health, and behavior: A perceptual-cognitive approach. *Psychology & Health*, *13*(4), 717-733. doi:10.1080/08870449808407425
- Leventhal, H., Meyer, D., & Nerenz, D. (1980). The common sense representation of illness danger. In S. Rachman (Ed.), *Contributions to Medical Psychology* (Vol. 2, pp. 7-30). Oxford: Pergamon Press.
- Liegghio, M. (2016). 'Not a good person': family stigma of mental illness from the perspectives of young siblings. *Child & Family Social Work*, *22*(3), 1237-1124. doi:10.1111/cfs.12340
- Limón, M. (2001). On the cognitive conflict as an instructional strategy for conceptual change: A critical appraisal. *Learning and instruction*, *11*(4), 357-380. doi:10.1016/S0959-4752(00)00037-2
- Lin, P., Cambell, D. G., Chaney, E. F., Liu, C.-F., Heagerty, P., Felker, B., & Hedrick, S. C. (2005). The influence of patient preference on depression treatment in primary care. *Annals of Behavioral Medicine*, *30*(2), 164-173.
- Link, B. G., & Phelan, J. C. (2006). Stigma and its public health implications. *The Lancet*, *367*(9509), 528-529.
- Lobban, F., Barrowclough, C., & Jones, S. (2003). A review of the role of illness models in severe mental illness. *Clinical psychology review*, *23*(2), 171-196. doi:10.1016/S0272-7358(02)00230-1
- Logan, D. E., & King, C. A. (2001). Parental facilitation of adolescent mental health service utilization: A conceptual and empirical review. *Clinical Psychology: Science and Practice*, *8*(3), 319-333. doi:10.1093/clipsy.8.3.319
- Loureiro, L. M., Jorm, A. F., Mendes, A. C., Santos, J. C., Ferreira, R. O., & Pedreiro, A. T. (2013). Mental health literacy about depression: a survey of portuguese youth. *BMC psychiatry*, *13*, 129. doi:10.1186/1471-244X-13-129
- Lubman, D., Cheetham, A., Jorm, A., Berridge, B., Wilson, C., Blee, F., . . . Proimos, J. (2017). Australian adolescents' beliefs and help-seeking intentions towards peers experiencing symptoms of depression and alcohol misuse. *BMC public health*, *17*(1), 658. doi:10.1186/s12889-017-4655-3

- Lynch, F. L., & Clarke, G. N. (2006). Estimating the Economic Burden of Depression in Children and Adolescents. *American Journal of Preventive Medicine*, 31(6), 143-151. doi:10.1016/j.amepre.2006.07.001
- Maas, E., Marecek, J., & Travers, J. R. (1978). Children's Conceptions of Disordered Behavior. *Child Development*, 49(1), 146-154. doi:10.2307/1128603
- MacLean, A., Hunt, K., & Sweeting, H. (2013). Symptoms of mental health problems: Children's and adolescents' understandings and implications for gender differences in help seeking. *Children & Society*, 27(3), 161-173. doi:10.1111/j.1099-0860.2011.00406.x
- Marshall, J. M., & Dunstan, D. A. (2013). Mental health literacy of Australian rural adolescents: An analysis using vignettes and short films. *Australian Psychologist*, 48(2), 119-127. doi:10.1111/j.1742-9544.2011.00048.x
- Maybery, D. J., Reupert, A. E., Patrick, K., Goodyear, M., & Crase, L. (2009). Prevalence of parental mental illness in Australian families. *The Psychiatrist*, 33(1), 22-26. doi:10.1192/pb.bp.107.018861
- McCauley, E., Pavlidis, K., & Kendall, K. (2001). Developmental precursors of depression: The child and the social environment. In I. Goodyer (Ed.), *The depressed child and adolescent* (pp. 46-78). Cambridge: Cambridge University Press.
- McGrath, E. P., & Repetti, R. L. (2002). A longitudinal study of children's depressive symptoms, self-perceptions, and cognitive distortions about the self. *Journal of abnormal psychology*, 111(1), 77-87. doi:10.1037/0021-843X.111.1.77
- McKeague, L., Hennessy, E., O'Driscoll, C., & Heary, C. (2015). Peer Mental Health Stigmatization Scale: psychometric properties of a questionnaire for children and adolescents. *Child and Adolescent Mental Health*, 20(3), 163-170. doi:10.1111/camh.12088
- McLeod, G., Horwood, L., & Fergusson, D. (2016). Adolescent depression, adult mental health and psychosocial outcomes at 30 and 35 years. *Psychological medicine*, 46(7), 1401-1412. doi:10.1017/S0033291715002950
- McLuckie, A., Kutcher, S., Wei, Y., & Weaver, C. (2014). Sustained improvements in students' mental health literacy with use of a mental health curriculum in Canadian schools. *Bmc Psychiatry*, 14(1), 379. doi:10.1186/s12888-014-0379-4
- McMenamy, J. M., & Perrin, E. C. (2008). The impact of experience on children's understanding of ADHD. *Journal of Developmental & Behavioral Pediatrics*, 29(6), 483-492. doi:10.1097/DBP.0b013e318190317c
- Meadus, R. J. (2007). Adolescents coping with mood disorder: a grounded theory study. *Journal of Psychiatric and Mental Health Nursing*, 14(2), 209-217. doi:10.1111/j.1365-2850.2007.01067.x
- Meadus, R. J., & Johnson, B. (2000). The experience of being an adolescent child of a parent who has a mood disorder. *Journal of psychiatric and mental health nursing*, 7(5), 383-390.
- Meadus, R. J., & Johnson, B. (2007). The experience of being an adolescent child of a parent who has a mood disorder. *Journal of Psychiatric and Mental Health Nursing*, 7(5), 383-390. doi:10.1046/j.1365-2850.2000.00319.x

- Melas, P., Tartani, E., Forsner, T., Edhborg, M., & Forsell, Y. (2013). Mental health literacy about depression and schizophrenia among adolescents in Sweden. *European Psychiatry, 28*(7), 404-411. doi:10.1016/j.eurpsy.2013.02.002
- Mellor, C. (2014). School-based interventions targeting stigma of mental illness: systematic review. *Psychiatric Bulletin, 38*(4), 164-171. doi:10.1192/pb.bp.112.041723
- Mendenhall, A. N., Frauenholtz, S., & Conrad-Hiebner, A. (2014). Provider perceptions of mental health literacy among youth. *Child and Adolescent Social Work Journal, 31*(3), 281-293. doi:10.1007/s10560-013-0321-5
- Mental Health Commission of Canada. (2012). *Changing directions, changing lives: The mental health strategy for Canada*. Calgary, AB: Author.
- Merikangas, K. R., Nakamura, E. F., & Kessler, R. C. (2009). Epidemiology of mental disorders in children and adolescents. *Dialogues in clinical neuroscience, 11*(1), 7-20.
- Merritt, R. K., Price, J. R., Mollison, J., & Geddes, J. R. (2007). A cluster randomized controlled trial to assess the effectiveness of an intervention to educate students about depression. *Psychological medicine, 37*(03), 363-372. doi:10.1017/S0033291706009056
- Midgley, N., Parkinson, S., Holmes, J., Stapley, E., Eatough, V., & Target, M. (2015). Beyond a diagnosis: The experience of depression among clinically-referred adolescents. *Journal of Adolescence, 44*, 269-279. doi:10.1016/j.adolescence.2015.08.007
- Milin, R., Kutcher, S., Lewis, S. P., Walker, S., Wei, Y., Ferrill, N., & Armstrong, M. A. (2016). Impact of a mental health curriculum on knowledge and stigma among high school students: a randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry, 55*(5), 383-391. doi:10.1016/j.jaac.2016.02.018
- Mitchell, J., McCauley, E., Burke, P., & Moss, S. (1988). Phenomenology of depression in children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 27*(1), 12-20. doi:10.1097/00004583-198801000-00004
- Moffitt, T. E., Caspi, A., Taylor, A., Kokaua, J., Milne, B., Polanczyk, G., & Poulton, R. (2010). How common are common mental disorders? Evidence that lifetime prevalence rates are doubled by prospective versus retrospective ascertainment. *Psychological medicine, 40*(6), 899-909. doi:10.1017/S0033291709991036
- Moffitt, T. E., Harrington, H., Caspi, A., Kim-Cohen, J., Goldberg, D., Gregory, A. M., & Poulton, R. (2007). Depression and generalized anxiety disorder: cumulative and sequential comorbidity in a birth cohort followed prospectively to age 32 years. *Archives of general psychiatry, 64*(6), 651-660. doi:10.1001/archpsyc.64.6.651
- Mond, J. M., Marks, P., Hay, P. J., Rodgers, B., Kelly, C., Owen, C., & Paxton, S. J. (2007). Mental health literacy and eating-disordered behavior: Beliefs of adolescent girls concerning the treatment of and treatment-seeking for bulimia nervosa. *Journal of Youth and Adolescence, 36*(6), 753-762. doi:10.1007/s10964-006-9087-9
- Moor, S., Ann, M., Hester, M., Elisabeth, W. J., Robert, E., Robert, W., & Caroline, B. (2007). Improving the recognition of depression in adolescence: Can we

- teach the teachers? *Journal of Adolescence*, 30(1), 81-95. doi:10.1016/j.adolescence.2005.12.001
- Mordoch, E. (2010). How children understand parental mental illness: "You don't get life insurance. What's life insurance?". *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 19(1), 19-25.
- Mordoch, E., & Hall, W. A. (2008). Children's Perceptions of Living With a Parent With a Mental Illness: Finding the Rhythm and Maintaining the Frame. *Qualitative Health Research*, 18(8), 1127-1144. doi:10.1177/1049732308320775
- Moreau, D., Mufson, L., Weissman, M. M., & Klerman, G. L. (1991). Interpersonal psychotherapy for adolescent depression: Description of modification and preliminary application. *Journal of the American Academy of Child & Adolescent Psychiatry*, 30(4), 642-651.
- Morrissey-Kane, E., & Prinz, R. J. (1999). Engagement in child and adolescent treatment: The role of parental cognitions and attributions. *Clinical child and family psychology review*, 2(3), 183-198.
- Moses, T. (2010). Adolescent mental health consumers' self-stigma: associations with parents' and adolescents' illness perceptions and parental stigma. *Journal of Community Psychology*, 38(6), 781-798. doi:10.1002/jcop.20395
- Moses, T. (2011). Parents' conceptualization of adolescents' mental health problems: Who adopts a psychiatric perspective and does it make a difference? *Community mental health journal*, 47(1), 67-81. doi:10.1007/s10597-009-9256-x
- Moss-Morris, R., Weinman, J., Petrie, K., Horne, R., Cameron, L., & Buick, D. (2002). The Revised Illness Perception Questionnaire (IPQ-R). *Psychology & Health*, 17(1), 1-16. doi:10.1080/08870440290001494
- Mueller, J., Callanan, M., & Greenwood, K. (2014). Parents' communication to primary school-aged children about mental health and ill-health: a grounded theory study. *Journal of Public Mental Health*, 13(1), 13-19. doi:10.1108/JPMH-09-2013-0063
- Mueller, J., Callanan, M., & Greenwood, K. (2016). Communications to children about mental illness and their role in stigma development: an integrative review. *Journal of Mental Health*, 25(1), 62-70. doi:10.3109/09638237.2015.1021899
- Mufson, L., Dorta, K. P., Moreau, D., & Weissman, M. M. (2011). The Origins and Development of Interpersonal Psychotherapy for Depression. In *Interpersonal psychotherapy for depressed adolescents* (2nd ed., pp. 19-29). New York: Guilford Press.
- Munson, M. R., Floersch, J. E., & Townsend, L. (2009). Attitudes toward mental health services and illness perceptions among adolescents with mood disorders. *Child and Adolescent Social Work Journal*, 26(5), 447-466. doi:10.1007/s10560-009-0174-0
- Myant, K. A., & Williams, J. M. (2005). Children's concepts of health and illness: understanding of contagious illnesses, non-contagious illnesses and injuries. *Journal of Health Psychology*, 10(6), 805-819. doi:10.1177/1359105305057315
- Nam, S. K., Chu, H. J., Lee, M. K., Lee, J. H., Kim, N., & Lee, S. M. (2010). A Meta-analysis of Gender Differences in Attitudes Toward Seeking Professional

- Psychological Help. *Journal of American College Health*, 59(2), 110-116. doi:10.1080/07448481.2010.483714
- National Institute for Health and Care Excellence. (2015). *Depression in children and young people: identification and management* (NICE Clinical Guideline No. 28). Retrieved from <https://www.nice.org.uk/guidance/cg28>
- Naylor, P. B., Cowie, H. A., Walters, S. J., Talamelli, L., & Dawkins, J. (2009). Impact of a mental health teaching programme on adolescents. *The British Journal of Psychiatry*, 194(4), 365-370. doi:10.1192/bjp.bp.108.053058.
- Neuendorf, K. (2002). *The content analysis guidebook*. Thousand Oaks: Sage.
- Neufeld, S. A. S., Jones, P. B., & Goodyer, I. M. (2017). Reduction in adolescent depression after contact with mental health services: a longitudinal cohort study in the UK. *The Lancet Psychiatry*, 4(2), 120-127. doi: 10.1016/S2215-0366(17)30002-0.
- Ng, P., & Chan, K.-F. (2002). Attitudes towards people with mental illness. Effects of a training program for secondary school students. *International journal of adolescent medicine and health*, 14(3), 215-224. doi: doi.org/10.1515/IJAMH.2002.14.3.215
- Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of abnormal psychology*, 100(4), 569-582. doi:10.1037/0021-843X.100.4.569
- Nolen-Hoeksema, S., & Girgus, J. S. (1994). The emergence of gender differences in depression during adolescence. *Psychological bulletin*, 115(3), 424-443. doi:10.1037/0033-2909.115.3.424
- Nolen-Hoeksema, S., Girgus, J. S., & Seligman, M. E. (1992). Predictors and consequences of childhood depressive symptoms: a 5-year longitudinal study. *Journal of abnormal psychology*, 101(3), 405-422. doi:10.1037/0021-843X.101.3.405
- Norman, G. (2010). Likert scales, levels of measurement and the “laws” of statistics. *Advances in health sciences education*, 15(5), 625-632. doi:10.1007/s10459-010-9222-y
- O'Connor, M., & Casey, L. (2015). The Mental Health Literacy Scale (MHLS): A new scale-based measure of mental health literacy. *Psychiatry research*, 229(1-2), 511-516. doi:10.1016/j.psychres.2015.05.064
- O'Connor, P. J., Martin, B., Weeks, C. S., & Ong, L. (2014). Factors that influence young people's mental health help-seeking behaviour: a study based on the Health Belief Model. *Journal of Advanced Nursing*, 70(11), 2577-2587. doi:10.1111/jan.12423
- O'Driscoll, C., Heary, C., Hennessy, E., & McKeague, L. (2012). Explicit and implicit stigma towards peers with mental health problems in childhood and adolescence. *Journal of Child Psychology and Psychiatry*, 53(10), 1054-1062. doi:10.1111/j.1469-7610.2012.02580.x
- O'Driscoll, C., Heary, C., Hennessy, E., & McKeague, L. (2015). Adolescents' beliefs about the fairness of exclusion of peers with mental health problems. *Journal of Adolescence*, 42, 59-67. doi:10.1016/j.adolescence.2015.03.008
- Oades, L., Deane, F., Crowe, T., Gordon Lambert, W., Kavanagh, D., & Lloyd, C. (2005). Collaborative Recovery: An Integrativemodel for Working with Individuals Who Experience Chronic and Recurring Mental Illness.

