A Portfolio of Study, Practice and Research Submitted for the Doctor of Psychology (PsychD) in Clinical Psychology Conversion Programme; University of Surrey.

Research Title: Attributional Style and Symptoms of Depression in Persons with Multiple Sclerosis.

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DECLARATION

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Signed:..... Date.....

Ian Indrik Kneebone

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SUMMARY

This portfolio provides three dossiers of endeavor in clinical psychology, professional practice, academic review and research, in order to demonstrate enhanced competence in this discipline. A personal study plan outlines the aims and objectives of the portfolio. The professional dossier then provides a copy of professional qualification in clinical psychology, followed by a detailed curriculum vitae outlining professional training and practice. The dossier also contains an autobiographical overview detailing development as a clinical psychologist specialising in working with older adults and a survey conducted to objectively document deficiencies in clinical psychology training courses in Australia, in this area. The academic dossier contains two critical reviews. One of 'Psychological management of post-stroke depression', the second of 'Coping and caregivers of persons with dementia'. The research dossier contains a paper reporting on research carried out within initial professional (Masters) training along with 12 month follow-up data obtained subsequent to the completion of the qualification. Finally, a piece of new research is presented 'Attributional style and symptoms of depression in persons with multiple sclerosis'.

PERSONAL STUDY PLAN

PsychD University of Surrey

Name: Ian I Kneebone
Date of registration: 21 April 1998
Registration number: 3721272

1 Overall Aim

To produce a portfolio which demonstrates the achievement of enhanced competence in clinical psychology by presenting a summary of work undertaken since the commencement of clinical training and through participation in the requirements of the PsychD (Clinical) conversion course programme of study.

2 Objectives

1. To provide a dossier that demonstrates enhanced professional competence.
2. To provide a dossier that demonstrates enhanced academic competence.
3. To provide a dossier that demonstrates enhanced research competence.

2.1 Professional Dossier

2.1.1 Aim

To demonstrate professional competence.

2.1.2 Objectives

1. To provide an account of professional training and practice by way of an extended curriculum vitae.
2. To detail development of competence as a clinical psychologist (in particular a clinical psychologist specialising in work with older adults) by providing:
 - (i) An overview of the process of achieving enhanced competence, summarising contributions to supervision, teaching, research and other professional activity.
 - (ii) A conference paper outlining the results of a survey of teaching about older adults in APS (Australian Psychological Society) approved clinical training programmes, which formally identified a deficiency and supported the development of a professional course, taught by myself.

2.2 Academic Dossier

2.2.1 Aim

To demonstrate academic competence.

2.2.2 Objectives

- 1 Provide a paper of up to 4500 words considering “Psychological management of post-stroke depression”.

The chances of developing depression are enhanced in persons who have had a stroke (e.g., Robinson, Starr & Price, 1987) and this complication has been demonstrated to affect the outcome of rehabilitation (Parikh et al., 1990). The review will critically

examine the literature on psychological management of depression in this challenging population and make suggestions as to future research opportunities.

- 2 To provide a paper of up to 4500 words considering "Coping and caregivers of persons with dementia".

The United Kingdom is facing a significant health care challenge over the next 20 years as the number of persons over 85 doubles. In particular this population increase will bring with it a substantial rise in the number of persons with dementia and correspondingly an increase in the number of persons caring for a loved one at home with this problem.

It is now well established that providing care to a person with dementia is stressful (Baumgarten et al., 1992; Grafstrom, Fratiglioni, Sandman & Winblad, 1992). The review will critically consider the literature on coping strategies of dementia caregivers attempting to identify which might mediate the effects of stress, and thus have implications for stress management interventions.

References

Baumgarten, M., Battista, R. N., Infante-Rivard, C., Hanley, A., Becker, R., & Gauthier, S. (1992). The psychological and physical health of family members caring for an elderly person with dementia. Journal of Clinical Epidemiology, 45, 61-70.

Grafstrom, M., Fratiglioni, L., Sandman, P. O., & Winblad, B. (1992). Health and social consequences for relatives of demented and non-demented elderly: A population based study. Journal of Clinical Epidemiology, 45, 861-870.

Parikh, R., Robinson, R., Lipsey, J., Starkstein, S., Federoff, J., & Price, T. (1990). The impact of post stroke depression on recovery in activities of daily living. Archives of Neurology, 47, 785-789.

