

CASE STUDY

Assessment of a 2 year old child with
developmental problems

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Psychology at the University of Edinburgh February 2000

I certify that this report is a fair and accurate account of the work undertaken



Introduction

WB was referred for psychometric testing in February 1997. He had recently been transferred from the main regional psychiatric hospital, where he been a patient in a secure ward, to a psychiatric ward of his local general hospital.

Reason for referral

WB was a 40 year old man who had been admitted to hospital under Section 25 of the Mental Health (Scotland) Act . He had been in hospital for one month prior to his referral to psychology. He had been exhibiting bizarre and disturbed behaviour for which various explanations were hypothesised, including manic depressive psychosis, HIV dementia and drug induced psychosis. Neuropsychological assessment was requested in order to aid differential diagnosis.

History of presenting problem

WB had been exhibiting a three to four month history of personality changes and increasingly bizarre behaviour which were of concern to his family. Over this period he had been refusing medical help. He had threatened various acts of violence including, at one point, plotting to kill his two children. He had also been locking himself in his bedroom and applying electric shocks to his dog. He seemed incapable of carrying out simple activities of daily living and had, for example, put milk in the toaster in order to boil it. He had urinated in a wash hand basin in front of visitors and had threatened to commit suicide by jumping off the Forth Road Bridge. He had also alluded to being interfered with by aliens who he alleged had been taking samples from his body.

Recently he had accused his 8 year old daughter of stabbing him, and had also accused his wife of plotting to stab him on the anniversary of his son's murder. When visited by social services shortly before his admission, he was found sitting naked having built himself a nest of duvets in the living room of his home. He has pushed all the furniture to the edges of the room which was in darkness with the exception of various spotlights trained on himself. He had smeared excrement all over the walls of the room.

Having accused his wife of planning to assault him, he threw milk over her and the kitchen. He then proceeded to dismantle the gas fire, threatened violence to his family who fled the house, and dressed his dog in clothes and stabbed it to death.

Background

Family history

WB was born in Glasgow in 1957. He had no known perinatal or developmental problems. When WB was aged 11 he and his family moved to Fife in order for his father to gain employment. WB recalls a childhood which was punctuated by frequent episodes of physical violence by his father.

Introduction

Name: DM

Gender: Male

Age: 2 years, 8 months

DM was referred to the Child Clinical Psychology service by the Senior Registrar of the paediatric clinic at the local general hospital that DM was attending. DM had failed 75% of his 2-year screening test, which had alerted his mother to potential developmental problems. At around the same time DM's health visitor had also noted gross developmental delay, in particular in speech and language acquisition. A visit to their General Practitioner resulted in a referral to the paediatric clinic where, as yet, inconclusive investigations were done. A formal psychological assessment was requested to help clarify the nature of his difficulties and to provide recommendations for future management if appropriate.

Presenting problems

DM's main problems presented as pronounced difficulties in his language development. Over the previous few months his parents had felt that his comprehension had increased, but his expressive language was limited to approximately 10 isolated words, for example, "dog", "ju" (=juice), "gran", "out". He was an unusually active boy who spent a lot of time rushing about, and who had considerable difficulty sitting still even for a few minutes. He showed developmentally inappropriate levels of inattention. He was, for example, unable to focus on what was being said to him, even for a few minutes. When attempting to build a tower with blocks he would shift his attention after less than 30 seconds and go onto to something else. He had difficulty concentrating for over 5 minutes and was frequently impulsive and difficult to control. He was fairly sociable and

seemed to be liked by other children, according to his parents. Although he was a happy child he had frequent temper tantrums, with screaming, feet stamping and loss of control. His parents felt that his behaviour was inhibiting his general functioning.

Background information

DM lived at home with his parents and older sister R (aged 4). R attended a local nursery school where she was to remain for an extra year as it was felt that she was not yet ready for school. R passed her screening tests at the appropriate times and was described by her parents as 'bright'. DM's father, Mr M, was a student, and Mrs M worked part-time as an enrolled nurse. DM was cared for by his maternal grandmother when both parents were at work. She reported finding him extremely difficult to manage. He would not settle to one piece of play for even a few minutes, and would pull all his toys out playing with each for only several seconds. She also found him difficult to control and was he prone to frequent tantrums, particularly when she was not paying attention to him or when he did not get his own way. . DM was visited regularly by a member of the pre-school home visiting service, and his parents were also seeking a nursery place for him.

DM was born 2 weeks late and was delivered normally. There were no complications with his birth and he did not require any special baby care provision. Mrs M reported no postpartum depression or subsequent periods of low mood. His early sleeping and feeding patterns were established appropriately. DM was, however, slow to crawl and walk. He did not walk unaided until approximately 15 months. Mrs M reported being concerned about his motor development until recently, but felt he had now made progress. Early medical problems included an ear infection and a chest infection. There were no reports of any major illness or head trauma. At DM's 8-month screening his mother made the observation that he did not appear to take notice when she was talking to him, and was worried that he had hearing problems. He had a hearing test at this time, however the test had to be done 3 times before a satisfactory result was obtained. The results indicated 100% hearing in one ear; 60% in the other.

DM failed 75% of his 2-year screening test, according to his mother. Although he appeared to follow the expected pattern of early language development, it was delayed. For example, he was using pre-linguistic vocalisations (e.g. babbling) by approximately 12 months. By 16 months he was making some vocalisations in response to his name and by 18 months pointing and sounding “uh” to communicate his needs. However, his language development was way behind what would be expected of a 2 year old child. It was at this point that Mrs M says she was forced to face previously repressed worries about his development. DM’s health visitor had also noted gross developmental delay in his speech and language acquisition. Mr M, conversely, had few concerns about his son’s progress.

DM’s conception was planned and seen by both parents as positive. They reported few problems during the pregnancy or birth, and their daughter R appeared to adapt well to the arrival of DM. Neither parent had any previous psychiatric history and admitted no past or current psychological problems. Mrs M’s father was now dead, and although Mr M still had both of his parents although they had divorced many years previously and he now had infrequent contact with his father. Both describe reasonable experiences of being parented. Mrs M was far more involved in the care of the children than her husband who tended to hold quite traditional views on what was acceptable for a man to do around the house. He socialised once or twice a week by going to the pub with friends. There was no suggestion, however, of any alcohol problem. His wife rarely went out socially nor had much time for leisure pursuits. At interview, Mrs M presented as worried and harassed, whereas Mr M tended to minimise the things his wife perceived as problematic. Their relationship with their children appeared close and loving, although they admitted to becoming frustrated with DM’s behaviour at times.

Assessment

Observation during testing

When initially seen in the clinic setting, DM presented as an uncontrollable child who showed no interest in play equipment. He was very distractible, therefore much had to be

made of incidental opportunities to enable him to demonstrate the full extent of his abilities on test materials. The quality of interaction with his mother was poor (e.g. little eye contact) and he displayed little interest in the examiners. He engaged frequently in screaming, stamping and throwing objects. Generally during the sessions he was found to be behaviourally very difficult for his age. He was difficult to strike up any rapport with and seemed to have no interest in or curiosity about the examiners. In order to assess DM's abilities in his optimum environment he was subsequently seen at home. His behaviour in familiar surroundings was entirely calmer. Although he continued to exhibit high levels of activity and impulsiveness, he engaged Mrs M in exploratory play. He seemed more attentive and was able to follow simple instructions. His eye contact, facial expressions and body posture were normal. He displayed no stereotypic body movements or self-injurious behaviour. It is possible that, with his levels of distractibility and inattention, DM found the strangeness and novelty of the clinic environment difficult to focus in and became overactive. Although there were toys available he seemed unable to calm down enough either to play with them or to interact constructively with his parents – perhaps due to the artificiality and stress of the situation.

Aims of assessment

It was considered important to formally assess DM's cognitive abilities and language development to ascertain whether he presented a specific language delay or general developmental retardation (Yule, 1987). Formal assessment results were interpreted in the context of informal observation of cognitive abilities including play, social maturity (e.g. self-help skills), problem solving and curiosity. To this end DM was seen on 6 occasions over a two and a half month period. He was seen twice in the clinic and 4 times at his home, in the company of his parents. His mother was the main source of information about DM's developmental history and current functioning, however, with Mrs M's permission, his health visitor was also contacted. Together, this provided further information about his emotional and social development, and his problem behaviour. Research indicates that disorders in these areas of development are frequently associated with language delay and have implications for management (Howlin and

Rutter, 1987). A description of each assessment measure used, together with results, is given below.

The Merrill-Palmer Scale of Mental Tests

This is a measure of general intelligence with emphasis on non-verbal tasks (Stusman, 1931). It contains items related to fine and gross motor coordination, spatial discrimination, form and object perception, manipulation of materials and memory for words or groups of words. It presents a variety of tasks which children find interesting and makes use of different materials (e.g. peg boards, scissors) concealed in interesting boxes which enhances cooperation and attention. It is useful for the assessment of the language delayed child as it requires a minimum of spoken instructions and needs little speech from the child. It's flexible scoring system allows for occasions when the child refuses rather than fails the item. It's utility is disadvantaged by the observation that it can give an inflated score when considered in relation to subsequent development (Graham, 1986). This test has proven reliability and validity, and norms exist for different chronological age bands.

DM, however, was reluctant/unable to cooperate with most aspects of the test. He made no attempt to provide verbal responses when required, or engage in the non-verbal tasks. It was impossible therefore to derive any meaningful result from this scale.

The Vineland Adaptive Behaviour Scale

This is a test of age appropriate functioning in the domains of communication, daily living skills and socialisation (Sparrow, Balla and Cicchetti, 1984). It is one of the most comprehensive scales in use to measure adaptive and maladaptive functioning. In addition to assessing the early development of children, it is also used in the field of learning disabilities. It is thought to be up to date, and is paired to related tests of intelligence. It has validated norms for a number of population samples. It is completed using information from the parent and by direct observation.

His adaptive behaviour in communication, socialisation and daily living skills was found to be low, indicating a mild deficit in all 3 domains. His chronological age was 2 years and 8 months yet he was communicating at an age equivalent of 1.4 years, his daily living skills were equivalent to a child of 1.7 years and his socialisation behaviour was at an age equivalent of 0.9 years. The assessment indicated his motor skills (fine and gross) to be at least equivalent to other children his age.

Video observation of play

From analysis of the video of DM's play, he was observed to engage mostly in exploratory play, but also demonstrated abilities in constructive, rough and tumble, relational and symbolic play. He seemed to particularly engage with physical or noise making play toys. At times when he became tearful he sought comfort with his mother. His verbal utterances during the times of assessment were minimal and confined to single words with sound substitutions. He was able to indicate preference when offered choice and demonstrated problem solving skills in the form of identifying his needs, forming and carrying out a plan. He, for example, fetched a chair, stood on it and was thus able to reach the handle of a door in order to leave the room. He also demonstrated an ability to communicate his needs non-verbally.

Formulation

On the basis of these test results which were interpreted along with information obtained by interview and by direct observation, it was concluded that DM had an impairment or delay in his language development. In addition, he presented significant delay in his social and emotional development. He also exhibited age inappropriate behaviour problems including overactivity, disruptive behaviour and temper tantrums. The impression formed was that the presentation of social and emotional difficulties was related to his speech and language deficits. There was no evidence found that DM had more global learning disabilities, although it was recognised that it is hard to draw firm conclusions at such an early age.

Discussion and Recommendations

Research suggests that early language delay is related not only to later language problems but also to problems in cognitive and educational attainment, and escalating difficulties in emotional and social development (Howlin and Rutter, 1987). To avoid such sequelae, an early broad-based intervention is essential. It was therefore proposed that a more detailed cognitive assessment should be undertaken to enable the psychometric comparison between specific cognitive skills. It would be possible to undertake such an assessment when DM's language had progressed to a level where verbal test materials could be used. It was suggested that appropriate authorities needed to be informed of DM's difficulties to enable appropriate nursery school provision and ensure monitoring of his progress. It was recommended that DM required a highly structured nursery environment with intensive input to optimise his development. If necessary, the use of a behavioural approach for developing his language could be employed (Howlin, 1987) which would require the cooperation of nursery staff and his parents, and necessitate the provision of training and support.

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Dictated: 21.04.94
Received: 22.04.94
Typed : 23.04.94

Dear Dr

Re: (C. J.) Dundee

Thank you for referring this little boy to Clinical Psychology for an assessment of his developmental problems.

Format of Assessment:

D was seen on six occasions between 20 January 1994 and 11 April 1994. During this time, Clinical Psychologist and myself undertook to get as valid a picture of his psychological development as possible. To this end we saw him twice at our clinic in DRI and four times at his home, in the company of his parents. Mrs M was the main source of information about D's developmental history and current functioning, however we also contacted, with Mrs M's permission, Health Visitor from Lochee Health Centre who was able to provide additional information.

Tests Administered:

As part of our assessment we administered the Merrill-Palmer Scale, the Vineland Adaptive Behaviour Scale, and the Pre-School Behaviour Checklist. We also made a detailed analysis of D's play using video observation.

Relevant Background Information:

Duncan lives at home with his parents and older sister R (4 years). R attends a local nursery school where she is to remain for an extra year as it is felt she is not yet ready for school. She passed her screening tests at the appropriate times and is described by her parents as "bright". Mr M is currently a student and Mrs M works part time as an enrolled nurse. D is cared for by his grandmother when both parents are at work and, I gather, finds him rather a handful. As you know, from the Pre-School Home Visiting Service is regularly visiting D. I understand that Mr and Mrs M are also seeking a nursery placement for him.

Dr

25 April 1994

Developmental History:

D was born two weeks late and was delivered normally. There were no complications and he did not require any special baby care provision. His early sleeping and feeding patterns were normal. D was, however, slow to crawl and walk. Mrs M. reported being concerned about his motor development until recently but feels he has now come on. Early medical problems included an ear infection and a chest infection. At D's 8 month screening Mrs N made the observation that he did not appear to take notice when she was talking to him and was worried he had hearing problems. He was tested at that time, however the test had to be done three times before a satisfactory reading was obtained. I gather that the results indicated 100% hearing in one ear; 60% in the other.

D failed 75% of his 2-year screening test according to his mother. At that point she told me that she was forced to face previously repressed worries about D's development. Mrs F Health Visitor, had also noted gross developmental delay, in particular in his speech and language acquisition. Mr M, conversely, has few concerns about D's progress.

Current Functioning:

D currently shows pronounced difficulties in his language development. In the past few months his parents feel his vocabulary has increased; his expressive language, however, is limited to about ten isolated words. He is a very active little boy who is always rushing around and has difficulty sitting still for more than five minutes. He shows developmentally inappropriate levels of inattention. He is fairly sociable and seems to be liked by other children according to his parents. He has difficulty concentrating for over five minutes and is frequently impulsive and difficult to control. Although he is generally a happy child he has frequent temper tantrums with screaming, feet stamping and loss of control. His parents feel that his behaviour is inhibiting to his functioning.

Observation in Testing:

D was seen for assessment initially in DRI. At that time he presented as an uncontrollable child who showed no interest in play equipment. He was very distractible, therefore much had to be made of incidental opportunities to enable him to demonstrate the full extent of his abilities on test materials. The quality of interaction with his mother was poor (eg, little eye contact) and he displayed little interest in the examiners. He engaged frequently in screaming, stamping and throwing objects. We found him to be behaviourally very difficult for his age.

In order to assess D's abilities in his optimal environment, however, we subsequently saw D at home. His behaviour in familiar surroundings was entirely calmer. Although he continued to

Dr

25 April 1994

exhibit high levels of activity and impulsiveness, he engaged Mrs M in exploratory and constructive play. He seemed more attentive and was able to follow simple instructions. His eye contact, facial expressions and body posture were normal. He displayed no stereotypic body movements or self-injurious behaviour.

Test Results:

The Merrill-Palmer Scale is a non-verbal test of intelligence which is useful in children with language problems. It presents a variety of tasks which children find interesting, requires a minimum of spoken instructions and requires little speech from the child. Dr , however, was reluctant to/unable to co-operate with many aspects of the tests. It was impossible, therefore, to derive any meaningful result from this scale.

The Vineland Adaptive Behaviour Scale is a test of age appropriate functioning in the domains of communication, daily living skills and socialization which is completed using information from the parent and by direct observation. This, together with the Pre-School Behaviour Checklist and the video assessment gave valuable information about Dr 's functioning. We found Dr 's adaptive behaviour in communication, socialization and daily living skills to be low, indicating a mild deficit in all three domains. He is currently communicating at an age equivalent of 1.4 years, his daily living skills are an equivalent to 1.7 years; and his socialization behaviour is at an age equivalent of 0.9 years. The assessment indicated his motor skills (fine and gross) to be at least equivalent to other children his age.

He engaged mostly in exploratory play, but also demonstrated abilities in constructive, rough and tumble, relational and symbolic play. He seemed to particularly engage in physical or noise making play toys. At times when he became tearful he sought comfort with his mother. His verbal utterances during the time of testing were minimal and confined to single words with sound substitutions. He was able to indicate choice when offered a preference and demonstrated problem solving skills in the form of identifying his need, forming and carrying out a plan. He, for example, fetched a chair, stood on it and reached the handle of a door in order to leave the room. He also demonstrated an ability to communicate his needs non-verbally.