- Australasian Psychiatry*, 13(3), 279-284. doi:10.1080/j.1440-1665.2005.02202.x
- Ojio, Y., Yonehara, H., Taneichi, S., Yamasaki, S., Ando, S., Togo, F., . . . Sasaki, T. (2015). Effects of school-based mental health literacy education for secondary school students to be delivered by school teachers: A preliminary study. *Psychiatry and Clinical Neurosciences*, 69(9), 572-579. doi:10.1111/pcn.12320
- Olsson, D. P., & Kennedy, M. G. (2010). Mental health literacy among young people in a small US town: recognition of disorders and hypothetical helping responses. *Early Intervention in Psychiatry*, 4(4), 291-298. doi:10.1111/j.1751-7893.2010.00196.x
- Ormslow, M. J., Paakkari, L. T., & Kannas, L. K. (2013). Measuring child and adolescent health literacy: a systematic review of literature. *Health Education*, 113(5), 433-455. doi:10.1108/HE-07-2012-0039
- Owens, P. L., Hoagwood, K., Horwitz, S. M., Leaf, P. J., Poduska, J. M., Kellam, S. G., & Jalongo, N. S. (2002). Barriers to children's mental health services. *Journal of the American Academy of Child & Adolescent Psychiatry*, 41(6), 731-738. doi:10.1097/00004583-200206000-00013
- Paterson, J., Moss-morris, R., & Butler, S. J. (1999). The effect of illness experience and demographic factors on children's illness representations. *Psychology and Health*, 14(1), 117-129. doi:10.1080/08870449908407318
- Peltzer, K., & Promtussananon, S. (2003). Black South African children's understanding of health and illness: colds, chicken pox, broken arms and AIDS. *Child: Care, Health and Development*, 29(5), 385-393. doi:10.1046/j.1365-2214.2003.00356.x
- Perreault, W. D., Jr. (1975). Controlling order-effect bias. *Public opinion quarterly*, 39(4), 544-551. doi:10.1086/268251
- Perrin, E. C., & Gerrity, P. S. (1981). There's a demon in your belly: children's understanding of illness. *Pediatrics*, 67(6), 841-849.
- Perrin, E. C., & Perrin, J. M. (1983). Clinicians' assessments of children's understanding of illness. *American Journal of Diseases of Children*, 137(9), 874-878.
- Perry, Y., Petrie, K., Buckley, H., Cavanagh, L., Clarke, D., & Winslade, M. (2014). Effects of a classroom-based educational resource on adolescent mental health literacy: a cluster randomised controlled trial. *Journal of Adolescence*, 37. doi:10.1016/j.adolescence.2014.08.001
- Pescosolido, B. A., Jensen, P. S., Martin, J. K., Perry, B. L., Olafsdottir, S., & Fettes, D. (2008). Public knowledge and assessment of child mental health problems: findings from the National Stigma Study-Children. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(3), 339-349. doi:10.1097/CHI.0b013e318160e3a0
- Peterson, L., Mullins, L. L., & Ridley-Johnson, R. (1985). Childhood depression: Peer reactions to depression and life stress. *Journal of Abnormal Child Psychology*, 13(4), 597-609.
- Pinfold, V., Toulmin, H., Thornicroft, G., Huxley, P., Farmer, P., & Graham, T. (2003). Reducing psychiatric stigma and discrimination: evaluation of educational interventions in UK secondary schools. *The British Journal of Psychiatry*, 182(4), 342-346. doi:10.1192/bjp.182.4.342

- Pinto-Foltz, M. D., Hines-Martin, V., & Logsdon, M. C. (2010). How adolescent girls understand and manage depression within their peer group: A grounded theory investigation. *School mental health, 2*(1), 36-43. doi:10.1007/s12310-009-9024-7
- Pinto-Foltz, M. D., Logsdon, M. C., & Myers, J. A. (2011). Feasibility, acceptability, and initial efficacy of a knowledge-contact program to reduce mental illness stigma and improve mental health literacy in adolescents. *Social science & medicine, 72*(12), 2011-2019. doi:10.1016/j.socscimed.2011.04.006
- Pitre, N., Stewart, S., Adams, S., Bedard, T., & Landry, S. (2007). The use of puppets with elementary school children in reducing stigmatizing attitudes towards mental illness. *Journal of Mental Health, 16*(3), 415-429. doi:10.1080/09638230701299160
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903. doi: 10.1037/0021-9010.88.5.879.
- Polanczyk, G. V., Salum, G. A., Sugaya, L. S., Caye, A., & Rohde, L. A. (2015). Annual Research Review: A meta-analysis of the worldwide prevalence of mental disorders in children and adolescents. *Journal of Child Psychology and Psychiatry, 56*(3), 345-365. doi:10.1111/jcpp.12381
- Poster, E. C. (1992). Children's concepts of the mentally ill. *Journal of Child and Adolescent Pediatric and Mental Health Nursing, 5*, 28-36. doi:10.1111/j.1744-6171.1992.tb00119.x
- Poster, E. C., Betz, C., McKenna, A., & Mossar, M. (1986). Children's Attitudes Toward the Mentally III as Reflected in Human Figure Drawings and Stories. *Journal of the American Academy of Child Psychiatry, 25*(5), 680-686.
- Prins, M. A., Verhaak, P. F., Bensing, J. M., & van der Meer, K. (2008). Health beliefs and perceived need for mental health care of anxiety and depression—The patients' perspective explored. *Clinical psychology review, 28*(6), 1038-1058. doi:10.1016/j.cpr.2008.02.009
- Public Health England. (2015). *Local action on health inequalities Improving health literacy to reduce health inequalities*. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/460709/4a\\_Health\\_Literacy-Full.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/460709/4a_Health_Literacy-Full.pdf).
- Rahman, A., Mubbashar, M. H., Gater, R., & Goldberg, D. (1998). Randomised trial of impact of school mental-health programme in rural Rawalpindi, Pakistan. *Lancet, 352*(9133), 1022-1025. doi:10.1016/s0140-6736(98)02381-2
- Raman, L., & Winer, G. A. (2002). Children's and adults' understanding of illness: Evidence in support of a coexistence model. *Genetic, social, and general psychology monographs, 128*(4), 325-355.
- Ratzan, S. C., & Parker, R. (2000). Introduction. In R. Selden & M. Zorn (Eds.), *National Library of Medicine Current Bibliographies in Medicine: Health Literacy*. Bethesda, MD: National Institutes of Health.
- Raviv, A., Sills, R., Raviv, A., & Wilansky, P. (2000). Adolescents' help-seeking behaviour: The difference between self-and other-referral. *Journal of Adolescence, 23*(6), 721-740. doi:10.1006/jado.2000.035
- Reavley, N., Cvetkovski, S., Jorm, A. F., & Lubman, D. I. (2010). Help-seeking for substance use, anxiety and affective disorders among young people: results

- from the 2007 Australian National Survey of Mental Health and Wellbeing. *Australian and New Zealand Journal of Psychiatry*, 44(8), 729-735. doi:10.3109/00048671003705458
- Reavley, N., & Jorm, A. (2011). Depression stigma in Australian high school students. *Youth Studies Australia*, 30(2), 33-40.
- Reinke, W. M., Stormont, M., Herman, K. C., Puri, R., & Goel, N. (2011). Supporting children's mental health in schools: Teacher perceptions of needs, roles, and barriers. *School Psychology Quarterly*, 26(1), 1-13. doi:10.1037/a0022714
- Reupert, A., & Maybery, D. (2007). Families affected by parental mental illness: A multiperspective account of issues and interventions. *American Journal of Orthopsychiatry*, 77(3), 362-369. doi:10.1037/0002-9432.77.3.362
- Richards, C., Cannon, N., & Scott, E. (2004). Depression in Teenagers. Retrieved from <http://www.depressioninteenagers.com/>
- Rickwood, D. J., Cavanagh, S., Curtis, L., & Sakrouge, R. (2004). Educating young people about mental health and mental illness: evaluating a school-based programme. *International Journal of Mental Health Promotion*, 6(4), 23-32. doi:10.1080/14623730.2004.9721941
- Rickwood, D. J., Deane, F. P., & Wilson, C. J. (2007). When and how do young people seek professional help for mental health problems? *Medical Journal of Australia*, 187(7), 35-39.
- Rickwood, D. J., Deane, F. P., Wilson, C. J., & Ciarrochi, J. (2005). Young people's help-seeking for mental health problems. *Australian e-Journal for the Advancement of Mental Health*, 4(3), 218-251. doi:10.5172/jamh.4.3.218
- Rothì, D. M., Leavey, G., & Best, R. (2008). On the front-line: Teachers as active observers of pupils' mental health. *Teaching and Teacher Education*, 24(5), 1217-1231. doi:10.1016/j.tate.2007.09.011
- Royal, G. P., & Roberts, M. C. (1987). Students' perceptions of and attitudes toward disabilities: A comparison of twenty conditions. *Journal of Clinical Child Psychology*, 16(2), 122-132. doi:10.1207/s15374424jccp1602\_4
- Ruble, A. E., Leon, P. J., Gilley-Hensley, L., Hess, S. G., & Swartz, K. L. (2013). Depression knowledge in high school students: Effectiveness of the adolescent depression awareness program. *Journal of Affective Disorders*, 150(3), 1025-1030. doi:10.1016/j.jad.2013.05.033
- Rushforth, H. (1999). Practitioner review: communicating with hospitalised children: review and application of research pertaining to children's understanding of health and illness. *Journal of child psychology and psychiatry*, 40(5), 683-691.
- Rutter, M., Kim-Cohen, J., & Maughan, B. (2006). Continuities and discontinuities in psychopathology between childhood and adult life. *Journal of Child Psychology and Psychiatry*, 47(3-4), 276-295.
- Ryan, N. D., Puig-Antich, J., Ambrosini, P., Rabinovich, H., Robinson, D., Nelson, B., . . . Twomey, J. (1987). The clinical picture of major depression in children and adolescents. *Archives of general psychiatry*, 44(10), 854-861.
- Ryan, R. M., & Deci, E. L. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. *American Psychologist*, 55(1), 68-78. doi:10.1037/0003-066X.55.1.68
- Ryan, S. M., Jorm, A. F., Toumbourou, J. W., & Lubman, D. I. (2015). Parent and family factors associated with service use by young people with mental health