Robinson, R. G., Starr, L. B., & Price, T. R. (1987). A two year longitudinal study of mood disorder following stroke. British Journal of Psychiatry, 144, 256-262.

2.3 Research Dossier

2.3.1 Aim

To demonstrate research competence by providing evidence of a significant contribution to knowledge in clinical psychology.

2.3.2 Objectives

1. To present a paper published in a peer reviewed professional journal arising from the thesis originally submitted for the Master of Psychology (Clinical) degree I was awarded from the University of Western Australia, but which also incorporates 12 month follow-up data obtained subsequent to the completion of the master's qualification. Title of the thesis and paper is 'Partner involvement in the treatment of chronic headaches'.
2. To present a piece of new research conducted during my enrolment in the PsychD (conversion) programme, as proposed below.

Title: Attributional style and symptoms of depression in persons with multiple sclerosis.

Supervisor: Dr Emma Dunmore

Background and Relevance of the Proposed Study:

Multiple sclerosis (MS) is a neurological condition, which involves selective destruction of the myelin sheath, which insulates nerve fibres. This disrupts neural transmission and can lead to symptoms including fatigue, weakness, loss of limb control, dysarthria, eye problems, incontinence and cognitive changes. There are two main sub types of MS, relapsing remitting MS (exacerbations interspersed with periods

of stability), and chronic progressive MS (progressive deterioration without periods of remission). On account of its effects a large number of persons with MS encounter significant dependency as the disease progresses.

Given its impact on an individual it is not surprising that up to 40% of persons with MS experience depression (Joffe, Lippert, Gray, Sawa, & Horvath, 1987). Emotional distress, however, does not appear to be related to objective levels of disability, but with periods of symptom exacerbation/progression and psychological factors such as subjective impression of impairment (Dalos, Rabins, Brooks & Odonnell, 1983; Devins & Seland, 1987; Zeldow & Pavlou, 1984). It is the psychological factors that are the interest of the proposed research.

The helplessness/hopelessness cognitive theory of depression proposes that an internal, stable, global attributional style for negative events places individuals at risk for the development of depression and conversely an external unstable specific attribution for negative events will moderate against its development when negative (stressful) events are experienced (Abramson, Metalsky & Alloy, 1989; Abramson, Seligman & Teasdale, 1978). While components of this theory has been investigated and supported in persons without a major physical illness (Metalsky, Joiner, Hardin & Abramson, 1993), in persons with depressive symptoms associated with other psychiatric disorders (Metalsky, Joiner, Wonderlich, Beatty, Staton & Blalock, 1997) and persons with significant physical conditions (Chaney et al., 1996) only one study has evaluated its role in the depression of persons with the significant physical illness, multiple sclerosis (Barrett, 1992), finding no evidence for any contribution. Given the weight of evidence from other areas and the methodological shortcomings of the only study to date (particularly low sample size), the proposed investigation is designed to make a further test of the helplessness/hopelessness theory in persons with MS. Specifically it is proposed to consider the relationship between negative events, attributional style and depressive symptoms across a large sample of persons with MS.

It is considered the proposed investigation could contribute to the development of appropriate assessment strategies to identify those with MS at risk for developing

depression. It could also provide evidence to support the use of treatments (such as cognitive therapy) that directly address dysfunctional attributional style.

Recent developments indicate that the attributional dimension, internality/externality should not be included in investigations into the relationship between attributional style and depression, as its coherence is open to question (Dykema, Bergower, Doctora & Peterson, 1996). Accordingly the dimensions of stability and globality are those to be assessed to establish negative attributional style in the proposed study.

Proposed Study Hypotheses:

1. That participants with MS who report high levels of depressive symptoms will demonstrate a higher stable global attributional style for negative events than persons with MS who report moderate and low levels of depressive symptoms and in turn those who report a moderate level of depressive symptoms will demonstrate a higher stable global attributional style for negative events than those who report low levels of depressive symptoms.
2. That there will be a significant relationship between attributional style for negative events and depressive symptoms in participants with MS such that the more stable and global the attributional style of participants, the higher their levels of depressive symptoms.
3. That recent negative events and a negative (stable, global) attributional style will interact to predict depressive symptoms in participants with MS, specifically that the more recent an individuals relapse (for participants with relapsing-remitting MS) and the greater the accumulation of recent general life stressors (for participants with any type of MS) and the more negative (stable, global) their attributional style, the higher will be their level of depressive symptoms.