Summary:

On the basis of these test results which were interpreted along with information obtained by interview and by direct observation, it can be concluded that D has an impairment or delay in language development. In addition, he presents significant delay in his social and emotional development. He also exhibits age inappropriate behaviour problems including overactivity, disruptive behaviour and temper tantrums.

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Dr A Kurien

25 April 1994

My impression is that Dr [redacted] problems are related to his speech and language deficits. Although it is hard to form firm conclusions at such an early age I found no evidence that [redacted] had more global learning disabilities.

As I said, I understand Dr [redacted] is to be assessed for a nursery place. I think he requires a highly structured nursery environment with intensive input to optimise his development. A more detailed cognitive assessment is recommended which will enable the psychometric comparison between specific cognitive skills. It will be possible to undertake such an assessment when Dr [redacted] language has progressed to a level where verbal test materials can be used.

The Pre-School Listing Service are offering Mrs M [redacted] support and advice at the moment. As the family are anticipating several other agencies becoming involved with Dr [redacted], and our assessment is complete, we will discontinue our contact with them. We would, however, be happy to resume our involvement at any time. Please get in touch if you feel we can help. If you feel the contents of this report would be useful to any other service with which Dr [redacted] has contact, please feel free to share it as you see appropriate.

Yours sincerely

Aileen S Thomson
Trainee Clinical Psychologist

Lesley Howells
Clinical Psychologist
Child Health Team

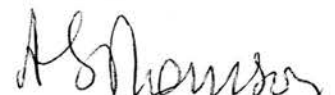
SMALL SCALE RESEARCH PROJECT

**Clinical Psychology Referrals :
A Ten Year Review**

Aileen S Thomson

Submitted in partial fulfillment of the degree of Doctor of
Clinical Psychology at the University of Edinburgh
February 2000

I certify that this is a fair and accurate account of the work undertaken



Abstract

This review describes all referrals to an adult mental health outpatient service, within a Health Board Area, from 1983 to 1993. A brief overview of the development of clinical psychology, with specific reference to work in primary care settings is given. The paper then goes on to outline trends in referral source to this department over the 11-year period and describe changes in types of problem referred. Implications for the future development of psychological services in General Practice are discussed.

Introduction

Initial suggestions that clinical psychologists might have a role in primary health care came from Broadhurst (1972) and Kincey (1974). These were followed by descriptive reports by McAllister and Philip (1975) and Johnston (1978) detailing the type of work which could be undertaken. Before the British Psychological Society (BPS) (1982) report on collaboration between General Practitioners (GPs) and psychologists was produced, a distinctive contribution by psychologists to primary health care was only slowly evolving (McPherson, 1981). Those early studies able to demonstrate success, however, found encouragement from both GPs and psychologists alike. Bhagat, Lewis and Shillitoe (1979), for example, deemed their "experiment" in primary health care to be a success, demonstrated by a doubling in the number of referrals from GPs, a significant decrease in prescribing of psychotropic medications and appreciation expressed by patients at having been referred.

At this time, few clinical psychology posts specifically allocated to primary health care had been created. Then, many patients would have been referred initially to psychiatrists who would recognise their need for psychological, rather than psychiatric, treatments and either undertake such therapies themselves, or refer them to a clinical psychologist. As the efficacy of psychological treatments became more widely demonstrated and recognised and with the heightening profile of clinical psychology in primary care settings, it became seen as being to the patient's for him/her to be referred to the appropriate specialist as soon as possible.

With the increased recognition of the need for effective management of psychological problems at primary care level came more studies describing and evaluating services offered. Among these and the largest at the time, was Espie and White's (1986) review of the first 4 years of a clinical psychology service delivered to primary health care teams within their Health Board District. They found that, from 1981 to 1984, GP referrals went from 36% to 85% of the total; psychiatric referral rates decreased over the same period.

The present study presents descriptive statistical information on 11 years of referrals - a total of 4564 referrals analysed in terms of source and type of problems referred. The results are discussed with reference to service developments.

Method

The study was carried out in the Dundee unit of Tayside Area Clinical Psychology Department. The department has expanded over the past 11 years and currently comprises 38 clinical psychologists, who provide a range of general and specialist services throughout the Health Board Area. This study, however, confines itself to referrals made to the adult mental health (outpatient) service for the City of Dundee, which has an adult (18 years and older) population of approximately 130 000. Staffing levels have varied over the 11 year period, but the service has consistently employed at least 4 clinical psychologists (2.5 whole time equivalents). Although the department is based in the grounds of a psychiatric hospital, it provides services mainly in various health centres and GP surgeries throughout the city, and in the outpatient department of a large teaching hospital. Domiciliary visits are also made when necessary. Referrals are accepted from GPs, psychiatrists, other medical specialists and health care workers.

A descriptive analysis of patients referred to the service was conducted for the 11 year period 1983 -1993. Statistics were collated and categorised in terms of referral source and type of problem. Categorisation was made by a clinical psychologist on the basis of information given in the referral letter and not on diagnosis on presentation to the psychologist. Problem types were conceptualised within the following categories :

Depression

Anxiety disorders - total

*(comprising : generalised anxiety disorder
post-traumatic stress disorder
obsessive-compulsive disorder
specific phobias
agoraphobia
social phobia
panic disorder)*

Eating disorders

Cognitive problems

Sexual problems

Sleep disorders

Somatic problems

Impulse disorders

Personality disorders

Grief and bereavement problems

Substance abuse

Relationship difficulties

Other

No estimate of reliability was made regarding accuracy of problem categorisation. In the case of multiple problems mentioned, categorisation was made by taking the primary complaint (or if this was unclear, the most severe).

Results

The total referrals received from all sources during the period 1983 - 1993 rose by nearly 400% (Figure 1). Table 1 summarises the referrals received from both GPs and psychiatrists over the 11 year period.

Table 1

Referrals Received By Dundee Clinical Psychology Adult Mental Health Service 1983 - 1993

Year	Total referred	GP referrals (%)		Psychiatry referrals (%)		Other referrals (%)	
1983	184	61	33	121	66	2	1
1984	268	105	39	152	57	11	4
1985	286	115	40	152	53	19	7
1986	357	168	47	155	43	34	10
1987	326	184	56	116	36	26	8
1988	323	244	76	59	18	20	6
1989	420	286	68	103	25	31	7
1990	419	295	71	102	24	22	5
1991	623	426	68	127	21	70	11
1992	633	475	75	94	15	64	10
1993	725	562	78	88	12	75	10

GPs became established as the main users of the service in 1986, as can be seen in Figure 2. Their referral rate increased by 921%, accounting for 33% of referrals in 1983, to accounting, in 1993, for 78% of all referrals. This increase in GP referrals was accompanied by an overall decrease in psychiatric referral rates. These referrals fell from accounting for 66% of referrals in 1983, to 12% in 1993. The reduction in patients referred by psychiatrists probably reflects the general change in policy adopted by many GPs of referring patients directly rather than through the psychiatric clinics. Over the same period, referrals received from other sources rose from 1% to 10% of the total. This would seem to indicate that other professionals became more aware of the clinical psychology service and the opportunity to refer directly.

Table 2
Proportion Of Total Psychiatry Referrals For Depression And Anxiety

Year	Depression (%)	Anxiety (%)
1983	7.4	76.0
1984	5.9	77.0
1985	5.6	70.4
1986	11.0	65.2
1987	6.9	70.7
1988	10.2	54.2
1989	22.3	42.7
1990	16.7	50.0
1991	19.7	51.2
1992	24.5	41.5
1993	18.2	46.6

Referrals received from psychiatrists for depression and all anxiety disorders, expressed as a percentage of total psychiatry referrals for that year, are shown in Table 2. It is evident that referrals for depression rose by 244%, from accounting for 7.4% in 1983, to 18.2% of the total referred by psychiatrists in 1993. Referrals for anxiety disorders saw a comparative drop of 38.7%.

As can be seen in Table 3, referrals for depression by GPs shows an increase of 461%, and anxiety disorders a drop of 33.3%.

Table 3
Proportion Of Total GP Referrals For Depression And Anxiety

Year	Depression (%)	Anxiety (%)
1983	3.3	78.7
1984	2.9	76.2
1985	6.1	70.4
1986	8.3	66.1
1987	9.2	62.5
1988	3.7	65.6
1989	2.8	74.1
1990	4.4	61.7
1991	9.6	62.9
1992	9.3	64.0
1993	15.1	52.5

The period has also seen an increase in the diversity of types of problem referred (by GPs especially), with a significant increase in eating disorders, somatic problems, and sexual problems, for example.

Discussion

The results of this comprehensive 11 year review of all referrals made to one particular service of a large area clinical psychology department, show the rapid expansion in the 1980s in direct referrals to the service by GPs. The rise from 33% to 78% of all referrals is broadly similar to the increase of 36% to 85% in the 4- year period studied by Espie and White (1986). This study examines only referrals made to the general adult mental health service, and makes no mention of referrals made to the many specialist services provided by the department (e.g. neuropsychology, medical psychology, elderly services). Even within the general adult service, however, it is evident that the diversity of referrals is now wider than ever before, perhaps indicating the confidence in clinical psychologists to treat a variety of disorders. It is also interesting to note the increased proportion of referrals, both from GPs and psychiatrists, for depression. With a wider repertoire of skills, such as cognitive therapy, shown to be effective both in treating and reducing the relapse rates of disorders such as depression, psychologists now appear to be viewed as a viable option for direct referral.

This study, however, is necessarily restricted in the conclusions it can draw due to practical limitations of the methodology. Classification of problem type was based solely on information contained in the referral letter, which was sometimes inadequate because of the vagueness of terms and information given. It is also limited in being able only to discuss the types of problems seen as suitable for referral, which may be different from the problem emerging when the patient presents. There is also no estimate made of the reliability of problem coding.

In reviewing referrals to this service, there appears to be certain cause for encouragement. Analysis of referral patterns (unpublished data) shows that the majority of GPs in Tayside now make direct referrals of a wide range of problems and the service is also increasingly used by other medical specialisms. It will be interesting to repeat this exercise in a few years time, to study the further development and utilisation of the service with the reforms in the Health Service. It will also be interesting to note the impact of fund-holding on GP referral rates and the influence of developments to the service, such as sectorisation, i.e. allocating named psychologists for particular practices. Early indications appear to be favourable for clinical psychology in this area, and continue the trends of the past 11 years.

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SMALL SCALE RESEARCH PROJECT

**The evaluation of a staffed house for
people with learning disabilities**

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Submitted in partial fulfillment of the degree of Doctor of
Clinical Psychology at the University of Edinburgh
February 2000

I certify that this is a fair and accurate account of the work undertaken

A S Thomson

EXECUTIVE SUMMARY
EVALUATION OF DUNBLANE STAFFED HOUSE

The Department of Clinical Psychology of the Royal Scottish National Hospital and Community NHS Trust undertook an evaluation of a six-person staffed house. The people living there were all previously residents in RSNH, and were seen over a period of 9 weeks, involving 24 hours of psychologist time.

The aims of the evaluation were to determine the extent to which people living in the house were satisfied with their quality of life, and to evaluate the changes in skills brought about by the increased opportunities afforded to the residents.

The evaluation involved trained clinical psychologists administering standardised and experimental measures to the residents, including the Quality of Life Index, the Lifestyle Satisfaction Scale, the Vineland Adaptive Behavior Scale and measures of stress, anxiety, self-esteem and loneliness. In addition the house environment was assessed using the "39 Steps" Checklist, which showed it to be a high quality environment, as close as possible to that of a typical house.

The results showed that all the residents has experienced increased opportunities for skill development, resulting in individual skill gain; increased community contact in daily life and leisure time; and increased quality of life as measured by the scales. In addition, there was an overall high level of satisfaction amongst the residents with their lifestyle. When compared to the results of using the same scales on residents in similar houses elsewhere, the Dunblane residents showed a higher level of quality of life and lifestyle satisfaction.

Introduction

The past few years have seen an increasing commitment from health care providers to providing alternative accommodation for people with learning disabilities in line with the implementation of community care. A number of publications from the Kings Fund Centre have been influential in the planning and development of these services, in particular "An Ordinary Life" (Kings Fund Centre, 1980). This paper recognised the need for people with learning disabilities to live in ordinary housing in the community with appropriate support based on principles of normalisation, and to enjoy a good quality of life. This is also evident within the new AAMR definition of 'Mental Retardation' in which people with learning disabilities are viewed in terms of strengths and weaknesses in relation to their environment. There is an emphasis on quality of life issues such as stress, lifestyle satisfaction and happiness (AAMR, 1992).

Frequently, when individuals are placed in the community they are given services thought to be helpful, and assessed according to perceived service need within financial constraints. The pursuit of happiness in people with learning disabilities has been largely neglected; for example there have been no legal decisions guaranteeing people with learning disabilities rights regarding their quality of life (Heale and Harner, 1992). In fact, clients' satisfaction with their lives has been largely overlooked and rarely assessed in human settings (Emerson, 1985; Schalock, 1990). This is important in order to identify life conditions that can enhance the individual's adaptation to the community (Heal and Harner, 1992), and also to guide and evaluate individual services and social policy issues. Community placements should be evaluated therefore not only on terms of objective standards, but also in terms of subjective satisfaction measures. Recently researchers have started to recognise the value of including the views of people with learning disabilities in areas of research which directly touch their lives (eg. Faire, 1985).

Increasingly the view is being taken that a high quality of life is associated with a personal viewpoint on a number of nonrestrictive environment alternatives, rather than the assumption that quality of life can only be best served in the least restrictive setting per se. There are several reasons why quality of life has become an important concept in the field of learning disabilities (Goode, 1990):

- quality of life has become an important concept in society as a whole
- quality of life has become an important issue with regard to community services for people with disabilities
- client's opinions are being seen as more credible as they have become more integrated into mainstream activities
- funding bodies have requested evaluation data including consumer input
- an increased dissatisfaction with current measures for evaluating and monitoring services.

Attempts to find objective indicators of subjective well-being have been largely unsuccessful. Unemployment has a large effect on measures of well-being. Job satisfaction, marriage, family, social contact, and richness of life events are positively related to subjective well-being; education, intelligence, and objective health indicators are only minimally related to subjective well-being. High self-esteem is one of the strongest predictors of subjective well-being. Subjective well-being is strongly correlated with a series of satisfaction ratings from all aspects of one's life (Andrews and Withey, 1976; Diener, 1984). The underlying assumption of the approach is that the greater one's satisfaction with his/her resources, the greater will be the feelings of life satisfaction, well-being, personal competence, and control over one's life.

Given the abundance of research documenting the effects of community living as assessed by objective and environmental based methods, and the relative dearth of information about how individuals with learning disabilities perceive their quality of life, this piece of operational research deals with subjective satisfaction issues in a particular project.

Community House

Following from the success of the first staffed houses set up by what was the Mental Handicap Services Unit of Forth Valley Health Board (Dickens, 1988), another was opened in May 1992 in Dunblane. The house is a modern semi-detached building comprising a lounge, kitchen, dining area, downstairs toilet, 3 double bedrooms, 1 single bedroom, a bathroom, and an upstairs toilet. There is a large landscaped garden to the rear. The house is home to 6 people, who had previously been residents of Royal Scottish National Hospital (RSNH). All had come directly from habilitation units there : five from 'The Bungalows', small ordinary houses in the grounds of RSNH with staff supervision; and one from a large house (Westerpark) also situated in the hospital grounds with a higher level of support and supervision. The house has 5 staff members who provide 24 hour care. The residents range in age from 27 to 62. There are no day placements available in the area, although 2 residents attend a 'Retirement Club' twice a week.

Aims of this Project

- 1) To determine whether people who live in this house are satisfied with their quality of life.
- 2) To evaluate the change in adaptive behaviour by the detailed comparison of skills possessed while in hospital with those since moving to the community in a single case.

Method of Evaluation

The evaluation was carried out over a period of 9 weeks (6 July - 6 September) and involved approximately 6 hours of interviews with staff and 18 of interviews with residents. The measures used in this process are described below. Additional data, where presented, were obtained from hospital service files; this data relates to the skills of people at the time they lived in the hospital.

The extent to which the environment of the house afforded a 'homely' atmosphere was assessed using the **39 Steps Checklist** (Gunzburg, 1973). This is a simple checklist devised to measure the presence or absence of 39 features that distinguish normalised living environments from institutionalised patterns and routines of life.

All interviews took place in the person's home as this appears to be the favoured setting (Faire, 1985) and has been found to be conducive to a relaxed conversational style of interviewing (Atkinson, 1988). Initially, time was spent getting to know and establishing rapport with the residents. When it appeared that the residents were comfortable with the researcher, each had an initial interview in which a simple explanation of the research aims was given. It was particularly stressed that responding would in no way change where they lived.

The comprehension skills of the residents were determined first to establish level of understanding, and whether alternative format questions should be included. This was done using the **British Picture Vocabulary Scale (BPVS)** (Dunn et al, 1982) - short form, administered in the standard way.