- problems: a systematic review. *Early intervention in psychiatry*, 9(6), 433-446. doi:10.1111/eip.12211
- Sawyer, M. G., Arney, F. M., Baghurst, P. A., Clark, J. J., Graetz, B. W., Kosky, R. J., . . . Raphael, B. (2001). The mental health of young people in Australia: key findings from the child and adolescent component of the national survey of mental health and well-being. *Australian and New Zealand Journal of Psychiatry*, 35(6), 806-814. doi:10.1046/j.1440-1614.2001.00964.x
- Sayal, K. (2006). Annotation: Pathways to care for children with mental health problems. *Journal of Child Psychology and Psychiatry*, 47(7), 649-659.
- Schachter, H. M., Girardi, A., Ly, M., Lacroix, D., Lumb, A. B., van Berkomp, J., & Gill, R. (2008). Effects of school-based interventions on mental health stigmatization: a systematic review. *Child and Adolescent Psychiatry and Mental Health*, 2(1), 18. doi:10.1186/1753-2000-2-18
- Schoenberg, N., & Ravdal, H. (2000). Using vignettes in awareness and attitudinal research. *International Journal of Social Research Methodology*, 3(1), 63-74. doi:10.1080/136455700294932
- Schroeder, C. M., Scott, T. P., Tolson, H., Huang, T. Y., & Lee, Y. H. (2007). A meta-analysis of national research: Effects of teaching strategies on student achievement in science in the United States. *Journal of research in science teaching*, 44(10), 1436-1460. doi:10.1002/tea.20212
- Schulz, K. F., & Grimes, D. A. (2002). Blinding in randomised trials: hiding who got what. *The Lancet*, 359(9307), 696-700. doi:10.1016/S0140-6736(02)07816-9
- Schwannauer, M., & Taylor, E. (2015). *Mental Health in Scotland: The CAMHS Matrix 2015: A guide to delivering evidence-based Psychological Therapies in Scotland*: NHS Education Scotland (NES).
- Scottish Executive. (2006a). A Curriculum for Excellence progress and proposals. Retrieved from [http://www.docs.hss.ed.ac.uk/education/outdoored/curriculum\\_for\\_excellence.pdf](http://www.docs.hss.ed.ac.uk/education/outdoored/curriculum_for_excellence.pdf)
- Scottish Executive. (2006b). The Scottish Index of Multiple Deprivation. Retrieved from <http://www.gov.scot/Topics/Statistics/SIMD>
- Secker, J., Armstrong, C., & Hill, M. (1999). Young people's understanding of mental illness. *Health Education Research*, 14(6), 729-739.
- Sen, B. (2004). Adolescent propensity for depressed mood and help seeking: race and gender differences. *Journal of Mental Health Policy and Economics*, 7(3), 133-145.
- Siegal, M. (1988). Children's knowledge of contagion and contamination as causes of illness. *Child development*, 1353-1359.
- Siegal, M. (2008). *Marvelous minds : the discovery of what children know*. Oxford: Oxford : Oxford University Press.
- Siegal, M., & Peterson, C. D. (1999). *Children's understanding of biology and health*. Cambridge: Cambridge : Cambridge University Press.
- Simmons, M. B., Hetrick, S. E., & Jorm, A. F. (2011). Experiences of treatment decision making for young people diagnosed with depressive disorders: a qualitative study in primary care and specialist mental health settings. *BMC psychiatry*, 11(1), 194. doi:10.1186/1471-244X-11-194
- Skre, I., Friberg, O., Breivik, C., Johnsen, L. I., Arnesen, Y., & Wang, C. E. A. (2013). A school intervention for mental health literacy in adolescents: effects of a non-

- randomized cluster controlled trial. *Bmc Public Health*, 13. doi:10.1186/1471-2458-13-873
- Solomon, G. E., & Cassimatis, N. L. (1999). On facts and conceptual systems: young children's integration of their understandings of germs and contagion. *Developmental psychology*, 35(1), 113-126.
- Spitzer, A., & Cameron, C. (1995). School-age children's perceptions of mental illness. *Western Journal of Nursing Research*, 17(4), 398-415.
- Srebnik, D., Cauce, A. M., & Baydar, N. (1996). Help-seeking pathways for children and adolescents. *Journal of Emotional and Behavioral Disorders*, 4(4), 210-220.
- Steel, Z., Marnane, C., Iranpour, C., Chey, T., Jackson, J. W., Patel, V., & Silove, D. (2014). The global prevalence of common mental disorders: a systematic review and meta-analysis 1980–2013. *International journal of epidemiology*, dyu038.
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Journal of Cognitive Education and Psychology*, 2(1), 55-87.
- Steinberg, L., & Silverberg, S. B. (1986). The vicissitudes of autonomy in early adolescence. *Child development*, 841-851.
- Strunk, C. M., King, K. A., Vidourek, R. A., & Sorter, M. T. (2014). Effectiveness of the Surviving the Teens Suicide Prevention and Depression Awareness Program: An Impact Evaluation Utilizing a Comparison Group. *Health Education & Behavior*, 41(6), 605-613. doi:10.1177/1090198114531774
- Strunk, C. M., Sorter, M. T., Ossege, J., & King, K. A. (2014). Emotionally Troubled Teens' Help-Seeking Behaviors An Evaluation of Surviving the Teens® Suicide Prevention and Depression Awareness Program. *The Journal of School Nursing*, 30(5), 366-375. doi:10.1177/1059840513511494
- Sullivan, G., & Artino, A. (2013). Analyzing and interpreting data from Likert-type scales. *Journal of graduate medical education*, 5(4), 541-542.
- Swami, V. (2012). Mental Health Literacy of Depression: Gender Differences and Attitudinal Antecedents in a Representative British Sample. *Plos One*, 7(11), e49779. doi:10.1371/journal.pone.0049779
- Swartz, K. L., Kastelic, E. A., Hess, S. G., Cox, T. S., Gonzales, L. C., Mink, S. P., & DePaulo, J. R. (2010). The effectiveness of a school-based adolescent depression education program. *Health Education & Behavior*, 37(1), 11-22. doi:10.1177/1090198107303313
- Swift, J. K., Callahan, J. L., & Vollmer, B. M. (2011). Preferences. *Journal of clinical psychology*, 67(2), 155. doi:10.1002/jclp.20759
- Swords, L., Heary, C., & Hennessy, E. (2011). Factors associated with acceptance of peers with mental health problems in childhood and adolescence. *J Child Psychol Psychiatry*, 52(9), 933-941. doi:10.1111/j.1469-7610.2010.02351.x
- Swords, L., Hennessy, E., & Heary, C. (2011a). Adolescents' beliefs about sources of help for ADHD and depression. *J Adolesc*, 34(3), 485-492. doi:10.1016/j.adolescence.2010.06.002
- Swords, L., Hennessy, E., & Heary, C. (2011b). Development of the Children's Attributions about Psychological Problems in their Peers Scale. *Child: Care, Health and Development*, 37(3), 446-455. doi:10.1111/j.1365-2214.2010.01151.x

- Sørensen, K., Van den Broucke, S., Brand, H., Fullam, J., Doyle, G., Pelikan, J., & Slonszka, Z. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, *12*, 80. doi: 10.1186/1471-2458-12-80
- Tashakkori, A., & Creswell, J. W. (2007). Editorial: The new era of mixed methods. *Journal of mixed methods research*, *1*(1), 3-7. doi:10.1177/1558689806293042
- Teagle, S. E. (2002). Parental problem recognition and child mental health service use. *Mental health services research*, *4*(4), 257-266.
- Tems, C. L., Stewart, S. M., Skinner Jr, J. R., Hughes, C. W., & Emslie, G. (1993). Cognitive distortions in depressed children and adolescents: Are they state dependent or traitlike? *Journal of Clinical Child Psychology*, *22*(3), 316-326. doi:10.1207/s15374424jccp2203\_2
- Thapar, A., Collishaw, S., Pine, D. S., & Thapar, A. K. (2012). Depression in adolescence. *The Lancet*, *379*(9820), 1056-1067. doi:10.1016/S0140-6736(11)60871-4
- Thapar, A., & McGuffin, P. (1998). Validity of the shortened Mood and Feelings Questionnaire in a community sample of children and adolescents: a preliminary research note. *Psychiatry research*, *81*(2), 259-268. doi:10.1016/S0165-1781(98)00073-0
- The Scottish Government. (2003). National Programme for Improving Mental Health and Well-being: Action Plan 2003-2006. Retrieved from <http://www.gov.scot/Publications/2003/09/18193/26509-b2>
- The Scottish Government. (2007). Towards a Mentally Flourishing Scotland: The Future of Mental Health Improvement in Scotland 2008-2011. Retrieved from <http://www.gov.scot/Publications/2007/10/26112853/0>
- The Scottish Government. (2009). Health Literacy – A Scoping Study Final Report. Retrieved from <http://www.gov.scot/resource/doc/296717/0092261.pdf>
- The Scottish Government. (2017a). Getting it right for every child (GIRFEC). Retrieved from <http://www.gov.scot/Topics/People/Young-People/gettingitright>
- The Scottish Government. (2017b). Mental Health Strategy 2017-2027. Retrieved from <http://www.gov.scot/Publications/2017/03/1750/0>
- Topkaya, N. (2014). Gender, Self-Stigma, and Public Stigma in Predicting Attitudes toward Psychological Help-Seeking. *Educational Sciences: Theory and Practice*, *14*(2), 480-487. doi:10.12738/estp.2014.2.1799
- Trizano-Hermosilla, I., & Alvarado, J. M. (2016). Best Alternatives to Cronbach's Alpha Reliability in Realistic Conditions: Congeneric and Asymmetrical Measurements. *Frontiers in Psychology*, *7*, 769. doi:10.3389/fpsyg.2016.00769
- UK Research Integrity Office. (2009). Code of Practice for Research.
- United Nations. (1989). Convention on the Rights of the Child. Retrieved from [https://treaties.un.org/doc/Publication/UNTS/Volume 1577/v1577.pdf](https://treaties.un.org/doc/Publication/UNTS/Volume%201577/v1577.pdf)
- Vacik, H. W., Nagy, M. C., & Jessee, P. O. (2001). Children's understanding of illness: Students' assessments. *Journal of Pediatric Nursing*, *16*(6), 429-437. doi:10.1053/jpdn.2001.27883
- van Schaik, D. J., Klijn, A. F., van Hout, H. P., van Marwijk, H. W., Beekman, A. T., de Haan, M., & van Dyck, R. (2004). Patients' preferences in the treatment of

- depressive disorder in primary care. *Gen Hosp Psychiatry*, 26(3), 184-189. doi:10.1016/j.genhosppsy.2003.12.001
- Vatne, T. M., Helmen, I. Ø., Bahr, D., Kanavin, Ø., & Nyhus, L. (2015). "She Came out of mum's Tummy the Wrong way" (Mis) Conceptions Among Siblings of Children with Rare Disorders. *Journal of Genetic Counseling*, 24(2), 247-258. doi:10.1007/s10897-014-9757-9
- Ventieri, D., Clarke, D. M., & Hay, M. (2011). The effects of a school-based educational intervention on preadolescents' knowledge of and attitudes towards mental illness. *Advances in School Mental Health Promotion*, 4(3), 5-17. doi:10.1080/1754730X.2011.9715632
- Vernberg, E. M. (1990). Psychological adjustment and experiences with peers during early adolescence: Reciprocal, incidental, or unidirectional relationships? *Journal of Abnormal Child Psychology*, 18(2), 187-198. doi:10.1007/BF00910730
- Vogel, D. L., Wade, N. G., Wester, S. R., Larson, L., & Hackler, A. H. (2007). Seeking help from a mental health professional: The influence of one's social network. *Journal of clinical psychology*, 63(3), 233-245. doi:10.1002/jclp.20345
- Vollmann, M., Scharloo, M., Salewski, C., Dienst, A., Schonauer, K., & Renner, B. (2010). Illness representations of depression and perceptions of the helpfulness of social support: Comparing depressed and never-depressed persons. *Journal of affective disorders*, 125(1), 213-220. doi:10.1016/j.jad.2010.01.075
- Wade, T. J., Cairney, J., & Pevalin, D. J. (2002). Emergence of gender differences in depression during adolescence: National panel results from three countries. *Journal of the American Academy of Child & Adolescent Psychiatry*, 41(2), 190-198. doi:10.1097/00004583-200202000-00013
- Wahl, O. F. (2002). Children's views of mental illness: a review of the literature. *Psychiatric Rehabilitation Skills*, 6(2), 134-158. doi:10.1080/10973430208408430
- Walker, J. S., Coleman, D., Lee, J., Squire, P. N., & Friesen, B. J. (2008). Children's Stigmatization of Childhood Depression and ADHD: Magnitude and Demographic Variation in a National Sample. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(8), 912-920. doi:http://dx.doi.org/10.1097/CHI.0b013e318179961a
- Watsford, C., Rickwood, D., & Vanags, T. (2013). Exploring young people's expectations of a youth mental health care service. *Early intervention in psychiatry*, 7(2), 131-137. doi:10.1111/j.1751-7893.2012.00361.x
- Weare, K., & Nind, M. (2011). Mental health promotion and problem prevention in schools: what does the evidence say? *Health promotion international*, 26(suppl 1), i29-i69. doi:10.1093/heapro/dar075
- Wei, Y., Hayden, J., Kutcher, S., Zygmunt, A., & McGrath, P. (2013). The effectiveness of school mental health literacy programs to address knowledge, attitudes and help seeking among youth. *Early Intervention in Psychiatry*, 7(2), 109-121. doi:10.1111/eip.12010
- Wei, Y., Kutcher, S., & Szumilas, M. (2011). Comprehensive school mental health: an integrated "school-based pathway to care" model for Canadian secondary schools. *McGill Journal of Education*, 46(2), 213-229.

- Wei, Y., McGrath, P. J., Hayden, J., & Kutcher, S. (2015). Mental health literacy measures evaluating knowledge, attitudes and help-seeking: a scoping review. *BMC Psychiatry, 15*, 291. doi:10.1186/s12888-015-0681-9
- Wei, Y., McGrath, P. J., Hayden, J., & Kutcher, S. (2016). Measurement properties of tools measuring mental health knowledge: a systematic review. *BMC psychiatry, 16*(1), 297. doi:10.1186/s12888-016-1012-5.
- Weijters, B., Baumgartner, H. & Schillewaet, N. (2013). Reversed Item Bias: An Integrative Model. *Psychological Methods, 18*(3), 320-334. doi: 10.1037/a0032121
- Weiner, B. (1985). An Attributional Theory of Achievement Motivation and Emotion. *Psychological Review, 92*(4), 548-573. doi:10.1037/0033-295X.92.4.548
- Weinman, J., Petrie, K. J., Moss-Morris, R., & Horne, R. (1996). The illness perception questionnaire: A new method for assessing the cognitive representation of illness. *Psychology & Health, 11*(3), 431-445. doi:10.1080/08870449608400270
- Weiss, B., & Garber, J. (2003). Developmental differences in the phenomenology of depression. *Development and psychopathology, 15*(02), 403-430.
- Weissman, M. M., Wolk, S., Goldstein, R. B., Moreau, D., Adams, P., Greenwald, S., . . . Wickramaratne, P. (1999). Depressed adolescents grown up. *Jama, 281*(18), 1707-1713. doi:10.1001/jama.281.18.1707
- Whiteford, H., Harris, M., McKeon, G., Baxter, A., Pennell, C., Barendregt, J., & Wang, J. (2013). Estimating remission from untreated major depression: a systematic review and meta-analysis. *Psychological Medicine, 43*(08), 1569-1585. doi:10.1017/S0033291712001717
- Whitley, J., Smith, J. D., & Vaillancourt, T. (2013). Promoting mental health literacy among educators: Critical in school-based prevention and intervention. *Canadian Journal of School Psychology, 28*(1), 56-70. doi:10.1177/0829573512468852
- Wilson, C., Deane, F. P., Ciarrochi, J., & Rickwood, D. (2005). Measuring Help-Seeking Intentions: Properties of the General Help Seeking Questionnaire. *Canadian Journal of Counselling, 39*(1), 15-28.
- Wilson, C. J., & Deane, F. P. (2010). Help-negation and suicidal ideation: the role of depression, anxiety and hopelessness. *Journal of Youth and Adolescence, 39*(3), 291-305. doi:10.1007/s10964-009-9487-8
- Wilson, C. J., Rickwood, D., & Deane, F. P. (2007). Depressive symptoms and help-seeking intentions in young people. *Clinical Psychologist, 11*(3), 98-107. doi:10.1080/13284200701870954
- Wisdom, J. P., Clarke, G. N., & Green, C. A. (2006). What teens want: barriers to seeking care for depression. *Administration and Policy in Mental Health, 33*(2), 133-145. doi:10.1007/s10488-006-0036-4
- Wisdom, J. P., & Green, C. A. (2004). "Being in a funk": teens' efforts to understand their depressive experiences. *Qualitative Health Research, 14*(9), 1227-1238. doi:10.1177/1049732304268657
- Witteman, C., Bolks, L., & Hutschemaekers, G. (2011). Development of the illness perception questionnaire mental health. *Journal of Mental Health, 2011, Vol.20*(2), p.115-125, 20(2), 115-125. doi:10.3109/09638237.2010.507685

- Woodall, A., Morgan, C., Sloan, C., & Howard, L. (2010). Barriers to participation in mental health research: are there specific gender, ethnicity and age related barriers? *BMC Psychiatry*, *10*(1), 103. doi:10.1186/1471-244x-10-103
- Woolfson, R., Woolfson, L., Mooney, L., & Bryce, D. (2009). Young people's views of mental health education in secondary schools: a Scottish study. *Child: care, health and development*, *35*(6), 790-798. doi:10.1111/j.1365-2214.2008.00901.x
- World Health Organization. (1992). *The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines*. Geneva: World Health Organisation.
- World Health Organization. (2013). *Health literacy. The solid facts*. Copenhagen: WHO Regional Office for Europe.
- World Health Organization. (2014). Preventing suicide: a global imperative. Retrieved from [http://apps.who.int/iris/bitstream/10665/131056/1/9789241564779\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/131056/1/9789241564779_eng.pdf)
- Wright, A., Jorm, A. F., Harris, M. G., & McGorry, P. D. (2007). What's in a name? Is accurate recognition and labelling of mental disorders by young people associated with better help-seeking and treatment preferences? *Social psychiatry and psychiatric epidemiology*, *42*(3), 244-250. doi:10.1007/s00127-006-0156-x
- Wright, A., Jorm, A. F., & Mackinnon, A. J. (2011). Labeling of mental disorders and stigma in young people. *Social Science & Medicine*, *73*. doi:10.1016/j.socscimed.2011.06.015
- Wu, P., Hoven, C. W., Bird, H. R., Moore, R. E., Cohen, P., Alegria, M., . . . Lichtman, J. H. (1999). Depressive and disruptive disorders and mental health service utilization in children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, *38*(9), 1081-1090. doi:10.1097/00004583-199909000-00010
- Yap, M. B. H., Wright, A., & Jorm, A. F. (2011). First aid actions taken by young people for mental health problems in a close friend or family member: findings from an Australian national survey of youth. *Psychiatry Research*, *188*(1), 123-128. doi:10.1016/j.psychres.2011.01.014
- Yorbik, O., Birmaher, B., Axelson, D., Williamson, D. E., & Ryan, N. D. (2004). Clinical characteristics of depressive symptoms in children and adolescents with major depressive disorder. *Journal of Clinical Psychiatry*, *65*(12), 1654-1659.
- Young, M., Richards, C., & Gunning, M. (2012). Online mental health resources for teenagers: an evaluation of two websites developed for adolescents. *Advances in School Mental Health Promotion*, *5*(4), 277-289. doi:10.1080/1754730X.2012.736792
- Zachrisson, H. D., Rödje, K., & Mykletun, A. (2006). Utilization of health services in relation to mental health problems in adolescents: a population based survey. *BMC Public Health*, *6*, 34. doi:10.1186/1471-2458-6-34
- Zimmer-Gembeck, M., & Skinner, E. A. (2011). Review: The development of coping across childhood and adolescence: An integrative review and critique of research. *International Journal of Behavioral Development*, *35*(1), 1-17. doi:10.1177/0165025410384923

- Zimmer-Gembeck, M., Waters, A. M., & Kindermann, T. (2010). A social relations analysis of liking for and by peers: associations with gender, depression, peer perception, and worry. *Journal of adolescence*, 33(1), 69-81. doi:10.1016/j.adolescence.2009.05.005
- Zisook, S., Lesser, I., Stewart, J. W., Wisniewski, S. R., Balasubramani, G., Fava, M., . . . Nierenberg, A. A. (2007). Effect of age at onset on the course of major depressive disorder. *American Journal of Psychiatry*, 164(10), 1539-1546. doi:10.1176/appi.ajp.2007.06101757
- Zuckerbrot, R. A., Cheung, A. H., Jensen, P. S., Stein, R. E. K., & Laraque, D. (2007). Guidelines for Adolescent Depression in Primary Care (GLAD-PC): I. Identification, assessment, and initial management. *Pediatrics*, 120(5), 1299-1312. doi:10.1542/peds.2006-1395
- Zwaanswijk, M., Verhaak, P. F., Bensing, J. M., Van der Ende, J., & Verhulst, F. C. (2003). Help seeking for emotional and behavioural problems in children and adolescents. *European child & adolescent psychiatry*, 12(4), 153-161. doi:10.1007/s00787-003-0322-6



## **Appendices**

# Appendix A: Research Ethics Approval Study 1

## Ethics Approval from the City of Edinburgh Council

Niki Georgakakou Koutsonikou

**Date** 2 October 2014

**Your ref**

**Our ref** SCS/RW

**Direct dial** 0131 469 3137

Dear Niki

I am writing in response to your application requesting permission to undertake research in schools in The City of Edinburgh.

Your request has been considered, and I am pleased to inform you that you have been given permission in principle to undertake your research. I must stress that it is the policy of this Authority to leave the final decision about participation in research projects of this kind to Head Teachers and their staff, so that approval in principle does not oblige any particular establishment to take part.

I request that you forward a copy of your completed findings to me when they become available. In this case an electronic summary of your thesis would be preferred. Your work may be of interest to a number of staff in the Children and Families Department.

I would like to thank you for contacting the Children and Families Department about your work, and wish you every success in the completion of your project.

Yours sincerely

**Ron Waddell**  
**DSM and School Support Manager**

**Schools and Community Services, Children and Families**  
Level 1.1, Waverley Court, 4 East Market Street, Edinburgh, EH8 8BG  
Tel 0131 469 3137 Fax 0131 529 6213 E-mail [ron.waddell@edinburgh.gov.uk](mailto:ron.waddell@edinburgh.gov.uk)

## Ethics Approval from the University of Edinburgh

### ER37 CONCLUSION TO ETHICAL REVIEW (if required)

The applicant's response to our request for further clarification or amendments has now satisfied the requirements for ethical practice and the application has therefore been approved.

*ELS*

Signature:

Position: Acting ethics tutor.

Date: 22.08.14

### ER38 AMENDMENT/S: REQUEST FOR APPROVAL

Subsequent to receipt of ethical approval above, I, the applicant, would like to request the following amendment/s to my original proposal.

Signature:

Date:

### ER39 CONCLUSION TO ETHICAL REVIEW OF AMENDMENT

I can confirm that the above amendment has been reviewed by two independent reviewers. It is their opinion that:

- a. Ethical issues have been satisfactorily addressed and no further response from the applicant is necessary,  
a. OR
- b. The ethical issues listed below arise and the following steps are being taken to address them:

Signature:

Position:

Date:

Acronyms / Terms Used  
NHS: National Health Service

# Appendix B: Consent Forms Study 1


## Child Information Sheet and Consent Form

(1/3)


**Any questions?**

If you have any questions, feel free to contact me...


... or my supervisors:





Niki Georgakakou  
[niki.georgakakou@ed.ac.uk](mailto:niki.georgakakou@ed.ac.uk)  
Clinical Psychology,  
School of Health in Social  
Science  
3rd Floor, Doorway 6,  
Medical School, Teviot  
Place, EH8 9AG



Jo Williams  
[Jo.Williams@ed.ac.uk](mailto:Jo.Williams@ed.ac.uk)  
+44 (0) 131 650 9962



Emily Taylor  
[emily.taylor@ed.ac.uk](mailto:emily.taylor@ed.ac.uk)  
+44 (0)131 650 3882



My name is **Niki** and I am a student at the University of Edinburgh.

I am exploring what children and teenagers think about difficult thoughts and feelings, like feeling sad, or angry, or worried.


**What is the research about?**

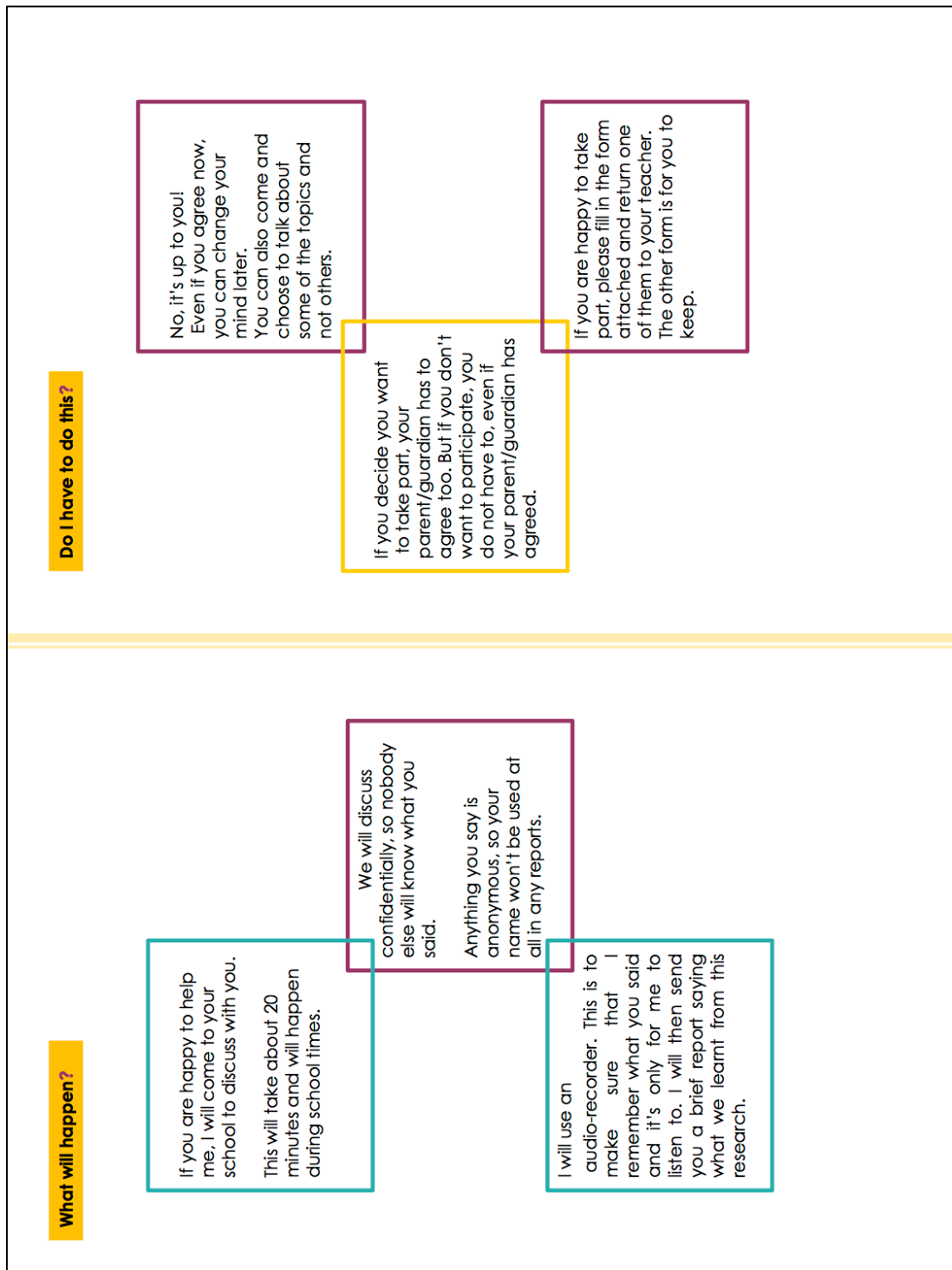
I want to learn more about what children and teenagers think about difficult thoughts and feelings.

I am very interested to hear what you think.

Lots of young people have problems with how they feel or think, but we don't know much about what children think about these problems.