To assess the extent of skills possessed and change in adaptive functioning, the **Vineland Adaptive Behaviour Scales** (Sparrow, Balla and Cicchetti, 1984) were used. The interview edition, survey form was completed using ratings provided by care staff well acquainted with residents' abilities. This measure consists of a number of items grouped into the following domains and subdomains :

<u>DOMAIN</u>	<u>SUBDOMAINS</u>
Communication	- receptive expressive written
Daily Living Skills	- personal domestic community
Socialization	- interpersonal relationships play and leisure time coping skills
Maladaptive Behaviour	

The remaining measures, designed to assess various quality of life aspects, were based on interviews with the residents themselves. Order of administration of the measures was varied between subjects to control for order effects.

The 28 item **Quality of Life Index** (Schalock et al, 1989) was used to assess residents reported lifestyle quality on number of largely objective items. The measure consists of the following scales :

- Overall quality of life index,
- Subscales of
 - environmental control
 - community involvement
 - social relations.

Each question is answered on a 3 point scale.

The **Lifestyle Satisfaction Scale** (Heale and Harner, 1993) is an instrument designed to measure satisfaction with the different lifestyle components contributing to one's quality of life. In addition to an overall quality of life score, the lifestyle satisfaction scale assesses one's satisfaction across 3 domains:

- home and community (COMSAT)
- friends, free time, recreation, and leisure (RECSAT)
- employment (JOBSAT)

The lifestyle satisfaction scale is oriented to the subject's present life circumstance and time, requiring minimal requests for comparisons with the past, future, or to different places. It was administered in an interview format with paraphrasing of questions employed as necessary to improve understanding. The scoring of the lifestyle satisfaction scale requires the examiner to rate each answer according to strength of response (on a 5 point scale ranging from overwhelmingly favourable to vigorous, unqualified negative reply). The tendency for people with learning disabilities to acquiesce is dealt with by the incorporation of an acquiescence scale which aids in evaluating the degree to which the tendency to say "Yes" to any question may have distorted the results.

Again, based on subjective, cognitive measures of quality of life, four indices have been combined into a total quality of life measure called **SLAPS** (Simon, 1992). These indices are self report measures of :

- satisfaction with various aspects of living situation;
- loneliness (adapted from a measure developed by Chadsey-Rusch);
- positive or negative affect inferred from bi-polar adjectives;
- and perceived stress.

Several modifications to the scales were made as agreed by the present authors and Simon (personal communication). The scales were administered in a structured interview format.

Results of the Evaluation

Skill Level and Acquisition

The mean age of the residents was found to be 43.8 years; the sex ratio was 4:2 males to females. The mean raw score on the *short form* of the BPVS was 9.7, which represents an average mental age level of between 4 and 4.5 years.

Two tables are presented that summarise the results from the Vineland Adaptive Behaviour Scales, described above. Group average scores are presented for the skills possessed after being in the community for a year; no data are available for the group as a whole for the same measure administered whilst in the hospital.

TABLE 1 Mean Scores On The Vineland After 1 Year In The Community

<u>DOMAIN/ SUBDOMAIN</u>	<u>MEAN SCORE</u>
Communication total	73.2
- receptive	24.2
- expressive	44.5
- written	4.5
Daily Living Skills total	125.2
- personal	70.3
- domestic	28.8
- community	26.0
Socialization total	99.0
- interpersonal	42.8
- play + leisure	30.0
- coping	26.2
Maladaptive Behaviour	2.3

It is unfortunate that the measure was not administered to the group while in the hospital, however these data can be used as a baseline for future evaluations and comparisons. What can be said from the available information is that these residents on the whole are less able than a group moved in to a group home in Stirling from RSNH (see Dickens, 1989). On every measure of adaptive behaviour, the Dunblane group score significantly lower than the comparable data for the Stirling group, except on the domains of written communication and socialization/coping.

Table 2 presents the analysis of the Vineland subdomains in a single case, showing scores whilst living in RSNH, and after 1 year in the community.

TABLE 2 Scores On The Vineland In A Single Case Over Time

<u>DOMAIN/ SUBDOMAIN</u>	<u>RSNH</u>	<u>COMMUNITY</u>
Communication total	53	73 *
- receptive	24	23
- expressive	29	43 *
- written	0	7 *
Daily Living Skills total	111	106
- personal	65	61
- domestic	26	25
- community	20	20
Socialization total	66	86 *
- interpersonal	30	36 *
- play + leisure	17	26 *
- coping	19	24 *

* significant at $p < .05$ level

The case for which the data in Table 2 applies is the least able resident of the 6, in terms of skills possessed. She scores substantially lower on both the daily living skills domain and the socialization domain than the group as a whole. It may therefore be reasonable to speculate that any skill acquisition demonstrated in this single case would be reflected to a greater or lesser extent in the other 5 residents. Simple T-tests of statistical significance have been performed to show the strength of the changes recorded. Those subdomains that are starred show significant change from pre-discharge level. The direction of all significant changes has been in that of skill acquisition. Both the domains of communication and socialization show large increases in adaptive skills; with only daily living skills failing to show much change.

Figures 1, 2 and 3 depict these results graphically.

Figure 1

Communication Skills

Vineland Adaptive Behaviour Scale

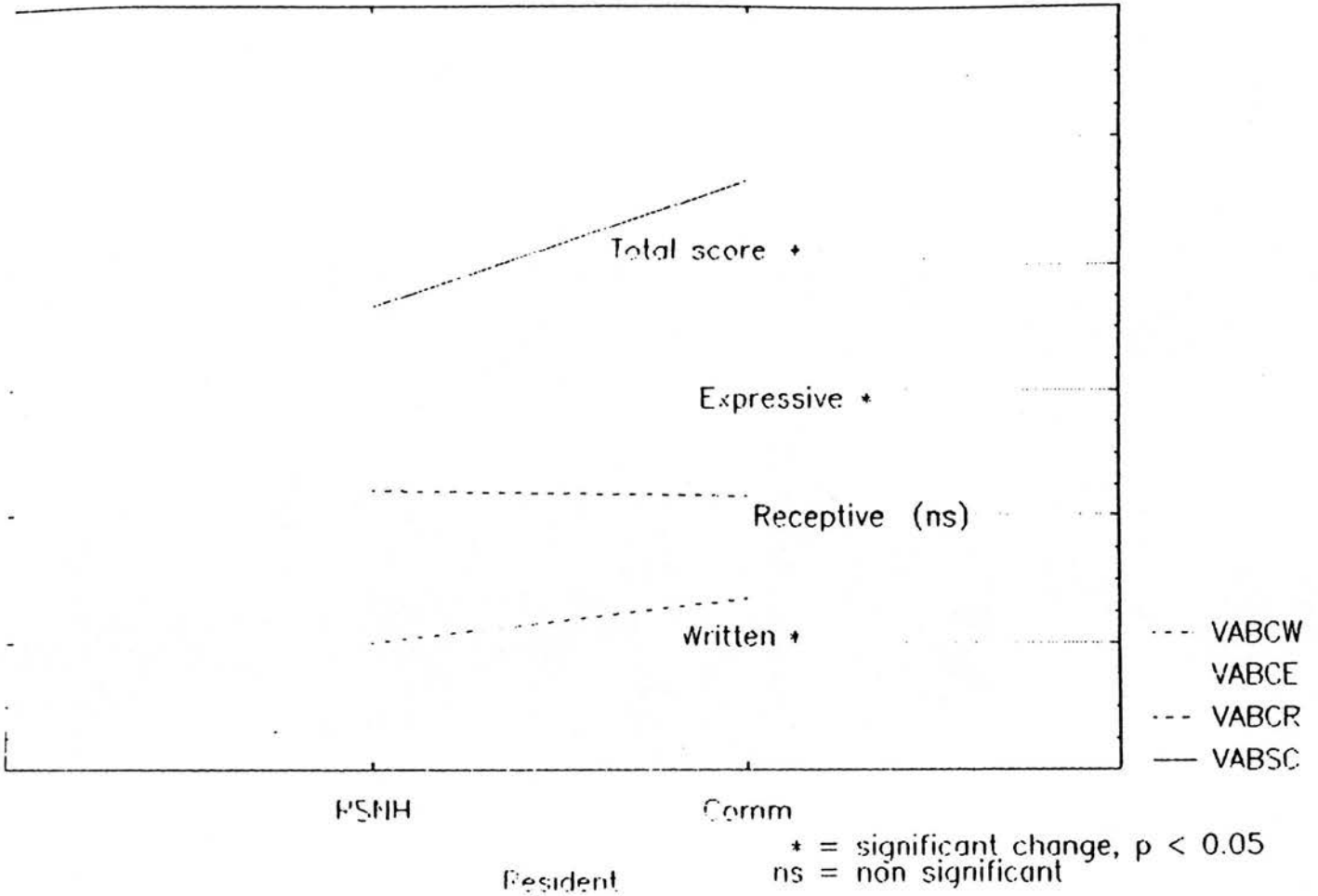


Figure 2

Daily Living Skills

Vineland Adaptive Behaviour Scale

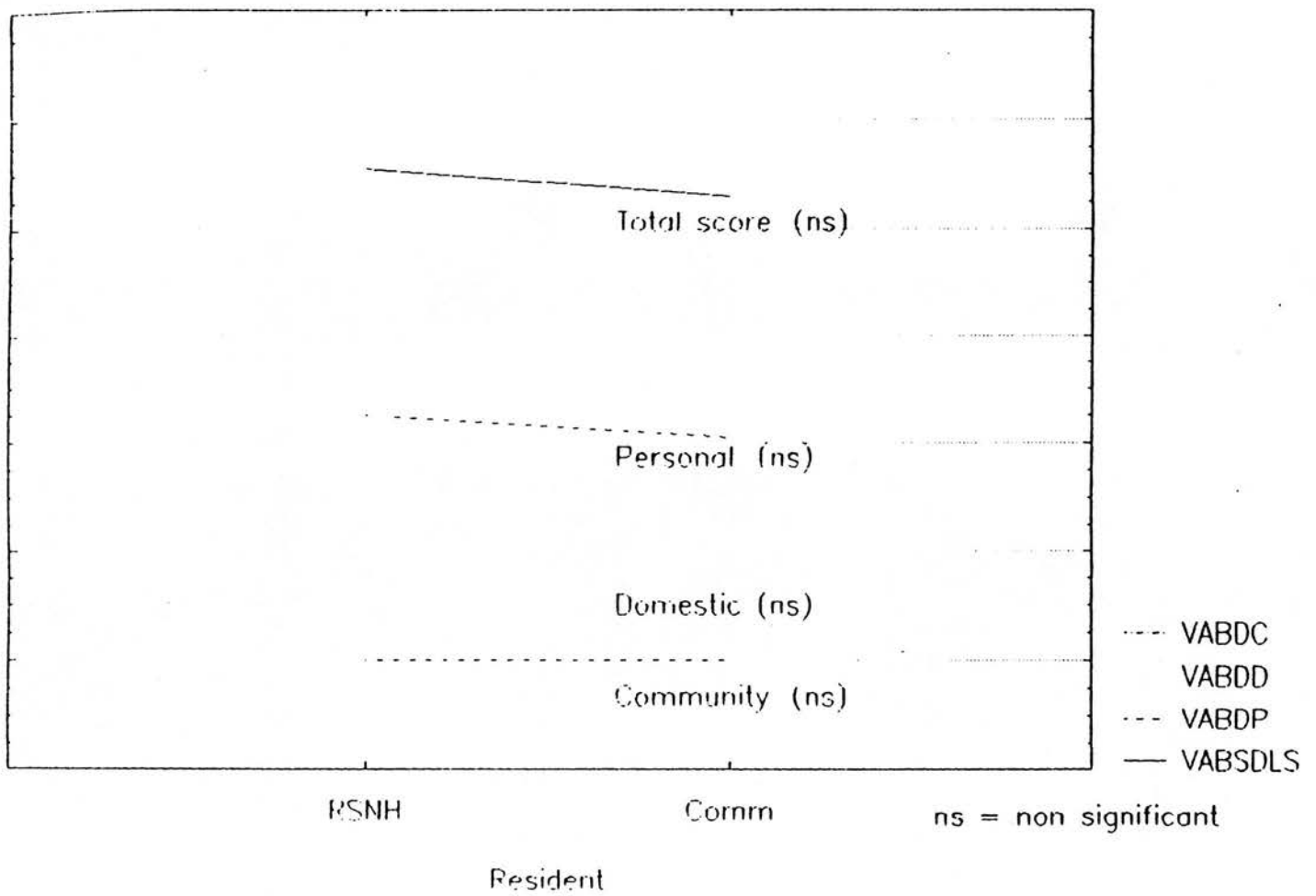
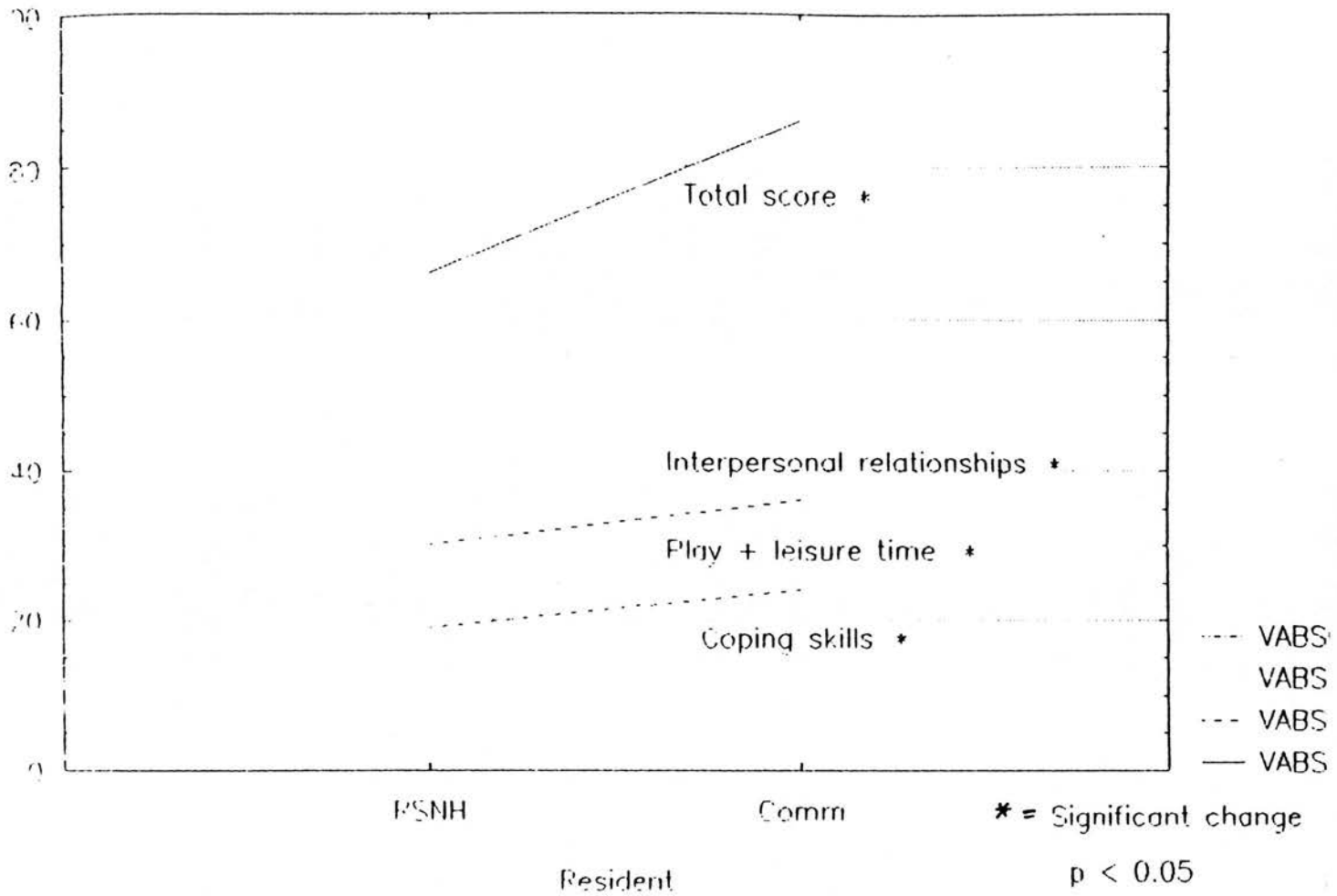


Figure 3

Socialization

Vineland Adaptive Behaviour Scale



Quality of Life Measures**TABLE 3 Group Mean Scores on the Quality of Life Index**

<u>SCALE</u>	<u>MEAN</u>
Total Quality of Life Index	62
- environmental	31.5
- community involvement	13.3
- social relations	17.2

Table 3 shows the mean scores of the group on the quality of Life Index. When compared with the norms for this type of accommodation (Level 4 - supervision, training, assistance and support during waking hours, with sleeping overnight provision provided) it can be seen that the total quality of life score of 62 compares favourably with the published norm score of 55. This indicates that this group of people report a better quality of life than people living in similar settings in the U.S.A. The current findings approximate the norms for those living in accommodation with support only on a scheduled daily basis, but are lower than those for levels of community living providing minimal support. Although the residents reported a comparatively high quality of life on this rather objective measure, it is noted that absence of any vocational activity in the majority of residents is contributing to lowering the group mean.