THE UNIVERSITY of EDINBURGH





<p>If you are <b>happy</b> to take part, please fill in the form:</p> <ul style="list-style-type: none"><li>• I have read the information about the project..... <input type="checkbox"/></li><li>• I understand that:</li><li>• The recording will be destroyed within 6 months of the session..... <input type="checkbox"/></li><li>• I will not be identified in any written reports about the project..... <input type="checkbox"/></li><li>• I can change my mind about taking part at any time..... <input type="checkbox"/></li><li>• Yes, I would like to participate in the project ..... <input type="checkbox"/></li><li>• And I give my permission for the discussion to be recorded..... <input type="checkbox"/></li><li>• My <b>Name</b> is: .....</li><li>• The <b>Date</b> is: .....</li></ul>	<p>If you are <b>happy</b> to take part, please fill in the form:</p> <ul style="list-style-type: none"><li>• I have read the information about the project..... <input type="checkbox"/></li><li>• I understand that:</li><li>• The recording will be destroyed within 6 months of the session..... <input type="checkbox"/></li><li>• I will not be identified in any written reports about the project..... <input type="checkbox"/></li><li>• I can change my mind about taking part at any time..... <input type="checkbox"/></li><li>• Yes, I would like to participate in the project ..... <input type="checkbox"/></li><li>• And I give my permission for the discussion to be recorded..... <input type="checkbox"/></li><li>• My <b>Name</b> is: .....</li><li>• The <b>Date</b> is: .....</li></ul>
---	---

Please sign both forms. Cut between the forms and give one to your teacher. The other form is for you to keep.



## Parent Information Sheet and Consent Form

(1/3)



THE UNIVERSITY of EDINBURGH



Department of Clinical Psychology  
School of Health in Social Science,  
University of Edinburgh  
Doorway 6, Medical School,  
EH8 9AG

April, 2015

Dear Parent/ Caregiver,

My name is Niki Georgakakou and I am a PhD student at the University of Edinburgh. I am exploring what children and teenagers think about mental health, especially difficult thoughts and feelings, like feeling sad or worried. This is an invitation for your child to participate in the study.

Procedure: The study is in the form of individual informal interviews with each pupil, which will take place at [REDACTED] during school hours. The interview will last for approximately 15 to 20 minutes. I will read short stories to the children, about made-up characters with difficult feelings. I will then ask some questions about what pupils think about the characters.

Ethical Approval: This study has been approved by the University of Edinburgh and the City of Edinburgh Council. [REDACTED] Head Teacher, has also given his consent. The study is also supervised by two lectures in the department of Clinical Psychology of the School of Health in Social Science. All answers will be confidential and the participants will remain anonymous.

Consent Forms and Data: All consent forms and questionnaires will be securely stored within the University. Apart from me, nobody will have access to the consent forms. After the end of the project (5 years), all data will be destroyed.

I would very much appreciate your permission for your child to participate in this study. If you do not wish to give your permission, please read and sign the consent form attached and return to your child's teacher.

*For further information or queries, please feel free to contact us:*



Niki Georgakakou  
PhD Student in Clinical Psychology  
Niki.Georgakakou@ed.ac.uk  
+44 (0) 131 623 1748



Dr Joanne Williams  
Senior Lecturer in Clinical Psychology  
Jo.Williams@ed.ac.uk  
+44 (0) 131 650 9962



Dr Emily Taylor  
Lecturer in Clinical Psychology  
emily.taylor@ed.ac.uk  
+44 (0) 131 650 3892

Thank you for your collaboration.

Kind Regards,  
Niki



## Children's views of Mental Health Study Consent Forms

Please read the information sheet attached before signing this form.

The **purpose** of the study is to examine what children think about mental health. Children will participate anonymously and any information will be confidential.

### Participation

Your child will be asked to provide their written informed consent prior to the study, and will be asked to confirm their consent at the beginning of the interview. It will be explained to your child that participation is voluntary and that they can withdraw at any stage. In the latter case, the participant's data will be excluded from the study.

### Interview

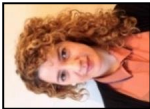



The study is in the form of informal interviews with each child, which last for approximately 20 minutes and will take place at [redacted] Primary School, within school hours. Each interview will be audio-recorded.

### Consent forms

All consent forms will be securely stored within the University. Apart from the researchers, nobody will have access to the consent forms. After the end of the project (5 years), consent forms will be destroyed.

### Use of Data

Audio recordings will be password protected and stored within the University network. Only my supervisors and I will have access to the data collected. The audio recordings will be transcribed and stored on a password protected University computer. After the end of the project (5 years), all data will be destroyed. The results of the study will be anonymously presented in my PhD thesis and in published articles. I will send a report of research findings to inform your child about the results of the study.

<p>Please tick the boxes as appropriate and sign below. Please cut the page and return it to your child's teacher.</p> <p>I have read the information sheet and consent form about this project.....<input type="checkbox"/></p> <p>and I <b>DO NOT</b> give my permission for my child to participate in the study described above.....<input type="checkbox"/></p> <p>Child's Name: .....</p> <p>Class:.....</p> <p>Parent/ Caregiver's name: .....</p> <p>Signature: .....</p> <p>Date:.....</p> <p>I am also planning a study on <b>parents' views of mental health</b>. Would you be happy for me to contact you in the future to let you know about how you could participate? By indicating "yes" you will <b>NOT</b> commit yourself in taking part in the study.</p> <p>Yes, I would be happy to be contacted about this study.....<input type="checkbox"/></p> <p>Email address: .....</p>	<p><b>THE UNIVERSITY of EDINBURGH</b></p> <p>If you have any questions or queries, please contact us:</p> <p><b>Niki Georgakakou</b> PhD Student in Clinical Psychology Niki.Georgakakou@ed.ac.uk</p>  <p><b>Dr Joanne Williams</b> Senior Lecturer in Clinical Psychology Jo.Williams@ed.ac.uk +44 (0) 131 650 9962</p>  <p><b>Dr Emily Taylor</b> Lecturer in Clinical Psychology emily.taylor@ed.ac.uk +44 (0) 131 650 3892</p>  <p>Clinical Psychology, School of Health in Social Science Doorway 6, Medical School, EH8 9AG</p> 
--	---



## Appendix C: Study 1 Material

### Vignettes

- **Child Vignette**

[Sam/ Stacey] is 8 years old and is in Primary 4. During the last month, [Sam/ Stacey] has been feeling very sad. [Sam/ Stacey] is a very good student, but his schoolwork is not as good as it used to [He/she] says [he/she] cannot concentrate as well as before. [He/she] also falls out with [his/her] friends lately. [Sam/ Stacey] stopped going to [football practice/ dance class] after school and says [he/she] doesn't enjoy it anymore. [He/she] has trouble sleeping and wakes up a lot during the night.

- **Preadolescent Vignette**

[Anna /Alex] is 11 and is in Primary 7. For the last few weeks, [Anna /Alex] often gets upset and cries in class. [She / he] has been feeling very tired at school, and has missed lots of days, as [she / he] refuses to go. Nothing seems to cheer [her/ him] up, not even [her / his] best friends. [Anna /Alex] stopped meeting with them after school. Instead, [she / he] spends a lot of time alone in [her /his] room and sleeps a lot more than [she /he] used to.

- **Adolescent Vignette**

[Jamie/ Emma] is 14 years old and is in Secondary 2. During the last couple of months, [Jamie/ Emma] is in a bad mood most of the time and never seems to have fun anymore. [He/ she] lost interest in his hobbies, music and sports. [He/ she] says [he's/ she's] not good enough for anything anyway. [His/ her] schools work is poorer as well, which makes [Jamie/ Emma] feel even worse. [Jamie/ Emma] told [his/ her] best friend [he/ she] might as well be dead.

- **Control Vignette**

[Sophie/ John] is [child's age] and is in [child's grade]. For the last few weeks, [Sophie/ John] gets a bit moody and wants [her/ his] own way at school. Most of the time [she/ he] gets along with everyone at school. A few weeks ago, [Sophie/ John] stopped going to [her/ his] guitar lessons, [she/ he] says she doesn't like it anymore and wants to start a [dance class, swimming class] instead. [Sophie/ John] usually hangs out with [her/ his] friends after school, but some days [she/he] goes home to rest. Last week, [Sophie/ John] had an argument with [her/ his] best friend.

## Questionnaire

(1/4)

### Part 1

Do you think there is something the matter with "X"?

Yes

What do you think it is?

.....

No

Do you think X could have a mental health problem?

.....

Some people would suggest "X" might have depression

*(Some people would suggest X is going through normal development)*

Would you agree or disagree?

Yes

No. What do you think it might be? .....

What might have caused X's difficulties?

.....

*When no answer:*

*Family issues*

*His/her parents passed it on*

*School issues*

*His/her brain works like that*

*Peer issues*

*Stress*

*The way he was brought up*

Would you be worried for X?

Yes

How worried would you be?

A little worried

Quite worried

Very worried

No

Do you think X needs help from someone else?  
 Yes  
If no answer:  
What could help X? .....  
Who do you think that X would talk to? .....  
Would s/he talk to a grown up or a child? .....  
Can you think of anyone else? .....

If no answer:  
 Doctor/ Nurse  
 Parents  
 Teacher  
 Mental Health Professional  
.....

ChildLine or other helpline  
 Someone who has had the same experience  
 Website  
 Other:  
.....

What might happen if X doesn't get help? .....  
 No

Do you think that X can recover from depression?  
 Yes  
How long do you think it might take? .....  
 No

What was the main clue in the story that X is experiencing difficulties?  
.....

Note. Part one repeated after each vignette, total of four times.

(/3 4)

**Part 2:** The following questions ask how you would feel about spending time with X.

Vignette 1: D or C

1. Would you be happy to meet up with X on the weekend?  
Definitely not                  Probably not                  Probably yes                  Definitely yes
2. To work on a school project with X?  
Definitely not                  Probably not                  Probably yes                  Definitely yes
3. To invite x around to your house?  
Definitely not                  Probably not                  Probably yes                  Definitely yes
4. Would you be happy to be X's close friend?  
Definitely not                  Probably not                  Probably yes                  Definitely yes

Vignette 2: D or C

1. Would you be happy to meet up with X on the weekend?  
Definitely not                  Probably not                  Probably yes                  Definitely yes
2. To work on a school project with X?  
Definitely not                  Probably not                  Probably yes                  Definitely yes
3. To invite x around to your house?  
Definitely not                  Probably not                  Probably yes                  Definitely yes
4. Would you be happy to be X's close friend?  
Definitely not                  Probably not                  Probably yes                  Definitely yes

**Part 3**

1. Do you know someone who has had depression?

Yes

Who was this person? .....

No

I don't want to say/ don't know

2. Have you ever had depression?

Yes

No

I don't want to say/ I don't know

3. If you thought you had depression, would you tell someone?

Yes. Whom?

If no answer:

i. Parent

ii. Sibling

iii. Friend

iv. Teacher/ Guidance Teacher

v. School counsellor/ Psychologist

vi. Other: \_\_\_\_\_

No. Why would you not to tell someone?

.....

Card-sorting photos




# Debriefing Sheet


(1/2)

**Any questions?**


If you have any questions about the research, feel free to contact us:




Niki Georgakakou  
[niki.georgakakou@ed.ac.uk](mailto:niki.georgakakou@ed.ac.uk)



Jo Williams  
[Jo.Williams@ed.ac.uk](mailto:Jo.Williams@ed.ac.uk)  
+44 (0) 131 650 9962



Emily Taylor  
[emily.taylor@ed.ac.uk](mailto:emily.taylor@ed.ac.uk)  
+44 (0) 131 650 3882



Doorway 6,  
Medical  
School,  
Teviot Place,  
EH8 9AG

**Thank you!**  
for taking part in this study .

The **purpose** of this study was to examine what children think about difficult thoughts and feelings, like feeling sad, angry or worried.

We then met with each child and had a chat about what they think about difficult thoughts and feelings.

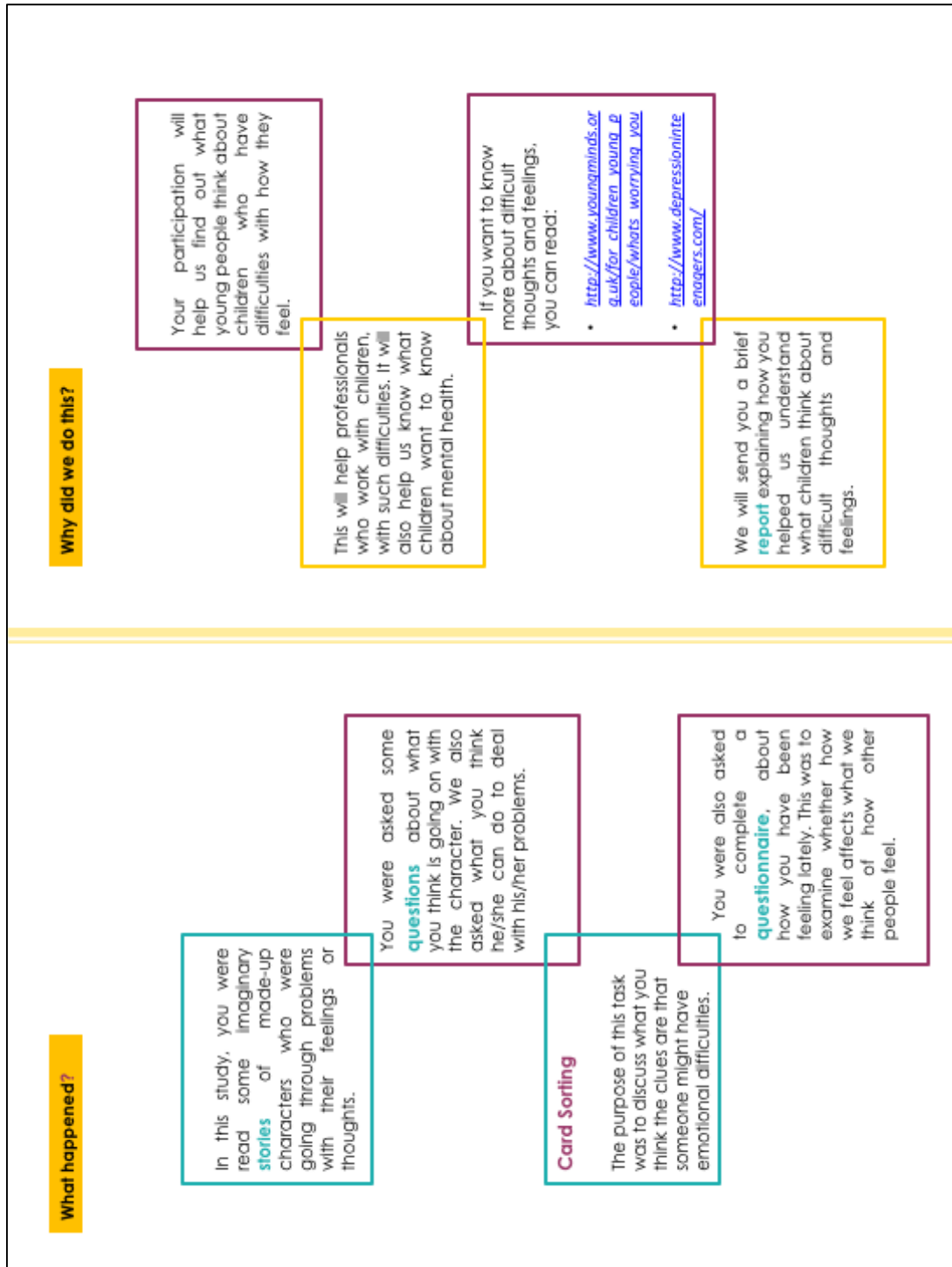
We invited children who are in P4 and P7 in schools in Edinburgh to take part.