TABLE 4 Group Mean Scores on the SLAPS Measure

<u>SCALE</u>	<u>MEAN</u>
Total Quality of Life	102.0
- stress	11.9
- loneliness	51.7
- affect	81.2
- lifestyle satisfaction	83.3

Table 4 describes the average scores on the SLAPS measure. As a function of the method of presentation and scoring of this scale, very high acquiescence was found. Correlations between this measure and the others were found to be surprisingly low, and it could be said that either this is a measure of some quite different aspect of lifestyle satisfaction, or that the results are of dubious validity.

TABLE 5 Group Mean Scores on the Lifestyle Satisfaction Scale

<u>SCALE</u>	<u>MEAN</u>	<u>NORM</u>
Total Lifestyle Satisfaction	15.0	6.5
- community	10.5	5.8
- recreation	2.3	-4.2
- job	2.2	4.9
- acquiescence	5.7	4.3

Table 5 shows the group average scores compared with the published norms for a large group of people receiving community services. The LSS total score compares favourably with the normal score; similarly all subscales show a large significant difference in a positive direction, with the exception of the Job Satisfaction subscale in which the Dunblane residents score lower. As already mentioned, lack of employment opportunity is the major area of dissatisfaction in this group. Otherwise on this subjective measure of lifestyle satisfaction, this group score very highly.

Of all the quality of life measures used, the Lifestyle Satisfaction Scale is the most subjective. Its administration was considered somewhat difficult with this group of people with low comprehension skills. The results should therefore be interpreted with caution. Also two subjects scored very highly on the acquiescence scale, possibly invalidating their results.

TABLE 6 Environmental Scores For Each Residential Setting On The 39 Steps Measure (maximum score = 39)

	<u>COMMUNITY HOUSE</u>	<u>BUNGALOWS</u>	<u>RSNH</u>
<u>39 STEPS</u>	38	33	11

Table 6 gives the results of the 39 steps environmental measure carried out on a single assessment basis. The scores show a trend towards increased "normalisation" for the residence in the community, with the traditional RSNH ward faring worst because of its presence within a large institution. This also applies to the habilitation area assessed, but to a lesser extent because of the type of model of service employed within it, that stresses independence and individual choice. The 39 steps is a good example of where the minutiae of 'ordinary living' supplies chances for learning not present in larger living settings. Any skill acquisition can be largely attributed to these opportunities.

Discussion

This evaluation should be regarded as stage 1 of an ongoing process. Rather than examining the results of the quality of life measures in detailed comparison with published norms, it is probably better to regard them as relational scales. Results from the Quality of Life index and the Lifestyle Satisfaction Scale can be used to evaluate any further changes that are made to an individual's lifestyle (eg. new job or an increase in leisure activities).

The impression was that the Quality of Life Index was the most reliable measure as it was the most objective. The Lifestyle Satisfaction Scale was the best indicator of people's opinions. The SLAPS measure seemed to be sampling a different area. It had very high acquiescence and requires some work on the scoring method. The evidence suggests that on the whole, the scales were measuring something real. Significant correlations were found, for example, between the socialization domain of the Vineland, and the social relations scale of the Quality of Life Index. This would seem to imply some sort of validity as this is a staff rating correlating with the client's own rating.

When looking beyond group means to examining and comparing individuals results on the various measures, it becomes clear that different aspects of quality of life are being assessed. For example, one resident scored very positively on the objective scales, but very negatively whenever asked for a measure of opinion. This indicates the importance of not basing an evaluation only on one type of measure ie. an objective assessment should be balanced with a measure of opinion.

It was evident from the process of the evaluation that people expressed a strong preference not to return to the hospital. This prompted the consideration that people may be anxious to present their current quality of life in an exaggeratedly positive light. This highlights the importance of giving frequent assurances that responding would in no way alter living situation.

Conclusions

- * Individual skill gain in areas of
 - communication
 - socialization
- * Increased opportunities for learning
- * Increased community contact in daily life and leisure time
- * Improved quality of life

* High lifestyle satisfaction

The evaluation suggests that 6 people with learning disabilities who moved from RSNH to Dunblane are enjoying a quality of life and environment better than that from which they came. In the majority of respects they are highly satisfied with their lifestyle, with the one exception of lack of employment opportunities.

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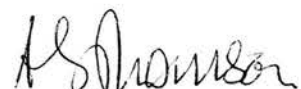
CASE STUDY

Neuropsychological Deficits in an HIV
Infected Drug User

Aileen S Thomson

Submitted in partial fulfillment of the degree of Doctor of Clinical
Psychology at the University of Edinburgh May 1999

I certify that this report is a fair and accurate account of the work undertaken



Introduction

WB was referred for psychometric testing in February 1997 (referral letter – Appendix A). He had recently been transferred from the main regional psychiatric hospital, where he had been a patient in a secure ward, to a psychiatric ward of his local general hospital.

Reason for referral

WB was a 40 year old man who had been admitted to hospital under Section 25 of the Mental Health (Scotland) Act . He had been in hospital for one month prior to his referral to psychology. He had been exhibiting bizarre and disturbed behaviour for which various explanations were hypothesised, including manic depressive psychosis, HIV dementia and drug induced psychosis. Neuropsychological assessment was requested in order to aid differential diagnosis.

History of presenting problem

WB had been exhibiting a three to four month history of personality changes and increasingly bizarre behaviour which were of concern to his family. Over this period he had been refusing medical help. He had threatened various acts of violence including, at one point, plotting to kill his two children. He had also been locking himself in his bedroom and applying electric shocks to his dog. He seemed incapable of carrying out simple activities of daily living and had, for example, put milk in the toaster in order to boil it. He had urinated in a wash hand basin in front of visitors and had threatened to commit suicide by jumping off the Forth Road Bridge. He had also alluded to being interfered with by aliens who he alleged had been taking samples from his body.

Recently he had accused his 8 year old daughter of stabbing him, and had also accused his wife of plotting to stab him on the anniversary of his son's murder. When visited by social services shortly before his admission, he was found sitting naked having built himself a nest of duvets in the living room of his home. He has pushed all the furniture to the edges of the room which was in darkness with the exception of various spotlights trained on himself. He had smeared excrement all over the walls of the room.

Having accused his wife of planning to assault him, he threw milk over her and the kitchen. He then proceeded to dismantle the gas fire, threatened violence to his family who fled the house, and dressed his dog in clothes and stabbed it to death.

Background

Family history

WB was born in Glasgow in 1957. He had no known perinatal or developmental problems. When WB was aged 11 he and his family moved to Fife in order for his father to gain employment. WB recalls a childhood which was punctuated by frequent episodes of physical violence by his father.

Educational and Occupational history

He did reasonably well at school and left age 16 with 2 O'Grades. On leaving school he worked for a couple of years in a local paper mill before completing an apprenticeship in mechanical engineering. He started a City and Guilds course in basic engineering which he did not complete. More recently he also started an Open University course in english, again uncompleted. Over the years his main employment has been as a fitter, and also as a welder and grinder in the oil industry. His last job was as a dresser at which he was employed until February 1997. Apparently he handed in his notice on this job as he was having some financial difficulties and needed the holiday pay he would be given if he resigned.

Social circumstances

WB lives at home with his wife and their three remaining children. Their oldest son was murdered exactly one year prior to the onset of WBs current problems. Naturally both Mr and Mrs B have found the consequences of this very difficult. It appears that in the immediate aftermath of the death, Mrs B was more overtly struggling to cope and that W assumed the role of caring for and supporting her. However, after several months it evolved that the roles reversed and W began to grieve more openly. Since this point W has suffered from low mood and erectile dysfunction. WB has minimal contact with his own parents, about whom he appears quite ambivalent.

Drug history

WB has had a 25 year history of multiple drug use. He started experimenting with drugs in his teens and claims to have taken every drug available except Ecstasy. He began injecting Barbiturates in 1977. He has, in the past, also injected heroin regularly . His most active period of intravenous drug use was in the late 1970s – mid 1980s. He was referred to Clinical Psychology by his General Practitioner (GP) in July 1980 for help in stopping his drug habit. Previous to this he had had a number of gaps where he had stopped himself but was finding this difficult to maintain, although he denied any physical craving. He described taking drugs for “kicks” rather than related to any underlying psychological problems. His main incentive to discontinue his drug use was that his wife was expecting a baby the following month, and he was worried about being sent to prison. Following assessment, it was thought that psychological treatment would not be of assistance at that time and WB was offered no further sessions.

WB was then re-referred to Clinical Psychology in November 1982 by the Psychiatrist whose care he was by that time under. He was seen for behaviour therapy aimed at helping him cope with reducing his drug use. The Psychiatrist notes in a letter of March 1983,

“He is coping with his symptoms in the way which has been recommended to him by, the Clinical Psychologist. He is gaining mastery over his symptoms and has returned to work. He is pleased with his progress and although he admits that there are still some difficulties to overcome, he is quite optimistic about the future.”

The Psychiatrist felt that WB was well enough to be discharged back to the care of his GP. Over the following 15 year period he had no further contact with the psychiatric or psychological services.

In recent months his drug use has been stabilised somewhat by Methadone prescriptions. He has, however, continued to use non-prescribed drugs (although not injectables he claims) including valium and cannabis. He is vague and erratic in his drug use, for example taking most of his weeks prescribed dose in one go. His most recent prescribed dose of Methadone was 40mg per day. He claims to drink alcohol only occasionally, which is substantiated by accounts from significant others.

Forensic history

WB has had various convictions for theft and assault (including assault of his father-in-law)

Medical history

WB has had previous contact with the psychiatric services through his dependence on drugs, as described above. He was diagnosed with the Human Immunodeficiency Virus (HIV) in November 1986, probably having become infected by sharing needles during his period of intravenous drug use. Since this time he has used medical services intermittently, and has oscillated between Fife and Lothian hospitals for out- and in-patient care. Attempts have been made by medical staff to monitor WB's immune function. Assays of CD4 lymphocyte count are normally used as an indicator of disease progression (a count of 500 or less is generally regarded as problematic). Increasingly severe symptoms of HIV disease usually parallel a decline in CD4 count. The use of anti-retroviral medications (now given in combination), inhibits replication of the virus, and thus improves symptomatic infection.

WB's past medical information includes the following:

- 1989 - admission with chest infection
- 1993 – CD4 count of 190
- 1996 – CD4 count of 77
- 1996 - admission with respiratory problems secondary to opportunistic infection
- 1997 – CD4 count of 53
- 1997 - commenced on antiretrovirals, specifically Zidovudine (Retrovir, AZT), Zalcitabine, Lamivudine (3tc, Epivir). Also started on Septrin (prophylactic for pneumocystis pneumonia) and Haloperidol.
- 1998 – commenced on Droperidol, Thiorizidine, Lorazepam. Haloperidol discontinued.

Alternative hypotheses

Psychotic disorders in HIV positive individuals cannot be assumed to be always a direct result of the infection. Given WB's history and presenting problems then, the following alternative hypotheses for his psychotic breakdown were considered:

1. A pre-existing psychotic disorder
2. A psychogenic reaction to HIV infection
3. Iatrogenic factors

4. His history of substance misuse
5. HIV brain disease

Each were examined in turn in the light of information gathered about WB from the assessment, including the patient himself, his wife, relevant medical notes, and direct observation. Table 1 summarises the reported prevalence of aetiological factors in such disorders .

Table 1 Aetiological factors in HIV-associated psychotic disorders

<u>Aetiology</u>	<u>Reported prevalence</u>
Pre-existing psychotic disorders	18 – 42 %
Substance misuse	15 – 20 %
Psychogenic reaction	25 %
Iatrogenic factors	None reported
HIV brain disease	21 – 61 %

(taken from Catalan *et al*, 1995)

1. A pre-existing psychotic disorder

Given the lifetime prevalence of mania and schizophrenia (approximately 1% and 1-2% respectively (Robins *et al*, 1984)) it is inevitable that some people with a history of psychosis will acquire HIV. Particularly with manic states, it seems likely that sexually disinhibited behaviour may lead to an increased risk of acquiring HIV. The reported incidence of HIV patients with psychosis found to have a past history of psychotic disorders varies from 18% (Catalan *et al*, 1995) to 42% (Harris *et al*, 1991).

There was no evidence indicative of any former psychotic episode in WB. Indeed, prior contact with the Psychiatric services for his drug problems revealed no form of psychosis at that time. Neither Mr. nor Mrs. B were aware of any family history of psychosis. Until relatively recently WB had held down a job and had no history of bizarre behaviour or unusual thought content. It was therefore considered unlikely that WB had a pre-existing psychotic disorder.

2. A psychogenic reaction to HIV infection

Although it is generally agreed that the distress associated with being HIV positive can, on occasion, lead to severe and unusual psychological reactions, the only report of psychogenic psychosis is from Stockholm (Alexius, 1991), in which 25% of cases of psychosis in HIV patients was attributed to psychogenic factors.

WB was diagnosed with the Human Immunodeficiency Virus (HIV) in November 1986. He showed no signs of unusually severe reactions at that time, or since.

3. Iatrogenic factors

Although a variety of medications can have a side effect of causing psychosis, the reports of anti-retroviral medication contributing to psychotic disorders are mainly confined to case reports. Concern has been expressed regarding the possible implication of Zidovudine in the development of mania (e.g. Maxwell *et al*, 1988), and of Dideoxyinosine (ddI) also in mania (Orth *et al*, 1991). However the numbers reported are very small, despite the widespread use of these drugs, suggesting that the risks are small.

4. Substance misuse

The use of certain drugs including amphetamines and cocaine can precipitate psychotic syndromes. Harris *et al* (1991) found amphetamine misuse in 17% of HIV patients admitted to a psychiatric unit, and Baer (1989) reported the involvement of amphetamines and cocaine in 20% of such patients.

Although he had abused amphetamines in the past, WB appeared not to have used these in the preceding few years, with his drug use mainly confined to “downer” rather than stimulant substances. In the period prior to his psychotic episode WB had been taking methadone, cannabis and valium none of which have clearly documented links with onset of acute psychosis.

Therefore, although possible, it was considered unlikely that WB’s psychosis was drug induced.

5. HIV Brain Impairment

In HIV Brain Impairment, presentation can usually be divided into one of two categories. One involves the person becoming high and disinhibited, the other slowed, demotivated and vague. Usually the high presentation comes as an earlier manifestation, the vague at a later stage. However this is only a clinical impression.

In a few cases (approximately 1 in 100) the high presentation presents in an exaggerated form, as a psychotic breakdown (Lykestos *et al*, 1993a). This is probably the result of neurotransmitter abnormalities in the brain caused by the presence of HIV. The proportion of patients with HIV referred to psychiatrists with a psychotic breakdown reported in the literature ranges from 2% (Ayuso-Mateos *et al*, 1989) to 21% (Harris *et al*, 1991). This variation is likely to be due to factors including the type of psychiatric service available. In surveys, at least 30% of all psychiatric admissions of patients with HIV infection are for psychotic illness (Baer, 1989; Smith, 1990).

One likely cause of psychotic disorders is HIV-related brain disease. The neurological and cognitive status of HIV patients with a psychotic disorder has been detailed in a number of reports, and it seems that in a proportion of, but not all, cases brain disease *was* present. In a study of 20 cases of psychosis, Sewell *et al* (1994) found a trend towards greater neuropsychological impairment than controls, but magnetic resonance

imaging (MRI), CSF and neuropathological investigations failed to provide conclusive evidence for organic brain involvement.

HIV can directly infect the brain and spinal chord (i.e. the CNS). HIV directly infects only the white matter of the brain. Although it cannot directly invade neurons, it appears that neurons are destroyed nevertheless by indirect means. Neuronal damage is, in principle irreversible, whereas white matter can regenerate. It is also known that the mere presence of HIV in the CNS is in itself not enough to cause dementia.

Whatever the aetiology, it appears that most patients show an improvement in psychiatric symptomatology, although their clinical prognosis is poor (Catalan *et al*, 1995). In a number of cases dementia develops (Smith, 1990), and in a proportion of cases a fairly rapid decline is described (El-Mallakh, 1991). Given that reduced life expectancy has been reported in HIV patients with psychosis, that AIDS patients with neurological disease have a shorter survival rate, and that poor neuropsychological test performance in both symptomatic and asymptomatic gay men with HIV is associated with increased risk of death (Mayeux *et al*, 1993), it seems that brain involvement may be an important aetiological factor in psychotic disorders.

Current estimates of 10-16% for AIDS Dementia are based on large prevalence studies in the USA. Similar figures emerge from smaller European studies. It is likely that a higher percentage of individuals with HIV have some viral activity in their brain which may not necessarily impact on their functioning. With the advent of new treatment approaches, it is possible that it will be advantageous to identify any level of HIV activity in the brain in order to identify the appropriate treatment.

Navia *et al* (1986a,b) found that in most cases, the onset of dementia was insidious but in some cases an abrupt onset was seen (usually associated with a serious systemic illness). More recent reports from longitudinal neuropsychological studies have suggested that dementia typically develops over a relatively short period of time and is not necessarily preceded by any significant cognitive difficulties. It is important to be clear that dementia refers to the extreme end of the spectrum of HIV Brain Impairment. The term refers to cognitive impairment severe enough to interfere with social and occupational functioning.

Until recently there has been no definite treatment for an individual with HIV Brain Impairment. One of the critical issues with drug therapy is the extent to which a given drug can pass the blood/brain barrier.

Of the drugs used to treat HIV, only 3 Nucleoside Analogues appear to penetrate the CNS significantly

Zidovudine

Lamivudine

Stavudine

The protease inhibitor group of drugs do not achieve CNS penetration, but of the non-nucleoside analogue reverse transcriptase inhibitors (the newest class of drugs), nevirapine (Viramune) does show CNS penetration.

WB was commenced on 3 antiretrovirals including the Nucleoside Analogues Zidovudine (Retrovir, AZT) and Lamivudine (3tc, Epivir) in 1997.

In addition to the direct effects of HIV on the brain, the brain is susceptible to opportunistic infections in those with HIV. Such opportunistic brain infections include: cerebral toxoplasmosis, cryptococcal meningitis, cytomegalovirus, progressive multifocal leucoencephalopathy and brain lymphomas. It is important to differentiate HIV Brain Impairment from such infections. They may show similar symptoms, although infections are, in the main, treatable. A differential diagnosis can be made on the basis of a number of investigations including CSF sampling and brain scans. The possibility of opportunistic infections in WB was excluded by investigations.

Cognitive impairments

Memory problems are usually not as central in HIV dementia as with other types of dementia. The main difficulties are with attention - screening out distractions and dual tasking. Difficulties concentrating and 'keeping on track' can lead to half completed tasks and forgetfulness. Other problems include difficulty attending for any length of time. This can leave the individual feeling chaotic and out of control. Precision motor tasks become difficult (especially visuo-motor skills) and general slowing is evident. As would be expected from the neuropathology of HIV dementia, which predominately, though not exclusively, involves subcortical structures (Price *et al*, 1988), the pattern of cognitive deficits resembles that of a subcortical dementia and involves :
“...psychomotor slowing, memory impairment, affective and emotional disorders and difficulties with strategy formation and problem solving” (Cummings,1986).

WB was seen on 3 occasions for formal neuropsychological assessment of his cognitive state. Two of these attendances was as an out patient; the other during an admission to the psychiatric ward. He also failed to attend 6 out-patient appointments, and was unfit to be assessed on one other occasion when he appeared in the out-patient clinic overly sedated having taken an overdose of sleeping tablets. WB was pleasant and co-operative throughout the assessment. He did, however, repeatedly question the point of the assessment and seemed to feel it was of little relevance to him. He did not appear particularly anxious regarding testing but was quite distractable. At the time of the assessment his mood was stable and he was off all his psychiatric medication. He continued to use cannabis and valium in an erratic manner. He was more settled in that he was no longer displaying bizarre behaviour or voicing fantastic ideas, although his mood seemed high. He talked very loudly and quickly, his mood was elevated, and during the assessment he was rather inappropriate, for example whipping out a camera and leaping around the room taking many photographs of the assessor from different angles.

WB's premorbid intellectual functioning was estimated using the *National Adult Reading Test* (NART) as being within the high average range of abilities. This estimate did not, on the whole, appear to correlate well with his scores on some subtests of the *Weschler Adult Intelligence Scale – Revised* (WAIS-R). On the arithmetic subtest of the WAIS-R, WB scored in the below average range. This test, taken with others, can indicate problems with attention and distractibility as well as with the ability to hold and manipulate information. On the digit symbol test of the WAIS-R, a test of psychomotor performance that is relatively unaffected by intellectual prowess, memory or learning, WB performed extremely poorly. This indicates problems with his sustained attention, response speed and visuo-motor co-ordination. This test has been found to be consistently more sensitive to brain damage than other WAIS tests. A recognised test of attentional functioning (*Trails Making A and B*) was administered to WB. He had difficulty with this attentional measure, being generally slow and in particular experiencing difficulties with aspects of both sustained and focussed attention. He operated at the level below the 10th percentile range.

However on the block design subtest of the WAIS-R, he operated at the above average level of performance and showed reasonable planning and organisation of the task required of him. This subtest is regarded as a good indicator of frontal lobe type impairment. Verbal fluency, also a good measure of frontal lobe type functioning, was within the average range of performance. It is possible to calculate predicted verbal fluency scores from the NART score using a conversion formula and this indicated that WB's actual obtained verbal fluency was broadly what one would expect considering his performance on the NART.

His immediate memory, as evidenced by his below average performance on the digit span subtest of the WAIS-R appears impaired (16th percentile). WB's memory was also assessed using a number of measures from the *Adult Memory and Information Processing Battery* (AMIPB). Generally his performance on these tasks was within the below average range of performance (at the 25th percentile) which could be contrasted with the premorbid estimate of his general level of cognitive ability. Immediate recall of a verbally presented passage of text was reasonable at the 50th percentile and recall of this text worsened slightly after a delay. Verbal learning over trials was poor (<10th percentile) although there was some evidence of consolidation, retention and organisation of new information. His abilities at copying a complex figure appeared relatively preserved with some evidence of a coherent structure and plan applied to this task. There was some evidence of loss of detail when asked to recall this figure immediately.

WB generally operated within the low range of performance across a range of neuropsychological measures. Given his premorbid ability was estimated as being within the high average range, this is less than one would have expected. It could appear initially that his primary disruptions relate to typically temporal lobe type impairments affecting both verbal and non verbal aspects of memory. His memory function overall was poor and speed of information processing seriously flawed. However, given that most memory tests require a degree of attention and concentration, and that his

attentional abilities seem seriously impaired, it may be that his primary problems relate to attention. Certainly he performed consistently badly on all measures of attention administered. He also was poor on all tests which were timed, indicating general slowing. His verbal fluency was normal and he showed good organisation of a complex figure copying task which may indicate less evidence of frontal lobe type of impairments.

This picture is largely consistent with an HIV brain impairment which, as described earlier, is characterised by problems with attention, screening out distractions, poor visuo-motor skills and general slowing.

Conclusions

Given that WB is a poor historian, and with the complexity of factors possibly contributing to his problems, it is hard to draw any *definite* conclusions from the assessment. He has been on different mixtures of medication (anti-psychotics and anti-retrovirals) which he takes haphazardly. He is also prescribed methadone. He has used many non-prescribed drugs recreationally for many years, and continues to take valium and cannabis. He has been infected with HIV for at least 13 years and in recent years his CD4 count has fallen significantly. It is possible that any of these may have been involved in his psychotic breakdown, and almost certainly all will have some influence on his cognitive impairment.

However, we have information gained from this assessment pertaining to the alternative hypotheses detailed below :

- A pre-existing psychotic disorder
- A psychogenic reaction to HIV infection
- Iatrogenic factors
- His history of substance misuse
- HIV brain disease

It would appear that there is little evidence for WB having had a pre-existing psychotic disorder or a psychogenic reaction to HIV infection. Generally, there is little documented evidence for iatrogenic factors having a role in onset of psychosis. Although abuse of some drugs, particularly amphetamines, can precipitate a psychosis WB's use of such drugs has been minimal in recent years. It would appear unlikely that they would have this delayed effect. The most likely attribution of his psychotic episode seems to be HIV brain disease. As described previously, one manifestation of HIV brain disease involves the person becoming high and disinhibited. It has been documented (Lykestos *et al*, 1993a), that in approximately 1 in 100 cases the high presentation presents in an exaggerated form, as a psychotic breakdown. Neuropsychological test findings are consistent with a picture of HIV brain impairment. He shows the attentional, "dual-tasking" and memory deficits, slowed processing and responses which are common indicators of diffuse damage in sub-cortical dementia such as that caused by HIV. It would also seem that his language and practical functions are relatively spared. Thus much of this assessment points towards a picture of psychosis caused by HIV brain impairment. Management of WB's psychotic symptoms would be as for psychosis of other aetiologies

(i.e. anti-psychotic medication) along with appropriate antiretroviral therapy of drugs with good CNS penetration.

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CASE STUDY

Psychological therapy for late life
depression

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Submitted in partial fulfillment of the degree of Doctor of Clinical
Psychology at the University of Edinburgh February 2000

I certify that this report is a fair and accurate account of the work undertaken



Introduction

Cognitive behavioural therapy for depression has been established in many trials (eg Elkin, 1994) as effective. Most of the research done until recently was however conducted on adults under the age of 65 years. In recent years there has been increasing interest in the application of cognitive behavioural therapy in the treatment of late life depression (e.g. Teri *et al*, 1994). In their review of 2) studies employing CBT strategies in the treatment of late life depression, Teri *et al* (1994) found substantial improvements in 50-75% of patients. There is also evidence that CBT is seen as equally credible by older as by younger adults, and that indeed older adults are less concerned by the stigma of seeking mental health treatment (Rokke and Scogin, 1995). Compared to patients in reminiscence therapy or waiting list, significantly more subjects receiving CBT were classed as improved or in remission at the end of treatment (Arean *et al*, 1993). These outcomes were maintained over a 3-month follow-up period.

Thompson *et al* (1986) suggest that the emphasis in CBT on repeated summaries of materials covered and soliciting feedback from the client to ensure that both therapist and patient understand and agreed on points of importance can help compensate for comprehension and retention problems in older adults. They draw attention to, however, the extra need to be sensitive to the older adults level of therapeutic sophistication and misconceptions about the origin of their depression. Modifications to CBT for older adults also need to include the need to deal with social conventions or attitudes of older adults which may impede the therapeutic relationship.

The use of CBT for older adults with depression will now be illustrated with reference to the case of WA.

Reason for referral

WA is a 65 year old man who was originally referred to the elderly service of the clinical psychology department in January 1999 by the psychiatrist of the local day hospital. At that time Mr A had been suffering from marked memory and concentration problems in the context of a severe depressive episode. However it was felt that his memory problems warranted further investigation and a referral was made to clinical psychology. Full neuropsychological assessment revealed no evidence of organic impairment (details later) but it was suggested a short course of cognitive behavioural therapy for residual depressive symptom may be useful at a later date depending on his progress. WA was duly referred by the same psychiatrist some 6 months later.

History of presenting problem

Mr A suffered from a severe depressive episode some 5 years previously. At that time he was hospitalised on three occasions, the last of which involved a course of 6 sessions of

electroconvulsive therapy (ECT). Prior to the ECT Mr A had felt hopeless, very depressed and suicidal. His weight had dropped to 7 stones (from 11.5 stones) and antidepressant medication was of minimal value. Following the ECT Mr A felt a lot better - his mood lifted considerably in a short space of time. He was left, however, with some residual depressive symptoms and memory and concentration problems. He also continued to be affected by mood swings and irritability. He complained of motivational problems and a degree of emotional blunting. He reported his appetite was normal and although his sleep had been characterised by restlessness it had improved over the preceding year. Mr A also suffered from anhedonia and was no longer interested in the things he used to enjoy such as horse racing, bingo, bowls and painting garden gnomes. His wife felt he was "not himself" and was particularly troubled by his short fuse and irritability.

Neuropsychological assessment

Mr A was first seen in the clinical psychology department for differential diagnosis with regard to the nature of his apparent memory problems. He was seen on 4 occasions in the local out-patient clinic. Mr A spontaneously mentioned complaints about his memory – mainly difficulties recalling things that happened recently. His memory for events years ago seemed to be fine. He reported that his wife would say things to him that he would have no recollection of. He also noted that if he was watching a film on TV or reading a book, he often could not remember many details the next day, and would forget putting the kettle on regularly.

Mr A stated that things first started to change for him when he became depressed, 4 years previously. He was under a great deal of stress at work and became unable to cope. Although he was feeling considerably better by the time of the assessment, he still considered himself to be depressed. During testing Mr A was cooperative and well motivated. He appeared relatively anxious during the early phases of testing although he appeared to become more relaxed at later sessions. His premorbid intellectual functioning was estimated using the National Adult Reading Test (NART) as being within the average range of abilities. This premorbid estimate appeared to be relatively consistent with scores obtained on measures of current intellectual functioning as assessed by subtests of the Weschler Adult Intelligence Scale – Revised (WAIS-R). Verbal fluency was within the high average range of abilities and was slightly above that expected given his performance on the NART. A measure of attention functioning (Trails Making A and B) was administered to Mr A. He appeared to experience no major difficulties with this attentional measure as he performed within the average range of performance.

On the Benton Visual Retention Task, Mr A's performance was consistent with his premorbid and current estimates of intellectual functioning. On this task his performance was generally in line with expectations taking into account his age. His memory was further assessed using a number of measures from the Adult Memory and

Information Processing Battery (AMIPB). His immediate recall of a verbally presented passage of text was again within the average range of abilities. Verbal learning over trials was assessed and his performance generally was within the average range for this measure also. On the interference portion on this measure Mr A performed within the high average to superior range of abilities. On this verbal learning over trials task, there appears to be evidence of consolidation and attention, and the organisation of new information. Attempts at copying a complex figure were just at the low average range and he appeared to experience a number of difficulties in terms of developing a coherent and purposeful approach to the copy part of this task. It is not surprising therefore that his immediate and delayed recall of this complex figure was somewhat poorer than expected given his poor attempts at copying this.

On the Kendrick Cognitive Tests for the Elderly, a useful measure for detecting the probability of the presence of dementia, Mr A obtained age-scaled quotients within the average range on both subtests. His pattern of performance on this measure is indicative of non-impairment and is inconsistent with scores expected of a person suffering from an organic impairment. On the Hospital Anxiety and Depression Scale (HADS), Mr A obtained a score of 8 for anxiety and 11 for depression. A score of 10 or above is generally taken to indicate "caseness".

Generally then, Mr A operated in consistent fashion within the average range of performance across a broad range of neuropsychological measures. This was also consistent with an estimate of his pre-morbid intellectual functioning and educational and vocational history. On the basis of his performance on this broad battery of tests, there appeared to be limited evidence for impairment of functioning. It seemed probable that his memory problems may be a result of his depression, and his tendency to spend a lot of time ruminating on his problems. It was suggested that a short course of cognitive behavioural therapy for depression may be helpful, and Mr A was to contact the department if he wished to take up this offer. He did not do so at this time and was therefore discharged.

Mr A was then rereferred to the elderly service by his psychiatrist 6 months later, saying Mr A now wished to engage in CBT. He was seen in the local outpatient clinic on 2 occasions for assessment. At the time of the rereferral, Mr A was being reviewed by the psychiatrist approximately every 6 months. He had been attending the day hospital 3 times a week but this had now ceased. He was taking a regular dose of Clomipramine medication.

Background

The onset of Mr A's depression appears to relate to a number of factors, primarily to do with loss of role and reward from life in the context of vulnerability. He had been the supervisor in a diary franchise for 20 years and was very involved in, and committed to his job. He worked extremely long hours and rarely had a day off work. He had few

regular interests, but in his very occasional leisure time enjoyed playing bingo, betting on horse racing and walking his dog. In addition to running the diary, Mr A had an ice cream van which he would take out every evening as soon as he was finished at the diary. He enjoyed this – particularly the interaction with local people- and felt he was good at sales. He got approximately 4 hours of sleep per night. Around 4 years ago the diary was then taken over (following a successful hostile take-over bid) by a large national diary business. This resulted in many changes in the way things were run, including multiple job losses. Although Mr A kept his job, his position in the company was devalued. He also found himself working alongside colleagues who did not share his commitment to customer service at a local level, and missed his former work mates. His working schedule became even more strenuous (and more importantly, was outwith his control) with the regular pattern being him going to bed at 11 p.m. and getting up for work at 2 a.m.. He was also required to travel significantly longer distances. This had been going on for a year when he began to notice the first sign of problems, namely that he started losing interest in work and customer care. He sold his ice cream van – with regret – in an attempt to improve the situation for himself but found this did not help. He then contracted a viral illness which, despite feeling quite unwell, he continued to work through. At the same time he took on more work until, it would appear, he could sustain the pressure no longer. He became quite severely depressed and for the first time in 45 years was forced to consult his general practitioner (GP). His GP immediately signed him off work and made an urgent referral to the psychiatrist. At that point Mr A was feeling black and hopeless. He had formed a plan of ending his life by throwing himself in the path of oncoming traffic, but did not get near to carrying this out. Following psychiatric assessment he was admitted to hospital. As detailed previously he was treated unsuccessfully with medication, and eventually satisfactorily with ECT over the course of 3 in-patient stays. Following discharge he attended the day hospital 3 times each week where participated in occupational therapy (where he was introduced to gnome making) and various group therapies including stress management and a men's group. He continued to be troubled by residual symptoms of depression, however, (detailed earlier) and memory and concentration problems.