If you feel **uncomfortable or concerned** about your thoughts and feelings, please contact:

**ChildLine**

- Telephone 0800 111 111
- Chat or email:  
<http://www.childline.org.uk/talk/Pages/Talk.aspx>

Or please talk to your teacher/ parents/ a trusted adult.





## Appendix D

**Table 34:** *Data Extraction*

First Author (Year)	Sample Size	Country	Design	Focus of intervention	Comparison	Duration	Follow-up	Measure	Outcomes		
									Knowledge	Attitudes	Help-seeking
Bentham (2013)	230	UK	Pre-post	Mental health, depression, anxiety, substance abuse, help-seeking and stigma	NC	50 minutes	Post	Questionnaire developed for the study: Knowledge of mental health/ illness and specific disorders, Help-seeking	↑	↑	N/A
Mcluckie (2014)	409 (pre-post) 265 (FU)	Canada	Pre-post	Stigma and MI, information on specific MI, experiences and impact of MI, help-seeking	NC	10-12 h	Post; 2 month FU	Questionnaire developed for the study measuring mental health knowledge	↑	↑	NA
Ojio (2015)	102	Japan	Pre-post	Depression, schizophrenia	NC	Two 50-minute workshops	Post; 3 month FU	Questionnaire developed for the study: Knowledge of mental illnesses and their treatments.	↑/ (-)	N/A	↑
Perry (2014)	380 (pre) 322 (post) 208 (FU)	Australia	Cluster RCT	Mental health, mood disorders, help-seeking/ providing, Stigma	TAU	5 sessions	Post; 6 month FU	Modified Depression Literacy Scale; Depression Stigma Scale; Inventory of Attitudes towards Seeking Mental Health Services; Depression Anxiety and Stress Scales	↑	↑	(-)


Strunk (2014)	1547	USA	CBA	Depression symptoms, suicide signs, CBT techniques	TAU	Four-day programme	Post	Questionnaire developed for the study: Knowledge and symptoms/ signs, Coping, Help-providing, Myths and Facts of MI	↑	↑	↑
Rahman* (1998)	100	Pakistan	RCT	Depression, epilepsy, psychosis, drug, smoking, LD	NI	Unknown	Post	Questionnaire developed for the study	↑	NA	NA
Swartz* (2010)	4299	USA	CBA	Depression literacy	NI	3 one-hour sessions	Post (at 6 weeks)	Adolescent Depression Knowledge Questionnaire	↑	NA	NA
Battaglia* (1990)	1662	USA	Quasi	Psychiatry, depression, drug and alcohol, helping strategies	NI	1 week	Post	Open ended questions on evaluation of session and help-seeking	NA	NA	↑
Conrad* (2009)	210	Germany	Quasi	Contact with MI: schizophrenia, depression, bipolar, help-seeking	NI	1 day	Post; 3 months FU	Self-Efficacy Scale, Help-seeking Questionnaire; Social Distance Scale	NA	↑	↑
Naylor* (2009)	416	UK**	Quasi	Stress, depression, suicide, self-harm, eating disorders, bullying, LD	NI	Six 50-minute sessions	Post (at 6 months)	Mental Health Questionnaire <i>SDQ</i>	↑/(-)	NA	NA

*Note.* Extraction form adapted from Wei et al. (2013). Data for studies with an asterisk extracted from Wei et al. (2013). RCT: Randomised Controlled Trial, CBA: , FU: follow up, LD: Learning Disability, MI: mental illness, ↑Increase, NA: Not applicable, (-) no significant change. MI: Mental Illness(es) NC: No Comparison. NI: No intervention \*Studies extracted from Wei et al. (2013) \*\* corrected from original data in Wei et al. (2013). Study is conducted in the UK.

# Appendix E: Intervention Material and Questionnaire

## Intervention Content


(1/ 6)



### Young People's Mental Health: Low Mood & Depression

Niki Georgakakou  
Department of Clinical Psychology  
University of Edinburgh




With the permission of  
Dr Geoff Richards,  
Head of Lothian Child &  
Adolescent Mental Health  
Services (CAMHS)



### What am I going to learn?


- What is depression?
  - Signs and Symptoms
  - Causes
- How is it treated?
  - How to help a friend
  - How to get help

How?

-  Videos
-  Group discussions
-  Individual tasks
-  Feedback

### Why feedback?

Feedback on your own learning- help shape this session and make it more meaningful for young people!




- STOP:** I don't like this
- CONTINUE:** this works
- START:** add something about...

### What is Depression?

Depression is a **diagnosable** and **curable** mental illness.

The term depression refers to a **group** of symptoms in **mood, thinking, behaviour and body changes**.



Approximately **1 in 30** young people (12 to 18 years) experience depression.



### Video 1: Jim


#### What signs can you spot that Jim has depression?

 Use the hot cross bun to write them down



 Discuss in groups of 3-4 and feedback to the class (10 mins)

### Symptoms of Depression

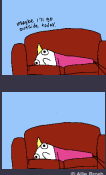


- What we feel
- What we think
- What our body feels
- What we do



**Behaviour** **Changes in behaviour and activity**


- Withdrawal from friends/ family
- Falling out with friends/ family
- Dropping out from hobbies/ clubs
- Being aggressive
- Self-harm



**Body** **Changes in the body**

- Low energy/ Tiredness
- Problems with concentration
- Restless/ Fidgety
- Pains in the body (e.g. headaches)
- Changes in appetite
- Sleep problems

"I have to work twice as hard to produce the same quality as I did before"



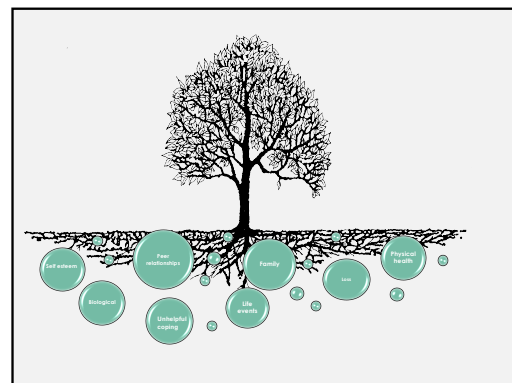
**What causes depression?**

There is **NO SINGLE CAUSE** for depression.

Having one cause does not mean you are going to have depression.

**Some common causes are:**

- Peer relationships: bullying, loneliness
- Family relationships: neglect, abuse
- Life events: e.g. loss
- Physical illness
- Low self-esteem
- Self-criticism
- Unhelpful coping

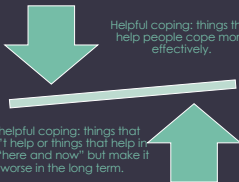



**Helpful & Unhelpful Coping**

**Helpful coping:** things that help people cope more effectively.

**Unhelpful coping:** things that don't help or things that help in the "here and now" but make it worse in the long term.

**Coping scale:** The aim of this task is to help you think about your own coping in difficult situations.



**Helpful & Unhelpful Coping**

**Helpful coping:**

- I get advice from someone about what I should do.
- I work at solving the problem to the best of my ability.
- I tell a friend or family member what happened.
- I make time for leisure activities.
- I keep fit and healthy.
- I share my feelings about the problem with another person.

**Unhelpful coping:**

- I don't let others know how I am feeling.
- I worry too much about it.
- I stay away from things that remind me of the problem.
- I shut myself off from the problem so that I can avoid it.
- I take it out on others because I feel sad, angry.
- I pretend the problem isn't very important to me.



### Treatment and duration

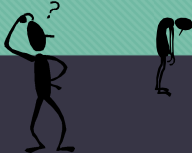
- Depression is a **treatable** illness
- Most people make a full recovery

**Timeline to recovery**

- The average recovery period for young people is 6 months
- Most young people are well after 18 months.



### What can you do to help a friend?



### Video 2: Mary

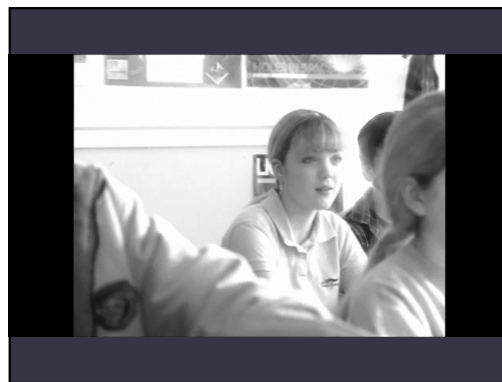
Untreated depression can become dangerous, if the person does not get the right help and support.

"I wish things were different"

"I wish it would go away"

If Mary was your friend, what could you do to prevent her from harming herself?

Discuss in small groups and feedback your ideas to the class.



### If your friend told you they were feeling suicidal

- Tell a responsible adult
  - Your teacher
  - Your Mum/ Dad or another person that cares for you
  - Your school nurse/doctor/ counsellor
  - Phone NHS Direct

**Do this even if your friend asks to keep it a secret**

### Helping a friend: Do's and don'ts.

- Talk to them
- Spend time with them
- Listen to them
- Suggest talking to an adult
- Talk to a teacher for them

**In Class:**

- Be understanding
- Be supportive

- Don't keep it a secret
- Don't pretend it's okay
- Don't make fun of them
- Don't bully them


### What should I say? The TEAR approach

**T**ell them that you have noticed a change in their behaviour and that you are worried

**E**ncourage them to speak to their guidance teacher or parent


**A**ct for them: ask if they need you to talk to someone for them, go with them, or help them work out what they will say

**R**ecommend some local resources such as: ChildLine, "Depression in Teenagers"



Be gentle, be there to listen to them but don't keep it a secret.


### What can you do if you are feeling down?



### Self help (helpful coping)

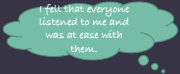
**Talk to:**

- Your friends
- Parents/ Carers or close relatives
- A friend's parents
- Your teachers
- Your GP
- Helplines



### Getting Professional Treatment

- You can ask your GP or school to refer you to the Child and Adolescent Mental Health Services (CAMHS).
- You will be asked some questions about:
  - How you have been feeling
  - Your life (school, family, friends, hobbies)
  - What help you would like to receive



### Talking Treatments (Psychological Therapy)



- Cognitive Behavioural Therapy (CBT): CBT is a short-term treatment and looks at how thoughts affect people's mood and their behaviour
- Interpersonal Therapy (IPT): IPT is a short-term treatment that looks at the effect of current difficulties with relationships and feelings on depression and vice versa.

Usually 4 to 14 sessions



### Antidepressant Medication

- Used in the treatment of severe depression
- Used if other approaches aren't working
- Works best in combination with psychological therapies.
- Fluoxetine (Prozac) most common antidepressant



### Who to talk to

if you are worried you might have depression:

- Talk to your parents/ people that care for you
- Visit your GP

Talk to your **teachers**:

- Guidance Teacher
- School Counsellor
- School Welfare Assistant/ Nurse

### Helplines




- ChildLine**  
0800 1111  
24 hours
- get connected**  
0808 808 4994  
11am – 11 pm every day
- SAMARITANS**  
116 123  
Everyday, 24 hours
- PAPYRUS**  
prevention of young suicide  
0800 068 41 41  
Mon-Fri: 10am-10pm,  
weekends: 2pm-10pm
- NHS 24**  
DIAL 111

### Finally...


- Depression is a real illness, it's not a sign of weakness or something to feel ashamed of
- Help is available
- Most people make a full recovery
- Don't suffer alone.