Occupational/Educational history

Mr A went to an all boys grammar school which he really enjoyed. He would have stayed on at school after the age of 16 had his father not died, and had intended to go on further in his education. On leaving school Mr A started an apprenticeship as a castings engineer in a foundry. He completed a full apprenticeship in this and worked in the foundry for 15 years. When he was age 21 he served in the Kings Dragoon Guards where he was did National Service in Germany and Malaya. He achieved corporal-in-charge rank, and very much enjoyed this time in his life. He could have gone further but left to get married. He then went to work the Provident and he built up his own customer base to a point at which it became so successful that his company franchised out his customers to other agents. Mr A left this company shortly thereafter and began to work in a local dairy. He eventually achieved his own franchise business with responsibility for 2 large districts.

Family history

Mr A has been married for 44 years and seems reasonably happy in the relationship. He describes his wife as supportive, although admits his irritability causes friction between them. It also appears that they have both found adjusting to him being around the house more very difficult. Mr A met his wife prior to doing his National Service and left the Kings Dragoon Guards to marry her. They have 2 daughters and 1 son, all of who live within 100 yards of their parents. Mr A has 8 grandchildren, one of who he practically brought up. He gets on well with them all but finds the frequency of their visits hard to handle at times. His family have few health problems. Mr A got on "well enough" with his own parents. His father was killed in a mine when Mr A was age 15. His mother died approximately 15 years ago. Neither had any psychological or psychiatric problems, as far as he knows.

Social history

Mr A keeps in touch with a few of his former colleagues from the diary, although sees them infrequently. He enjoyed a holiday in Wales several years ago, but other than this had very little time for hobbies etc when working. He did bet on horse racing occasionally, and enjoyed bingo on holiday. At the time of the onset of his depressive illness Mr A reversed into a parked car when maneuvering his milk cart. The accident was not serious and appeared to relate to a lapse in concentration. However, Mr A was taken to court and advised by his lawyer to voluntarily surrender his driving license until his depression improved. Unfortunately despite the relatively minor nature of the offence and that 4 years have now elapsed and Mr A is significantly better he has been unable to get his license back from DVLC. This has restricted his opportunities to get out and about, and is a source of frustration (understandably) for him. He spends his time now watching soap operas on TV(which he previously hated), walking the dog and going shopping with his wife.

Medical history

Mr A has had remarkably few health problems, and until consulting his GP 5 years ago when he had become depressed, had not seen a doctor for 45 years. In the past few years he has experienced some episodes of pins and needles in his head and dizziness, associated with hardening in the arteries at the back of his neck. This does not appear to substantially restrict his activities, however. He has no history of any psychological problems, and drinks alcohol only occasionally.

Formulation

It would appear therefore, that Mr A developed vulnerabilities to depression through excessive working. He invested most of his time and energy in work and obtained most of his self-esteem through this. He was successful in every occupation he tried, and

enjoyed having control over his job and investing in customer care. When his diary business was taken over he lost control, and his emphasis on customer care was devalued – a marked contrast to the personal loyalty and commitment he had put into the business.. He had been getting increasingly disillusioned with work, feeling that he was an anonymous worker of little worth to the management. This was associated with multiple losses for him, which were not compensated for in other aspects of his life due to his lack of investment in them. When Mr A became unwell with a virus he pushed through the illness with no time off. He was left exhausted and forced to stop work. Then the loss of his role and a large part of his identity became apparent. He was unable to develop other aspects of his life and the losses - and the depression- were maintained.

Treatment plan

On the basis of this formulation, which Mr A agreed with, a course of 5 sessions of cognitive behavioural therapy was agreed. Given the lack of purposeful activity in Mr A's life, and the resultant large amount of time left to ruminate on his having "spent his worth", it seemed particularly important to increase the amount of pleasurable events and things he felt good or skilled at in his life.

The sessions followed the following structure and course.

Session 1

Setting of agenda

Information given and discussed about CBT model

Diary monitoring of activity levels, and rating for pleasure/mastery discussed

Homework – to complete activity diaries

To list previous/possible pleasant activities

Mr A appeared to understand the model and was, when discussing the link between mood and behavior, was able to volunteer that he had noticed feeling brighter since going to watch the local football team regularly. He admitted it was a struggle to motivate himself to go in the early stages, but started to enjoy it and found he was looking forward to going.

Session 2

Setting of agenda

Review of homework

Relaxation introduced

Homework- continue diary monitoring + rate for mastery/pleasure
practise relaxation

Mr A had read some, but not all, of the literature about depression and CBT. He had listed some possible hobbies etc and had completed the daily activity records. His day appeared mundane, with little in the way of enjoyment or success. This was highlighted.

Session 3

Setting of agenda

Review of homework

Dysfunctional thoughts + assumptions discussed

Strategies for managing irritability identified

Behavioural experiment set to test thought –“I will feel no better if I meet my friend”

Homework -monitoring of activity and dysfunctional thoughts
continue relaxation/breathing exercises

Mr A seemed well engaged in therapy and reported valuing the opportunity of improving his mood. Particularly important for him, however, seemed to be the feeling that he was being listened to, understood and not blamed. He had not been able to introduce any of the activities in terms of behavioural goals as his 15 year old dog had died during the week and he was too upset to do much. Much of the session was spent discussing this further loss and his feelings about it.

Session 4

Setting of agenda

Review of homework

Results of behavioural experiment discussed and evaluated

Mr A had still not been able to introduce much in the way of activity although had taken some steps to beat his “do-nothingism” by breaking tasks down into small steps. He had met his friend and enjoyed the encounter – evidence to challenge his assumptions.

Session 5

Setting of agenda

Review of homework

Review of progress

Plan for maintaining and furthering gains

Although Mr A had managed to introduce more pleasurable and mastery type activities into his life, he still had some way to go in consolidating and generalising these. He seemed aware, however, of what he needed to do in order to achieve this. He had also gone some way towards regaining his driving license by following a planned breakdown of the task. He felt moderately improved which seemed to coincide with the clinical impression. He reported finding one of the main benefits of therapy had been now understanding the factors involved in the genesis and maintenance of his problems.

Results

The following measures were taken at pre and post treatment:

Hospital Anxiety and Depression Scale (HAD)

Beck Depression Inventory (BDI)

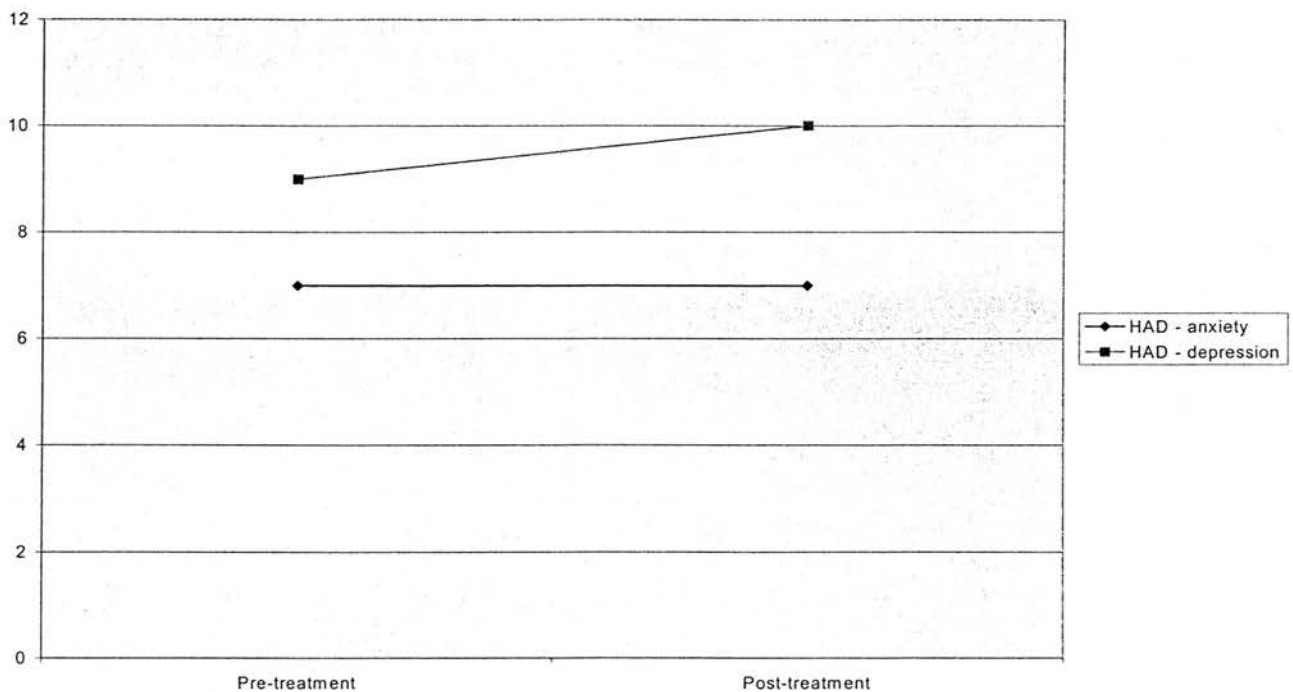
Geriatric Depression Scale (GDS)

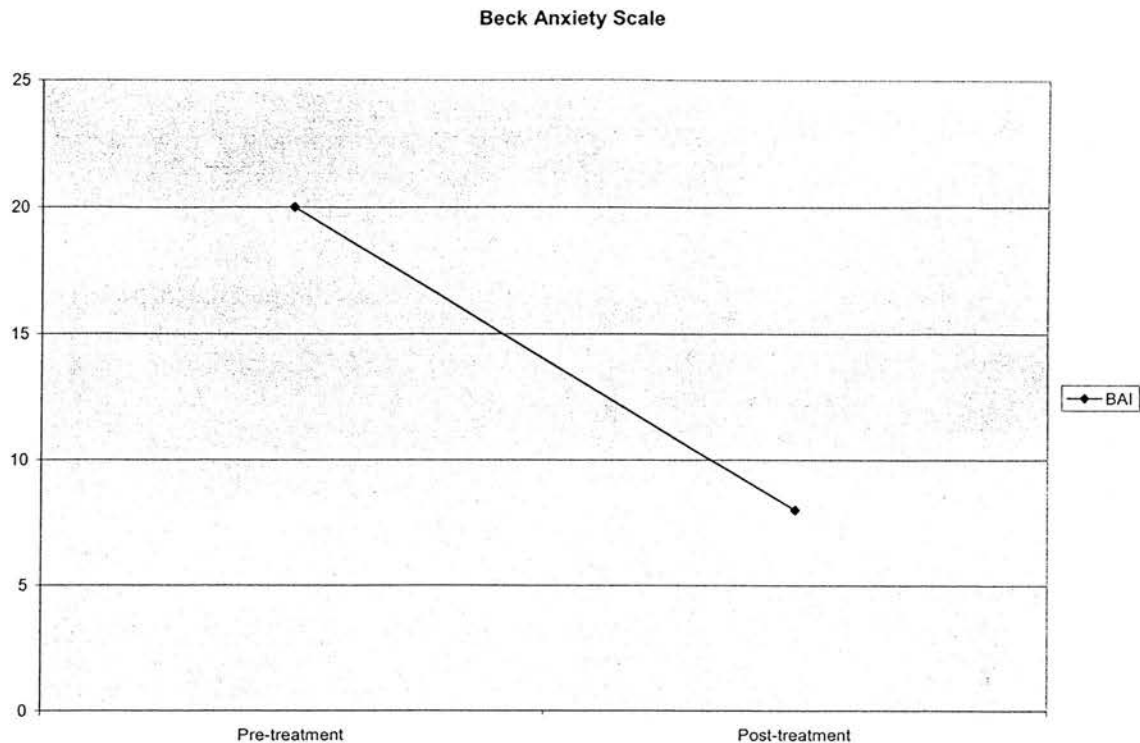
Beck Anxiety Inventory (BAI)

The BDI has been frequently used in treatment outcome studies to assess change in older, as well as younger, depressives (e.g. Thompson, Gallagher, Breckenridge, 1987). The GDS was developed specifically for use with older adults and has a simpler yes/no format than the BDI's multi-response format. It also places less emphasis on somatic symptomatology. The BAI and the HAD have both been used extensively in adult studies, and have also been applied to elderly groups.

WA's scores on the Hospital Anxiety and Depression Scale were not altered by treatment. His anxiety score was unchanged at 7 (sub-clinical), whereas his depression score actually rose slightly from 9 to 10 (borderline). This rise in depression is not borne out by his scores on the Beck Depression Inventory which fell from a pre-treatment score of 17 to a post-treatment score of 10. The Geriatric Depression Scale shows a less significant drop from 23 to 20. On the Beck Anxiety Inventory WA's score dropped from 20 to 8 over the course of therapy. The following graphs depict the results.

Hospital Anxiety and Depression Scale





Summary and Conclusions

It would appear that Mr A has made moderate progress with a short course of cognitive behavioural therapy adapted for older adults. He felt that the identification of the losses associated with medical retirement and exploration of the associated dysfunctional assumptions about his spent utility etc were particularly useful. These issues guided the treatment plan in terms of the behavioural, as well as the cognitive components. His scores on the BDI certainly support the impression of a moderate improvement in his depression, as do his scores on the BAI with respect to his anxiety symptoms. Paradoxically his pre and post treatment scores on the HAD show no change. This measure is, however, thought to be less reliable in the assessment of depression than the BDI. The results from the GDS show a lesser drop in depressive symptomatology than the BDI which may indicate more of WA's problems being identified with somatic manifestations of depression.

Generally, despite initial reservations, Mr A engaged well in therapy and seemed to gain some benefit from it. The cognitive components of treatment seemed to be less easily integrated by him, and more focus was consequently placed on altering cognitions through behavioural change. Lack of meaningful activity and the meaning of this for Mr A in terms of his role in life was a particularly salient theme. There was also more focus in therapy on limitations through ill health (of others) and changing social structures

(through retirement and death of friends/colleagues) than would normally be the case in therapy with younger adults. However, CBT did seem to be effective for Mr A in treatment of his depression in which he made moderate improvements over a relatively brief 5 session course.

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Enquiries to: Psychiatric Office, Ext. 3931

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9th July, 1999.

TELEPHONE : 01592 643355
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Chartered Clinical Psychologist,
Rowan House,
Willow Drive,
KIRKCALDY.

Dear

re:
D.B.

, GLENROTHES.

You recently saw this gentleman for psychometric assessment. It was felt that his memory problems are more to do with his depressive symptoms and you were willing to offer him a short course of cognitive therapy.

I have recently seen at the clinic and he is quite keen to give the cognitive therapy a trial. I would be grateful if you could contact to offer him an appointment. I will also be following up from time to time in the out-patient clinic.

Yours sincerely

DR
Staff Grade Physician in Psychiatry

Fife Primary Care

NHS TRUST

DEPARTMENT OF CLINICAL PSYCHOLOGY

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Our Ref: AT/CM
Your Ref:
Enquiries to: Ext. 2025
2 February 2000

Dr.
Staff Grade Physician in Psychiatry
Dunnikier Day Unit
Whyteman's Brae Hospital
KIRKCALDY.

Dear

I have now seen Mr. for the 5 sessions of cognitive behaviour therapy for his depression that we had arranged. I saw him most recently at my Pitteuchar Health Centre Outpatient clinic on 27th January 2000.

My approach with Mr. was predominantly using behaviour therapy for his depression. He appears to have very little in the way of meaningful activity in his life and this, I feel, is the main maintaining factor in his problems. As detailed previously he is a man who has previously worked for something like 16 hours a day 7 days a week and the current enforced absence of employment leaves him with a huge gap. He continues to be quite irritable and anxious and it would appear that he and his wife are getting under each other's feet somewhat. Through our sessions we developed a list of activities that Mr. thought he may enjoy and developed a plan for scheduling these regularly. Through diary recording it became clear that he had very few activities in the week that he found pleasurable or that he felt some sense of achievement over. By introducing more in the way of meaningful and enjoyable activity into his life I think he will find his mood lifting considerably. He seemed to agree with me regarding the rationale behind this and indeed remarked that he had found the same with regard to spectating at football. Initially he had been very reluctant to go, sure he would not enjoy it, but after several attendances he began to look forward to it and now very much enjoys this. Using this as an example we have discussed him resuming painting garden gnomes which he used to enjoy, visiting friends and colleagues, perhaps going back to the bingo or the bowls. Unfortunately he has found it difficult to put much of this in place although I think has begun to take steps in the right direction. He has also been considering looking for some part time work, either voluntary or paid, which I think would indeed be very good for him. He has also been pursuing trying to get his driving licence back from DVLA so he can go some trips in the car with his wife. Unfortunately it sounds like he has been dealt with very unfairly by having his licence revoked when he was depressed and he is now taking advice from the Citizens Advice Bureau. I think at the moment we have gone as far as we can and on our last session we developed a strategy for him continuing to put some of the behavioural methods into place. His scores on the Hospital Anxiety and Depression scale are unchanged (7 for anxiety, 9 for depression) although his score on the Beck Depression Inventory has come down from a pre-treatment score of 17 to post treatment score of 10 and on the Beck Anxiety Inventory from a pre-treatment score of 20 to a post treatment score of 9. This is quite encouraging. I think we have gone as far as we can for the moment but please feel free to refer him back to the Department at any point in the future.

Yours sincerely

Aileen Thomson
Chartered Clinical Psychologist

Dr.
Cos Lane Surgery
Woodside Road
GLENROTHES
KY7 4AQ



Awarded for excellence
to Nutrition and Dietetic Department

CASE STUDY

The use of a palm top computer in the treatment of panic disorder

Aileen S Thomson

Submitted in partial fulfillment of the degree of Doctor of Clinical
Psychology at the University of Edinburgh February 2000

I certify that this report is a fair and accurate account of the work undertaken

A handwritten signature in black ink, appearing to read 'A S Thomson'.

Introduction

Various factors, including the prevalence of psychological disorders, the ever increasing waiting lists of patients requiring treatment, and the focus on cost effectiveness, has made it necessary to explore novel methods of delivering therapy. Cognitive behavioural therapy is probably the treatment of choice for many of the anxiety disorders, and although this is a comparatively brief treatment, it is also expensive. Various alternatives or supplements to conventional therapy using computers have been examined. The use of palm top computers in panic disorder the use of such computers will be illustrated with reference to the case of LB.

Panic disorder

Research indicates that CBT is the most effective treatment for panic disorder which is a relatively common and disabling condition (Jerrom *et al*, 1982). In the UK around 15% of all referrals to adult acute psychology services are for panic disorder.

In accordance with Clark's model (ref), CBT for panic disorder incorporates education, exposure, cognitive restructuring and breathing retraining. This has been shown to be more effective than single component treatments such as relaxation, and more effective than medication or placebo. However, although CBT is clearly the treatment of choice for panic disorder modifications to improve efficiency need to be considered. Waiting times for treatment in the NHS are commonly over 6 months, and although CBT is considered to be a brief treatment the average hours of therapy in Fife is 12. This underscores the need to examine improved efficiency of CBT. Self-help manuals have been used with some success in the treatment of panic disorder although there are some disadvantages to this, mainly in ensuring intelligibility and acceptability of the material, and with ease of accessibility when needed. Computer-assisted programmes however could potentially solve these problems.

Computer assisted CBT

Computer programmes have been shown to be effective for specific components of CBT such as relaxation , systematic desensitisation (Buglione *et al*, 1990), self exposure (Carr *et al*, 1988) and cognitive restructuring (Selmi *et al*, 1990). Computer programmes have been shown to be useful in the treatment of agoraphobia (Chandler *et al* , 1986,1988).

Like other self-help regimes, however, there is some evidence that computers are more effective as an adjunct, rather than as a substitute for therapy. Agras *et al* for example undertook a study in 1990 comparing 4 sessions of therapy plus computer, with 10 sessions of therapy, with computer only in the treatment of obesity. At follow-up they found computer-assisted therapy was more cost-effective, and was as good in terms of weight loss as the 10 session condition. A further study found that the strongest predictor of weight loss was the frequency of use of the hand-held computers (Burnett *et al* 1992). Taylor and colleagues (1991) randomised 57 overweight women to a weight reduction programme using a pocket computer only , or a diet followed by the computer after they

had lost 3.5 – 4.5 kgs. All subjects also met for 4 1.5 hour sessions to review progress. They found that both groups managed significant weight loss but that the diet + computer lost significantly more weight.

Computers have also been used to good effect in the treatment of obsessive compulsive disorder (Baer *et al*, 1988) and generalised anxiety disorder (Newman *et al*, personal communication, 1997).

There are obvious advantages to using palm top computers as opposed to desk tops, principally in their portability and the potential for in vivo exposure and rehearsal of coping strategies. Palm-tops can also improve the reliability of self-monitoring by avoiding retrospective recall biases. Pilot studies in Australia and America have shown that palm-top computers are well accepted, lead to increased compliance and more reliable self-monitoring. In their pilot study an American team, lead by Michelle Newman, allocated 18 patients to either 12 session CBT or 4 sessions of computer assisted CBT. The results demonstrated that both treatments were equally effective at post treatment and 6 month follow-up. However this study was small and did not have a brief treatment with no computer condition therefore not much can be concluded about any additional benefit of the computer.

This case forms part of a large international multi-centre controlled trial of the delivery of CBT for panic disorder. Patients with panic disorder, with or without agoraphobia, are randomly allocated to either a treatment condition or a wait list. The active treatment groups are 12 sessions of weekly CBT, 6 sessions of weekly CBT or 6 sessions of weekly CBT supplemented with a palm-top computer. As such some of the methodological flaws inherent in previous studies are addressed, and hopefully conclusions about any additional benefits of the computer can be made.

LB – background information

LB was referred to the Clinical Psychology Department in December 1998 by her Psychiatrist (Appendix 1). She is a 46 year old lady with a history of depression and anxiety with a recurrence of panic symptomatology. She was seen for assessment in a clinical psychology out-patient clinic in February 1999.

LB reported having suffered from episodes of depression with marked anxiety symptoms for 21 years. The first episode occurred in the period after her first child was born and was of a severity requiring hospitalisation. Since then she has depressive episodes of varying severity. Over the past year, however, treatment with Imipramine helped considerably. Her mood significantly lifted although she continued to suffer from marked and disabling panic attacks at a frequency of approximately one a week. Her main catastrophic cognitions relate to fainting in public. LB was engaging in some avoidance behaviour and was mildly agoraphobic. She admitted her panic attacks would be more frequent if she did not avoid anxiety-provoking situations. She had been unable to attend an anxiety management course at the Day Unit, for example, due to fears of

being around other people. She was also unable to go shopping, travel on public transport or attend church.

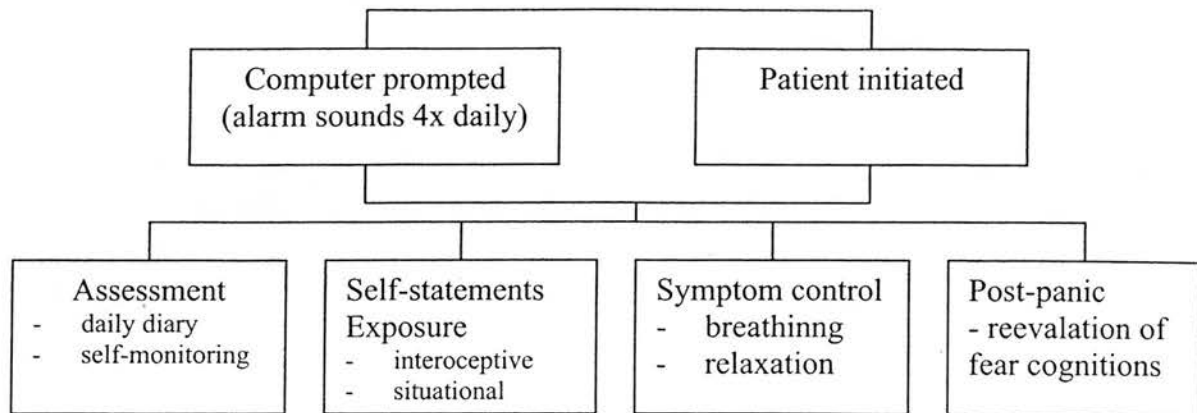
LB was working as a self-employed hairdresser. She lives at home with her second husband and son. She also has a daughter who lives locally. She has been married to her husband for 11 years and describes him as supportive. This is in marked contrast to her first husband and father, both of whom she found cold, inconsiderate, domineering and possessive. Eventually she divorced her first husband and brought up her 2 children alone until she met her second husband. She has had 2 previous contacts with Clinical Psychologists. She was seen in 1983, 6 years after having had a “nervous breakdown” following the birth of her son. At that time she was suffering from panic attacks and agoraphobia which she attributed to the strain of her marriage. She was given behaviour therapy for her anxiety problems and exploratory psychotherapy for marital difficulties. Her panic attacks decreased in intensity, although not in severity and she was discharged after 7 months. She was again seen in 1992 with similar anxiety problems. This time her teenage daughter was causing difficulties at home. She was also attempting to reduce her dependence on Ativan. She was seen on 6 occasions for anxiety management and made good progress.

Generally LB admitted to often taking on other peoples’ problems which she was finding particularly exhausting of late. Her self-esteem, although low, was improving. Her main goals from therapy were to develop better control of her anxiety symptoms.

Formulation

Lb apparently suffered an episode of post-natal depression following the birth of her first child, which at the time was undiagnosed. She received little support from her husband and became isolated and withdrawn. Her depression was maintained by lack of any form of pleasure in her life. The baby was demanding and LB felt she was failing as a mother. Her self-esteem was eroded and this was exacerbated by her husband’s comments and his treatment of her. Over the years LB continued to suffer from depression – largely linked to her by now chronic self-esteem problems. She also felt she had little control over her life and became panicky when any additional stress arose. After suffering from several panic attacks the fear of another returning made her hyper-vigilant for any symptoms which may escalate. Frequent self-monitoring and misinterpretation of anxiety symptoms increased the frequency of her panic attacks, and she exhibited behavioural avoidance and relied on medication in an attempt to cope. This weakened her perceived self-efficacy and of course led to an increasingly restricted lifestyle. Her feeling of being out of control in this respect was a factor in keeping her self-esteem low.

Details of computer programme



The computer programme has 2 main elements – a diary function and a treatment component. As a diary, the computer prompts the patient at 9 pm each day to report her average level of anxiety and frequency of panic attacks that day. The treatment part combines self-monitoring and therapy components, assisting the patient with cognitive restructuring, exposure and breathing retraining tasks. This part of the programme can be initiated in one of two ways:

- the patient can switch it on as required and follow directions, or
- the computer sounds an alarm and starts by itself 4 times a day, at 8am, 12 noon, 4pm and 8pm.

The patient was told to initiate the programme if she was having a panic attack, if she was afraid she was going to have an attack, if she was feeling anxious, or if she wanted to practise the techniques.

The treatment programme consists of 3 modules:

- self-statement and exposure
- symptom control
- post-panic module

In the first module the patient was asked to assess her catastrophic fears, and to rate the severity and the degree to which she believed those fears. The computer then presented the patient with a series of self-statements and suggestions which help her modify her cognitions and reduce her fear. The patient was also instructed to remain in the present situation and allow the fear to subside.

The “symptom control” module firstly conducts a self-assessment of breathing rate, then calculates the rate and provides a message giving feedback about breathing, prompting patients to practise a controlled respiration exercise to achieve an optimal breathing rate.

The “post panic” module is a computer-initiated programme that bleeps the patient 30 minutes after each computer interaction requesting her to re-evaluate the severity of, and belief in their fears. It also asks about panic occurrence and success in controlled breathing. The programme then presents a series of self-reinforcement and re-evaluation statements.

Procedure

The patient was seen for brief assessment by the potential therapist within 4 weeks of receiving a referral letter. The patient was then seen by a research assistant for screening interview using the Structured Clinical Interview Diagnostic-Revised (SCID).

Eligibility assumed the following :

- Panic disorder classed as primary problem (both by patient and SCID), with or without agoraphobic avoidance.
- Duration of current episode at least 3 months .
- Frequency of panic attacks of at least 4 in the past 4 weeks.
- Informed adults aged between 18 and 60 years.
- No evidence of organic mental disorder, psychosis, alcohol or drug dependence or have medical conditions similar to panic (e.g. cardiovascular disease, asthma or epilepsy).
- Patients on concurrent medication should ideally have been on the same stable regime for 3 months prior to the study. It is necessary that they remain on the stable regime until at least after the 3 month post-treatment assessment.
- No concurrent CBT in current episode

The patient was then asked to complete a battery of questionnaires.

Measures

In addition to the SCID to assess status at pre post and follow-up, these self report questionnaires were completed by the patient before and after treatment, and at 6 month follow-up.

- State-Trait Anxiety Inventory (Spielberger *et al*, 1970)
- Chambless Mobility Inventory for Agoraphobia (Chambless *et al*, 1985)
- Fear Questionnaire (Marks and Mathews, 1979)
- Body Sensations Interpretation Questionnaire (Chambless *et al* 1984)
- Agoraphobic Cognitions Questionnaire (Chambless *et al*, 1984)
- Beck Depression Inventory (Beck *et al*, 1961)
- Fear Survey Schedule III (Bernstein and Allen, 1969)
- Medical Outcomes Survey - SF36 (Ware, 1994)

LB was then randomly allocated to the the computer assisted CBT.

The computer-assisted CBT extends over 6 sessions, with an immediate start and the following format:

Session 1

Provide treatment rationale and guidelines on how treatment will be conducted.

Discuss somatic symptoms of panic followed by the cognitive model of panic and anxiety, including some irrational fears about anxiety itself.

Elicit the patient's thoughts and beliefs about panic.

Introduction to concept of computer

Homework

Use computer to monitor thoughts, beliefs and sensations for all panic attacks and anxiety episodes and to monitor daily anxiety and mood.

At this session LB seemed keen to engage in the treatment and hopeful about the outcome. She demonstrated insight into the nature of her catastrophic cognitions and fears. She certainly was willing to take responsibility for home practice and monitoring.

Session 2

Instructions on use of computer.

Discuss effects of hyperventilation and introduce controlled diaphragmatic breathing.

Describe components of cognitive therapy and the need for the patient to identify and challenge anxious/panic cognitions.

Review types of cognitive errors, particularly over-estimation of events and predictions of panic.

Develop countering strategies.

Set exposure goals.

Homework

Practice controlled breathing twice a day for 10 minutes, record practices, continue computer monitoring and intervention.

LB seemed well engaged in therapy by session 2. She admitted, however, concerns about using the computer – mainly to do with her perceived incompetence in this area and fears it would act to exacerbate her anxiety. We also had a lengthy discussion about how it could be best incorporated in her daily schedule.

Session 3

Review computer output including patient's experience with each panic/exposure episode.

Use output to reinforce successful strategies or to develop more adaptive ones.

Determine progress with controlled breathing.

Examine role of catastrophic cognitions.

Present countering techniques and measure strength of beliefs of important cognitions.

Introduce and practice interoceptive exposure.

Set exposure goals.

Homework

Continued use of computer for cognitive intervention, exposure practice and controlled breathing; continue to monitor daily anxiety and mood.

LB was, after a week of using it, reassured about fears of the computer. She was finding it a helpful prompt. In this session we also had a discussion about the effects of her chronic anxiety and depression on the family system and her view of herself as a result.

Sessions 4, 5 and 6 are similar to session 3 – starting with a review of anxiety/panic attacks which are used to reinforce more adaptive ways of coping. In later sessions greater emphasis is placed on relapse prevention and consolidation of treatment gains. Homework is similar to that from session 3.

LB made good use of the therapy time- and largely anticipated logical next steps in homework herself. Some time in sessions was also given to addressing self-esteem issues. She expressed some anxieties about maintaining treatment gains herself after the end of therapy and relapse prevention strategies were discussed.

The patient received a written self-help guide to supplement material discussed during sessions with the therapist. This included information on how to use the computer.

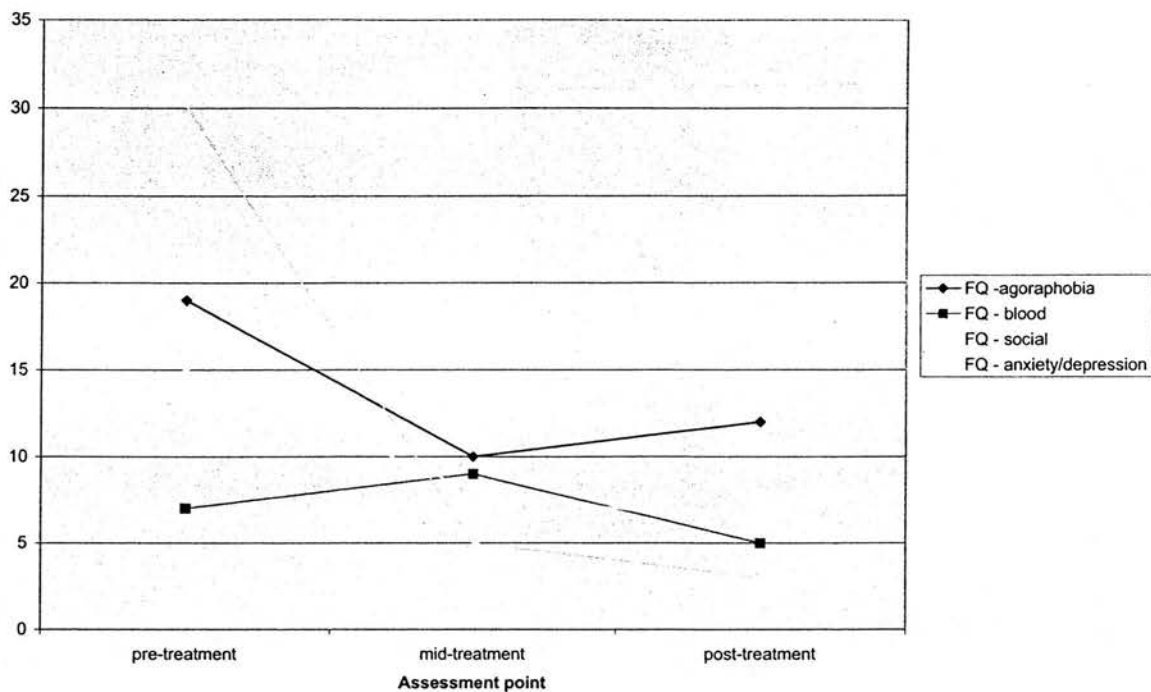
Results

To date, only pre, mid and post-treatment data are available on outcome measures for LB. The 6 month period of follow-up is not completed therefore follow-up scores are not yet available.