### Any questions?



### Thank you!



Contact us:

- Niki Georgakakou [niki.georgakakou@ed.ac.uk](mailto:niki.georgakakou@ed.ac.uk)
- Jo Williams [jo.williams@ed.ac.uk](mailto:jo.williams@ed.ac.uk)
- Emily Taylor [emily.taylor@ed.ac.uk](mailto:emily.taylor@ed.ac.uk)

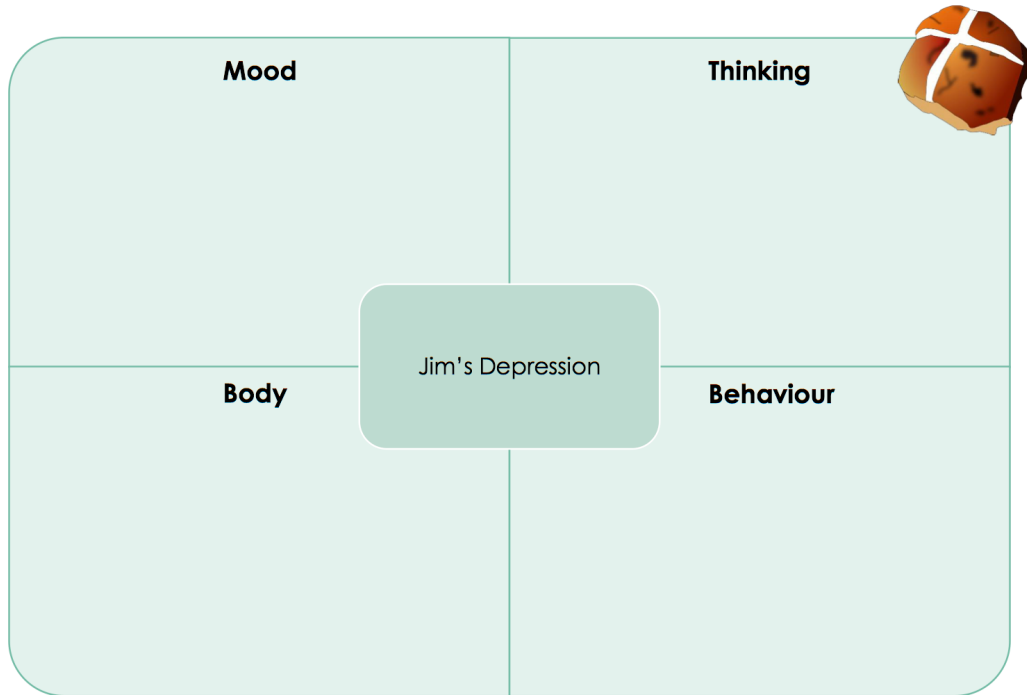
Images and quotes from: <http://hyperbolesandahalf.blogspot.co.uk/>  
Thanks to Dr Cathy Richards and the Young People's Unit for the permission to use and adapt material from "Depression: Information for Young People"



## Session Tasks

### Symptom Identification

While you watch the video, write down the symptoms that you notice in each of the four areas.



### Coping Scale

Below is a list of things young people do to cope with their problems. Tick the ones that apply to you and write each number in one of the boxes. You can write additional strategies that are not on the list. What do you tend to use more, helpful or unhelpful coping?

1. I get advice from someone about what I should do.
2. I don't let others know how I am feeling.
3. I worry too much about it.
4. I work at solving the problem to the best of my ability.
5. I tell a friend or family member what happened.
6. I make time for leisure activities.
7. I stay away from things that reminded me of the problem.
8. I keep fit and healthy.
9. I shut myself off from the problem so that I can avoid it.
10. I take it out on others because I feel sad, angry.
11. I share my feelings about the problem with another person.
12. I pretend the problem isn't very important to me.

My **helpful** coping strategies:

My **unhelpful** coping strategies:

Other:

Other:



Helpful: 1, 4, 5, 6, 8, 11  
Unhelpful: 2, 3, 7, 9, 10, 12



THE UNIVERSITY  
of EDINBURGH

### Young People's Mental Health: Low Mood & Depression A Pilot Evaluation Study

Mental health difficulties are common in adolescence. Research reports that **one in every 10** young people experience mental health difficulties. Providing information about mental health problems helps young people in need of support, by letting them know who and what can help.

The **aim** of the study is to examine whether young people's knowledge about depression changes after attending a psycho-education session. A second aim was to learn whether young people find the session helpful and whether they would recommend any changes.

You took part in a session learning about low mood and depression in young people. This happened during PSE class at school.

This session gave you information about low mood and depression and about sources of help, support services and treatment options for young people suffering from depression.

We asked you to fill in a **questionnaire** before and after the session. The questionnaire will help us measure how helpful the session is for young people your age. This was **anonymous** - you will not be identified in any reports.

Finally, we were interested in what you thought of the training. So, we asked you to give us **feedback** and let us know what worked and what could be changed.

What do  
YouTH think?



#### Want to learn more?

You can have a look at: <http://www.depressioninteenagers.com>, or

[http://www.youngminds.org.uk/for\\_children\\_young\\_people/whats\\_worrying\\_you](http://www.youngminds.org.uk/for_children_young_people/whats_worrying_you)

#### Any questions?

For more information about the research, contact:

Niki Georgakakou  
[niki.georgakakou@ed.ac.uk](mailto:niki.georgakakou@ed.ac.uk)

Jo Williams  
[Jo.Williams@ed.ac.uk](mailto:Jo.Williams@ed.ac.uk)  
+44 (0) 131 650 9962

Emily Taylor  
[emily.taylor@ed.ac.uk](mailto:emily.taylor@ed.ac.uk)  
+44 (0) 131 650 3892

If you feel **uncomfortable or concerned** about your thoughts and feelings, please contact:

**ChildLine (0800 11 11)**  
**Get Connected (0808 808 4994)**

Or **talk to** your teacher, parents or a trusted adult.

## Adolescent Concepts of Depression Questionnaire

(1/9)



# ADOLESCENTS' CONCEPTS OF DEPRESSION QUESTIONNAIRE



2

The questionnaire is about what you think about depression in young people. It has two parts: knowledge and help-seeking.

This is not a test, we are just interested in your opinion.

Remember, the questionnaire is anonymous, so we won't be able to identify you from your answers. However, we will ask for some identifiable information (e.g. part of your postcode) so that we can match your answers with your previous responses.

First, please give us some information about you.

Gender

Male

Female

Age: .....

Class: .....

Please write the last 2 letters of your postcode: \_ \_

*For example: for EH1 2AB, you would write: A B*

### Knowledge about Depression

Please list **three symptoms** of depression in young people:

- 1. ....
- 2. ....
- 3. ....

The following statements are about causes, consequences and treatment of depression. Please circle the answer that best describes your level of agreement with each statement.

<b>Depression is inherited from parents.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Having low self-esteem might be a cause of depression.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Young people can overcome depression in a couple of days.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Depression is a sign of weakness.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>It is important to seek treatment for depression in order to recover.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Depression is always treated with antidepressants.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree

(4/9)

<b>Depression is a normal part of adolescence.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>It takes years to recover from depression.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Depression is an illness.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Young people with depression can recover without treatment.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>A young person's grades might drop as a result of depression.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Young people have control over their depression.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Some young people might be prescribed with medication and also have talking therapy.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Depression is caused by diet.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Most young people recover from depression after a few months of treatment.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Young people with depression can get stuck in unhelpful/ negative thinking.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Young people can get depression for different reasons.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Young people don't usually recover from depression.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree

(5/ 9)

<b>Young people with depression spend a lot of time worrying about disputes they had with friends/ family.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Young people with depression find it difficult to manage relationships.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Most young people who are treated recover from depression.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Young people cannot do anything about their depression.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Talking therapy is an effective treatment for depression.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Young people with depression avoid going out.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>Young people with depression spend more time thinking about losses.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>You don't get depression if everything is going well in your life.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree
<b>The social environment (family, friends, school, community) might play a role in depression.</b>	Completely disagree	Partly disagree	Neither Agree Nor Disagree	Partly agree	Completely agree

### Help-seeking

In this section, you are asked your opinion about sources of help about emotional problems, including depression.

**People that can help.** For each of the scenarios below, rate how helpful each person would be. Rate each person listed on the left from 1 (not at all helpful) to 10 (extremely helpful).

**Scenario 1:**

A young person suffers from depression and has thoughts about harming themselves.

	Not at all helpful									Extremely helpful
Parent	1	2	3	4	5	6	7	8	9	10
Teacher	1	2	3	4	5	6	7	8	9	10
Friend	1	2	3	4	5	6	7	8	9	10
Mental health professional	1	2	3	4	5	6	7	8	9	10
Doctor	1	2	3	4	5	6	7	8	9	10

**Scenario 2:**

A young person is upset after breaking up with his girlfriend.

	Not at all helpful									Extremely helpful
Parent	1	2	3	4	5	6	7	8	9	10
Teacher	1	2	3	4	5	6	7	8	9	10
Friend	1	2	3	4	5	6	7	8	9	10
Mental health professional	1	2	3	4	5	6	7	8	9	10
Doctor	1	2	3	4	5	6	7	8	9	10

**Scenario 3:**

A friend confided in you that she has suicidal thoughts. She told you it's a secret that nobody knows about and she doesn't want you to tell anyone either.

What would you be most likely to do?

- Tell someone
- Keep it a secret
- I wouldn't know what to do

**Scenario 4:**

Imagine that you have a classmate that has depression. Rate the statements about whether you would be happy to spend time with him/her.

Rate each statement from "definitely not" to "definitely yes".

**I would be happy to...**

<b>...work on a school project with a classmate who has depression.</b>	Definitely not	Probably not	Probably yes	Definitely yes
<b>...be close friends with a classmate who has depression.</b>	Definitely not	Probably not	Probably yes	Definitely yes
<b>...meet up on the weekend with a classmate who has depression.</b>	Definitely not	Probably not	Probably yes	Definitely yes
<b>...invite a classmate with depression to my home.</b>	Definitely not	Probably not	Probably yes	Definitely yes

**Scenario 5:** Imagine that you have a friend that has depression.

How **confident** would you feel supporting your friend?

Circle one to rate from 1, not at all confident, to 10, completely confident.

Not at all confident

Completely confident

1      2      3      4      5      6      7      8      9      10

### Personal experiences

The following part is about your own experiences with depression and other mental health problems.

Have you ever had depression?

- Yes                       No                       I don't know

If no, has anyone suggested to you that you have depression?

- Yes                                       No
- 

Have you ever had any mental health problems apart from depression (e.g. anxiety, ADHD etc.)?

- Yes                       No                       I don't know

If yes, what kind of difficulty?

.....

If no, has anyone suggested to you that you might have some kind of mental health problem, apart from depression?

- Yes                                       No
- 

Do you know anyone who has had depression?

- Yes                       No                       I don't know

If yes, who is that person?

- Parent or family member
- Other adult
- Friend
- Other: .....

How often do you have contact with that person?

Never	1-2 times per year	At least every couple of months	At least once per month	At least once a week	Every day
1	2	3	4	5	6

Do you know anyone who has had any mental health problem apart from depression?

- Yes                                       No                                       I don't know

If yes, who is that person?

- Parent or family member  
 Other adult  
 Friend  
Other: .....

How often do you have contact that person?

Never	1-2 times per year	At least every couple of months	At least once per month	At least once a week	Every day
1	2	3	4	5	6

If you thought you had depression, what would you do?

Tell someone  
 Keep it a secret  
 I wouldn't know what to do

If you think you would talk to someone, who would you talk to?  
*Tick all that apply.*

Parent  
 Teacher/ Guidance teacher  
 Friend  
 Doctor/ Nurse  
 School doctor/ nurse  
 School counsellor  
 Sibling  
 Other family member: .....  
 Call a Helpline (e.g. ChildLine)  
 Other: .....

Among the people you ticked, who would you talk to **FIRST**?

.....

Thank you!

## Appendix F: Research Ethics Study 2

### Ethics Approval from the City of Edinburgh Council



Niki Georgakakou-Koutsonikou  
Clinical Psychology  
University of Edinburgh  
School of Health in Social Science  
Room 3.1, Doorway 6, Medical School  
Teviot Place, Edinburgh  
EH8 9AG

**Date** 3 February 2016  
**Your ref**  
**Our ref** SCS/JAI  
**Direct dial** 0131 469 3162

Dear Niki

I am writing in response to your application requesting permission to undertake research in schools in The City of Edinburgh.

Your request has been considered, and I am pleased to inform you that you have been given permission in principle to undertake your research. I must stress that it is the policy of this Authority to leave the final decision about participation in research projects of this kind to Head Teachers and their staff, so that approval in principle does not oblige any particular establishment to take part.

I request that you forward a copy of your completed findings to me when they become available. In this case an electronic summary of your thesis would be preferred. Your work may be of interest to a number of staff in the Children and Families Department.

I would like to thank you for contacting the Children and Families Department about your work, and wish you every success in the completion of your project.

Yours sincerely

A handwritten signature in cursive script that reads "J Innes".

JULIE INNES  
Administrative Officer

**Business Support, Schools and Community Services, Children and Families**  
Level 1.2, Waverley Court, 4 East Market Street, Edinburgh, EH8 8BG  
Tel 0131 469 3162 Fax 0131 529 6212 E-mail [julie.innes@edinburgh.gov.uk](mailto:julie.innes@edinburgh.gov.uk)



## Ethics Approval from the University of Edinburgh



SCHOOL of HEALTH IN SOCIAL SCIENCE  
CLINICAL AND HEALTH PSYCHOLOGY

The University of Edinburgh  
Medical School  
Doorway 6, Teviot Place  
Edinburgh EH8 9AG

Telephone 0131 651 3969  
Fax 0131 650 3891  
Email [submitting.ethics@ed.ac.uk](mailto:submitting.ethics@ed.ac.uk)

Niki Georgakakou Koutsonikou  
PhD Student  
Department of Clinical Psychology  
School of Health in Social Science  
University of Edinburgh

11 January 2016

Dear Niki,

### Application for Level 2/3 Approval

**Reference:** CLIN101

**Project Title:** Children and Young People's Conceptualisation of Depression

**Academic Supervisor:** Jo Williams / Emily Taylor

Thank you for submitting the above research project for review by the Department of Clinical and Health Psychology Ethics Research Panel. I can confirm that the submission has been independently reviewed and was approved on the 18<sup>th</sup> December 2015.

Should there be any change to the research protocol it is important that you alert us to this as this may necessitate further review.

Yours sincerely,

Kirsty Gardner  
Administrator  
Clinical Psychology

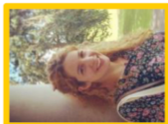
# Appendix G: Study 2 Consent Forms

## Child Consent Form

(1/3)


**Any questions?**

If you have any questions, feel free to contact us...