Over the course of treatment LB's frequency of panic attacks reduced from 6 per week before treatment began, to 0 at the mid treatment point, and 3 post-treatment. Data for measures taken from LB before, mid and after therapy are represented graphically below. As can be seen, on all measures taken LB shows an improvement between pre and post treatment. Her self-rated severity of panic attacks goes down from an average score of 6 to 0.5, for example.

Panic Severity

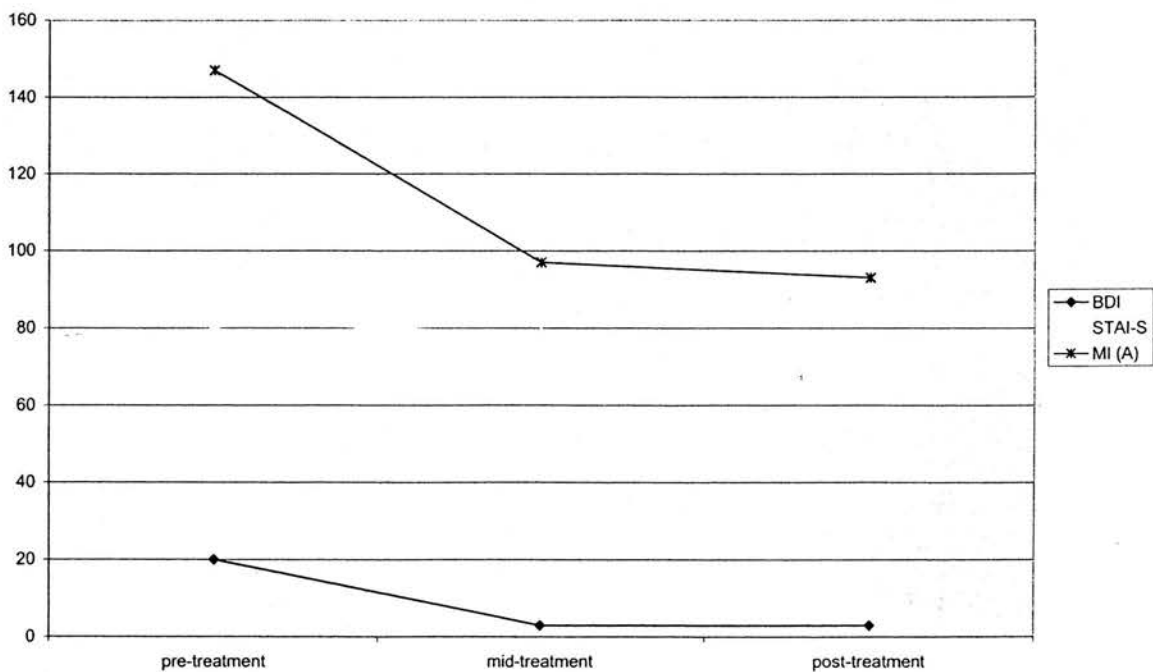
Fear Questionnaire



Fear Questionnaire

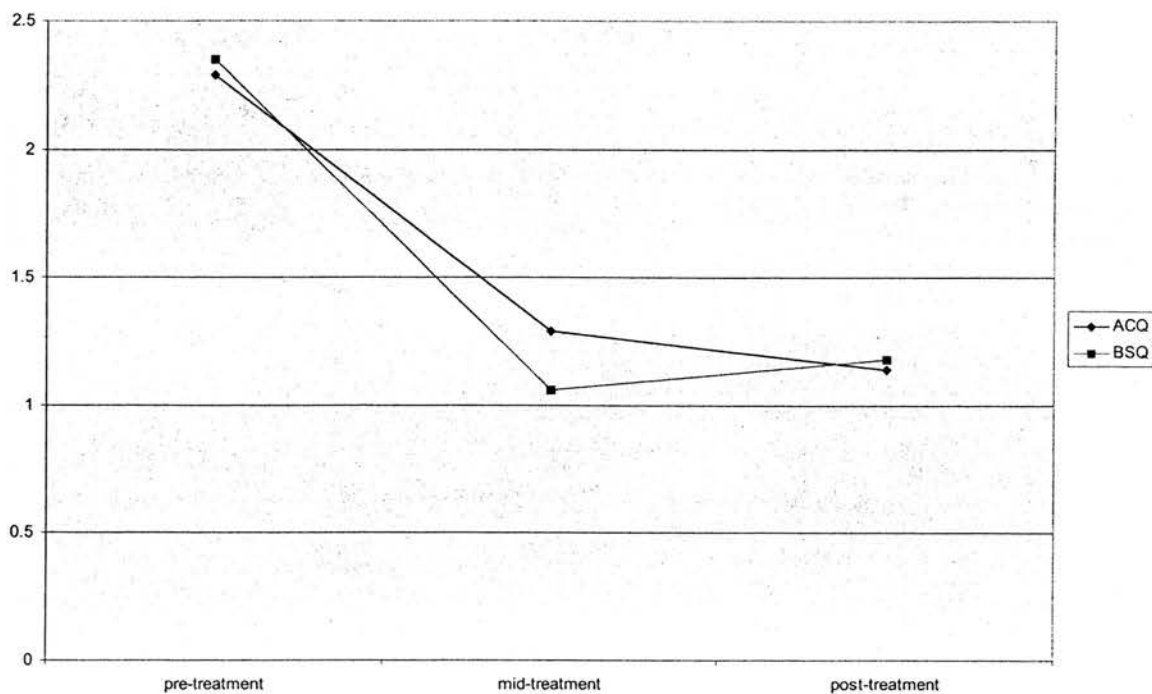
Beck Depression Inventory

State/Trait Anger Inventory (state) Mobility Inventory (agoraphobia)



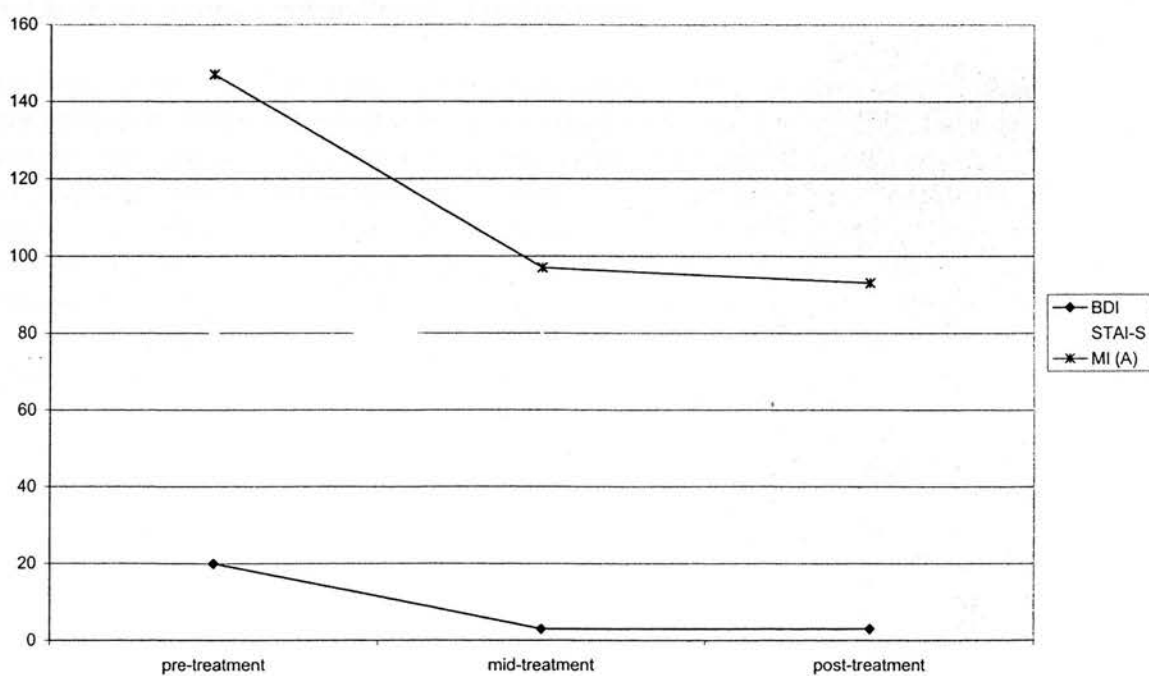
Agoraphobic cognitions questionnaire and Body Symptoms Interpretation Questionnaire

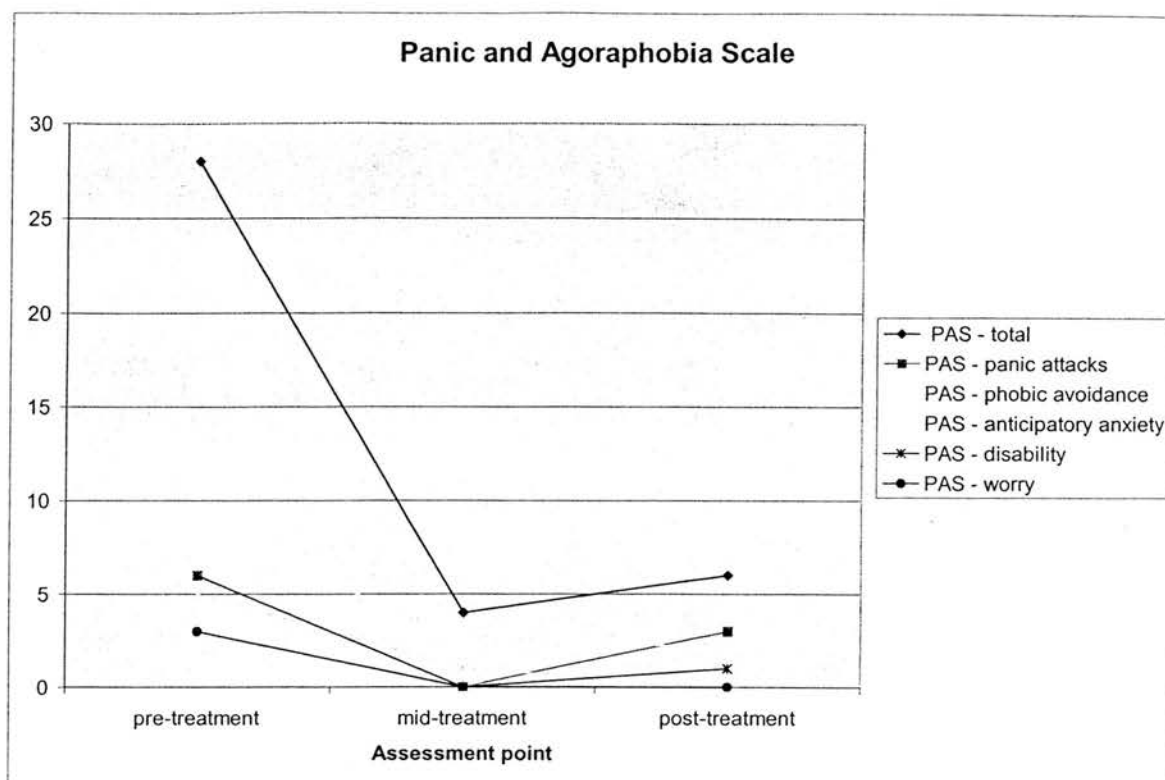
Agoraphobic Cognitions Questionnaire and Body Symptom Interpretation Questionnaire



Beck Depression Inventory

State/Trait Anger Inventory (state) Mobility Inventory (agoraphobia)





Discussion

Results indicate that computer-assisted therapy was effective in the management of LBs panic disorder and associated agoraphobia. On all measures her post-treatment scores indicate improvement.

Certainly on measures of agoraphobic cognitions, mobility, depression, anger-state, fears (general and specific), agoraphobic anxiety, worry, anticipatory anxiety and panic severity LB shows a consistent and marked improvement.

It is interesting, however, that on measures of frequency of panic attacks, agoraphobia, and body symptom interpretation she shows a marked reduction between pre and mid-treatment, but her scores rise slightly between mid and post-treatment. One possible explanation for this would be that in the later stages of therapy more emphasis is placed on exposure to higher anxiety provoking situations, therefore temporarily escalating panic symptoms until habituation and mastery is perceived, and elevating fears of going out. However, the slight increase in scores seen in the agoraphobia sub-scale of the Fear Questionnaire is not mirrored in the agoraphobic anxiety subscale of the Panic and Agoraphobia Scale (PAS) or in the Agoraphobic Cognitions Questionnaire, therefore may be spurious.

LB attended all 6 therapy sessions, cancelling an appointment on only one occasion due to illness. Despite initial concerns she adapted well to the palm-top computer and soon became comfortable with its use. This would appear to support previous studies that indicated that palm-top computers are well accepted. She reported finding the evening prompt to complete the daily diary helpful, which again adds support to previous assertions of such computers leading to increased compliance and more reliable self-monitoring.

As described previously the patient was assessed before and after treatment, and will be at 6-month follow-up. The computer is returned at 3 months however (i.e. 6 weeks post-treatment). It will be interesting to see if follow-up data indicate that gains made in the active therapy stage, are largely sustained during the follow-up period. It will also be relevant to examine if there is any difference in the follow-up period in the period when LB retained the computer, to the 3 month period without. This will have to be explored by comparing computer records with the follow-up outcome measures. Anecdotal evidence indicates that as patients become more familiar with anxiety management techniques and able to practise them in vivo, they rely on the computer less for structured rehearsal. Frequency of usage of the computer is often seen to decline as during the follow-up period with time.

It can be concluded, then, that 6 sessions of computer-assisted CBT was effective for LB for reducing her panic symptoms and associated agoraphobia. It was also shown to be beneficial in the improvement of concurrent symptoms of depression, worry, fear, mobility, anger and body symptom misinterpretation. Clearly many of these measures are correlated, however the package does seem to effect change in a number of areas. Without a non computer assisted therapy condition with which to compare it is difficult to conclude much about the added benefit of the palm-top computer. This comparison is part of a larger study which is being written up separately. The computer did appear to be effective as an adjunct for CBT, and possibly aided compliance and accuracy of self-monitoring. It was well accepted by the patient and may indicate a basis for more cost-effective ways of delivering therapy.

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AT/CM

29TH April 1999

Dr.
Markinch Medical Medical
19 High Street
MARKINCH

Dear Dr.

Markinch - (d.o.b. ...)

This pleasant lady was referred to us by Dr. ... from Dunnikier Day Unit. As you will know from previous correspondence, following assessment she met the selection criteria for inclusion in the panic disorder treatment trial. I therefore saw her for 6 sessions of computer assisted cognitive behaviour therapy latterly on 26th April 1999.

... has suffered from episodes of depression and marked anxiety symptoms for years now. She describes the first episode being 21 years ago shortly after her son was born, for which she was hospitalised. Since then she has had depressive episodes of varying severity. However over the past year she has felt the Imipramine prescribed by Dr. ... has helped a lot. She finds her husband (her second marriage) very supportive which is in marked contrast to how she found her first husband and her father. She has felt that latterly her depression has lifted considerably, however she continued to suffer from panic attacks. These are particularly bad in crowded situations and she showed a degree of mild agoraphobia. When we first met she was experiencing panic attacks at a frequency of approximately one a week, but admitted this would be much more if she did not avoid anxiety-provoking situations. More generally, she appears to have a fairly low self-esteem, and feels that she is unable to do anything adequately on her own. However, of late she has been challenging this assumption more now than ever before.

As I said, we met for 6 sessions of cognitive behaviour therapy, which was supplemented by the use of a palm top computer which, in addition to having a monitoring function included cognitive and behavioural exercises for ... to practise at home. She appeared to make good use of the strategies she learned, finding the breathing techniques particularly useful for controlling her panic attacks. She also did well to gradually expose herself to increasingly anxiety-provoking situations, using them both to rehearse her coping skills and improve her confidence. She developed the use of distraction techniques, and found that both distraction and breathing strategies soon became of routine use for her. She has been able to put herself in situations which were previously very anxiety-provoking for her, such as going to the supermarket, going to church, going out for a meal, all of which she has coped well with. She is particularly pleased that she managed to drive to Dundee last week which was a particular achievement for her as she had one of her first panic attacks in Dundee. She also is identifying and challenging any of the negative thoughts she has about her perceived lack of control over the panic attacks and their feared consequences.

I feel I ... made significant improvements with regard to controlling her panic attacks and more general symptoms of anxiety. She has now not had any panic attacks for approximately 1 1/2 months now and feels she is now getting on top of controlling them. She is clearly somebody who has had chronic anxiety problems. However I hope that with continued success in managing them she will increase in confidence further. I have encouraged her to continue using strategies she has found useful, however I think she is now sufficiently well that I can discharge her from my caseload. Please feel free to re-refer her at any point in the future should you consider it appropriate.

Yours sincerely,

Aileen S. Thomson
Chartered Clinical Psychologist

Cc Dr. S ... Dunnikier Day Unit