Niki Georgakakou  
[niki.georgakakou@ed.ac.uk](mailto:niki.georgakakou@ed.ac.uk)

Clinical Psychology,  
School of Health in Social Science  
3rd Floor, Doorway 6,  
Medical School, Teviot Place, EH8 9AG



Jo Williams  
[Jo.Williams@ed.ac.uk](mailto:Jo.Williams@ed.ac.uk)  
+44 (0) 131 650 9962




Emily Taylor  
[emily.taylor@ed.ac.uk](mailto:emily.taylor@ed.ac.uk)  
+44 (0) 131 650 3892

**Young People's Mental Health:  
Low Mood and Depression**  
*An evaluation study*

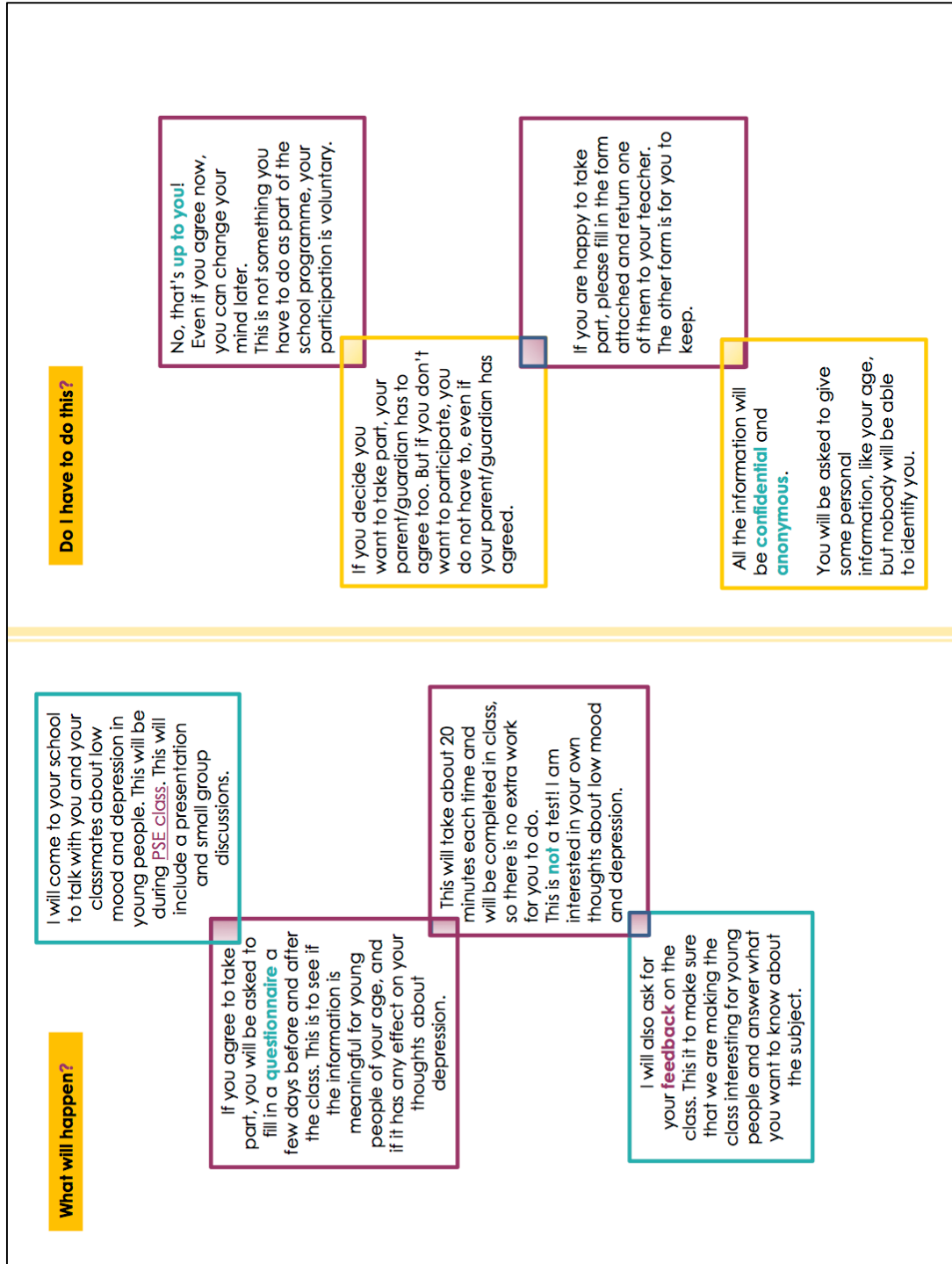
My name is **Niki** and I am a student at the University of Edinburgh. My research is about children and young people's thoughts about mental health, and especially low mood and depression.

**Why is this important?**  
One in every 10 young people have mental health problems but we don't know much about what young people think about such difficulties. The project will help us know what young people think and what they want to know.

**What is the research about?**  
This study aims to measure whether a class on low mood and depression is helpful for young people in S2 to S4. We are particularly interested in young people's feedback about the session.



THE UNIVERSITY of EDINBURGH





THE UNIVERSITY  
of EDINBURGH

**Young People's Mental Health  
Consent Form**

*Please read the information about the project first and then sign. Tick all the boxes that apply.*

*Please sign both forms, cut between them and give one to your teacher. The other one is for you to keep.*

- I have read the information about the study.....
- I understand that I will not be identified in any written reports about the study.....
- I understand that I can change my mind about taking part at any time.....

Please indicate whether you wish to take part or not by ticking one of the options in the box:

I am happy to participate voluntarily in this study .....	<input type="checkbox"/>
OR	
I DON'T want to take part in this study .....	<input type="checkbox"/>

**Name**..... **Surname**.....

**Class**..... **Date**.....

- I have read the information about the study.....
- I understand that I will not be identified in any written reports about the study.....
- I understand that I can change my mind about taking part at any time.....

Please indicate whether you wish to take part or not by ticking one of the options in the box:

I am happy to participate voluntarily in this study .....	<input type="checkbox"/>
OR	
I DON'T want to take part in this study.....	<input type="checkbox"/>

**Name**..... **Surname**.....

**Class**..... **Date**.....

# Parental Consent Form

(1/ 3)



THE UNIVERSITY of EDINBURGH

## "Young People's Mental Health: Low Mood and Depression" An evaluation study

### Parental Information Sheet

The **purpose** of the study is to evaluate a session delivered in school during PSE class, entitled "Young People's Mental Health: Low Mood and Depression". The session will be delivered by the research team during PSE class in Secondary 2 and Secondary 4.

#### Participation

Your child will be asked to provide his/ her written informed consent prior to the study. Children will participate in the research anonymously and any information will be confidential. It will be explained to your child that participation is voluntary and that they can withdraw at any stage. In the latter case, the participant's data will be excluded from the study.

#### Psycho-education session

The session is about low mood and depression in young people and is part of Personal and Social Education. The session aims to inform young people about low mood and depression and to provide information about help-seeking and strategies to help a friend in need. It includes discussions and group tasks on helpful coping strategies for emotional difficulties common in adolescence.

#### Data Collection:

Your child will be asked to complete an anonymous questionnaire in class a few days before and after the session. The questionnaire asks your child to agree or disagree with statements related to the content of the session, about young people's mental health. Your child will also be asked to complete the questionnaire again after one month in class, to examine whether the session has a long-lasting effect on young people's thoughts.

#### Consent forms

All consent forms will be securely stored within the University. Apart from the researchers, no one will have access to the consent forms. After the end of the project (5 years), consent forms will be destroyed.



## THE UNIVERSITY *of* EDINBURGH

### Use of Data

All the questionnaires will be securely stored in the University, only accessible to the researchers. The data will be transferred to a computer programme, stored on a password protected University computer. After the end of the project (5 years), all data will be destroyed. The results of the study will be anonymously presented in my PhD thesis and in published articles. I will send a report of research findings to inform your child about the results of the study.

**Ethical Approval:** This study has been approved by the University of Edinburgh and the City of Edinburgh Council.

██████████ has also given his consent. The study is also supervised by two lectures in the department of Clinical Psychology of the School of Health in Social Science. All answers will be confidential and the participants will remain anonymous.

Thank you for reading!

If you have any questions, please contact us:



Niki Georgakakou  
PhD Student in Clinical Psychology  
Niki.Georgakakou@ed.ac.uk



Dr Joanne Williams  
Senior Lecturer in Clinical  
Psychology  
Jo.Williams@ed.ac.uk  
+44 (0) 131 650 9962



Dr Emily Taylor  
Lecturer in Clinical Psychology  
emily.taylor@ed.ac.uk  
+44 (0) 131 650 3882



THE UNIVERSITY of EDINBURGH

**Parental Consent: Opt-out form**

*Please read the information sheet attached before signing this form.*

This is an opt-out form. If you DO NOT agree for your child to participate, please fill in the form below and give it to your child to return to school staff. If you agree for your child to participate, they do not have to do so if they do not wish to take part themselves.

*Please tick the boxes as appropriate and sign below. Please return this page to school staff through your child.*

I have read the information sheet and consent form about this project.....

I **DO NOT** give my permission for my child to participate in the study described above.....

Child's Name: .....

Class: .....

Parent/ Guardian's name:

.....

Signature:

Date

## Appendix H: Additional tables

**Table 35:** *Age Group Differences in Personal Sources of Help*

	13 year-olds		14 year-olds		15 year-olds		Total		$\chi^2(2)$	p
	N	%	N	%	N	%	N	%		
Parent	145	81.9%	76	72.4%	33	80.5%	254	78.6%	3.67	.160
Teacher	78	44.1%	24	22.9%	9	22.0%	111	34.4%	16.35	<.001
Friend	143	80.8%	76	72.4%	29	70.7%	248	76.8%	3.58	.167
Doctor	53	29.9%	19	18.1%	12	29.3%	84	26.0%	5.07	.079
School Doctor	18	10.2%	3	2.9%	2	4.9%	23	7.1%	5.69	.058
School Counsellor	38	21.5%	11	10.5%	5	12.2%	54	16.7%	6.41	.041
Sibling	87	49.2%	40	38.1%	15	36.6%	142	44%	4.31	.116
Family	65	36.7%	37	35.2%	5	12.2%	107	33.1%	9.35	.009
Helpline	32	9.9%	9	8.6%	5	12.2%	46	14.2%	5.04	.081

**Table 36:** *Gender Differences in Personal Sources of Help*

	Male		Female		Total		Group Difference	
	N	%	N	%	N	%	$\chi^2(1)$	p
Parent	135	83.9%	118	74.7%	253	79.3%	4.08	.043
Teacher	60	37.3%	50	31.6%	110	34.5%	1.12	.291
Friend	116	72.0%	128	81.0%	244	76.5%	3.56	.059
Doctor	45	28.0%	39	24.7%	84	26.3%	0.44	.508
School doctor/nurse	17	10.6%	6	3.8%	23	7.2%	5.45	.020
School counsellor	28	17.4%	26	16.5%	54	16.9%	0.05	.824
Sibling	70	43.5%	70	44.3%	140	43.9%	0.02	.882
Family	60	37.3%	46	29.1%	106	33.2%	2.39	.122
Helpline	25	15.5%	21	13.3%	46	14.4%	0.32	.570

**Table 37:** *Mixed ANOVA Results for Covariates between Intervention Groups*

	Time			Time x Age			Time x Gender			Time x SFMQ		
	F	df	p	F	df	p	F	df	p	F	df	p
<b>Comprehension</b>	0.01	1, 295	.905	0.01	1, 295	.915	0.04	1, 295	.846	1.37	1, 295	.242
<b>Attitudes</b>	2.41	1, 308	.122	0.23	1, 308	.636	1.19	1, 308	.276	2.27	1, 308	.133
<b>Treatment</b>	4.46	1, 308	.036	2.03	1, 308	.156	0.33	1, 308	.566	0.05	1, 308	.830
<b>Control</b>	1.18	1, 311	.277	0.33	1, 311	.568	0.94	1, 311	.333	0.10	1, 311	.748
<b>Total Scale</b>	3.99	1, 280	.047	1.38	1, 280	.241	0.89	1, 280	.345	1.88	1, 280	.172

**Table 38:** ANOVA Between Time and Group on Perceived Helpfulness of Sources of Help

		Pre-test Scores				Post-test Scores				ANOVA		
		Intervention		Control		Intervention		Control		df	F value	p value
		M	SD	M	SD	M	SD	M	SD			
1	Scenario Parents	7.80	2.01	7.69	2.21	7.67	2.21	7.39	2.34	1, 274	0.47	.491
	Teachers	6.14	2.12	5.27	2.30	5.58	2.27	4.81	2.28	1, 274	0.09	.764
	Friends	6.95	2.07	6.84	2.21	7.61	2.04	6.95	2.38	1, 274	5.03	.026
	MHP	8.30	2.00	7.80	2.37	7.94	2.31	7.34	2.48	1, 273	0.11	.742
	Doctors	7.40	2.33	6.86	2.50	6.98	2.62	5.90	2.81	1, 273	2.79	.096
2	Scenario Parents	6.55	2.63	6.66	2.62	6.63	2.86	6.45	2.74	1, 271	0.71	.399
	Teachers	3.27	2.33	3.27	2.17	3.11	2.39	3.07	2.19	1, 272	0.10	.753
	Friends	8.27	1.86	7.83	2.30	8.26	1.90	8.36	1.98	1, 271	3.57	.060
	MHP	4.48	2.90	3.91	2.69	4.15	2.88	3.61	2.51	1, 271	0.10	.981
	Doctors	3.45	2.62	2.93	2.49	3.15	2.50	2.92	2.30	1, 272	0.72	.398

**Table 39:** *McNemar Tests on Help-Seeking Intentions for Symptoms Groups*

	Tell someone	Keep it a Secret	Don't Know
Depressed participants (N=44)	.267	.109	1.00
Non-depressed participants (N=115)	.345	.774	.541