Method:

Participants with MS will be obtained via advertisement in the main newsletter of the MS Society of Great Britain and Northern Ireland.

Procedure:

Ethical approval for the study will be sought from the University of Surrey Advisory Committee on Ethics.

Following ethics approval, the MS Society will advertise for participants in their main newsletter. Participants will be able to either send in their name and address details (freepost) or phone, in order to express interest in participation.

The study questionnaires (assessing the variables of interest) including information sheets and consent forms will then be sent out. A post paid envelope will be included for return of these materials. Participants will have the option of having their GP informed of their involvement in the study. Those scoring high on the measure of depression will be notified of this with a suggestion they contact their GP or the principal investigator should they be concerned.

Major Measures:

Centre for Epidemiological Studies of Depression scale (CES-D) (Radloff, 1977) is a 20 item self report measure which obtains information on symptoms of depression experienced over the past week. The measure was developed to assess symptoms in non-psychiatric populations. It is psychometrically sound (Johnston, Wright & Weinmann, 1995) and has been previously used with illness populations (Devins et al., 1988). CES-D scores will be used as the basis for a split between participants based on whether they report low, moderate or high levels of depressive symptoms.

The Attributional Style Questionnaire-Survey (ASQ-S) (Dykema et al., 1996) asks subjects to write down one principal cause of specified events then rate this cause on a seven point scale for its degree of stability and globality. A composite sub-scale for negative outcomes is available from the instrument, score range one to seven.

Time Since Relapse Participants will be asked to indicate how long it has been since the last flare up of their MS symptoms. This will amount to an assessment of a negative MS related event, with intensity presumed to equate with recency. The measure is considered most relevant to participants with relapsing remitting MS. Inclusion of this measure will allow the effect on depressive symptoms of MS related stress both independently, and in interaction with negative attributional style, to be considered in the study.

The Recent Life Change Questionnaire (RLCQ) (Miller & Rahe, 1997) is a checklist of 74 potential recent life change events in a person's life. Life stressors are weighted in terms of the readjustment required by each. Inclusion of this measure will allow the effect on depressive symptoms of recent general life stressors both independently, and in interaction with negative attributional style, to be considered in the study.

Variables of Subsidiary Interest

General Information

A range of general information will be collected from participants via a questionnaire composed by the researcher, the General Information Questionnaire MS (GIMS). This will seek a variety of information including; age, sex, marital status, living circumstances, years of education, ethnicity, employment history, psychiatric history, use of medication, diagnosis and time since diagnosis.

The association between age, gender, education, socio-economic status, marital status, employment status, and disease related variables (including medication usage) and depressive symptoms will be considered in the study. Other variables obtained from the GIMS will be used for descriptive purposes.

Disability

Two measures of disability will also be used in the study. The Barthel Index (BI) (Mahoney & Barthel, 1965) is a 10 item assessment of independence in daily activities. The scale is one of the most widely used measures of serious disability and activities of daily living. Internal consistency and the validity of the scale have been established (Wade & Langton-Hewer, 1987). Higher-level disability will be assessed using the Functional Assessment Screening Questionnaire (FASQ) (Seltzer, Granger & Wineberg, 1982). The FASQ was designed for use with medical patients having moderate disability. Reliability is adequate and the questionnaire appears to be minimally contaminated by cognitive-affective variables (Millard & Jones, 1991).

Together the BI and the FASQ will provide two separate measures of disability. The association between disability and depressive symptoms will be considered in the study sample.

A number of other questionnaires assessing other cognitive variables and stressful life events will also be administered. This will allow their comparison with the measure of attributional style in terms of ability to predict depression in the study sample. These will include:

The MS Attitudes Index (MSAI) (Shnek, Foley, La Rocca, Smith & Halper, 1995) is a specific measure of helplessness in relation to MS. It consists of five likert-type items purported to evaluate patients' perceptions of helplessness in coping with MS. The scale yields a single "helplessness" score.

MS Attribution Question (MSAQ) It is proposed to develop a question to assess persons who have MS' attributions (stable and global) regarding deterioration in their condition.

Perceived MS Control Similarly to the MSAQ, a single question will ask how much control MS sufferers perceive themselves as having over their illness.

The Psychological Vulnerability Scale (PVS) (Sinclair & Wallaston, 1999) consists of 6 items measuring cognitions that are considered to promote harmful reactions to stress.

Statistical analyses

Major analyses:

An ANOVA will be run with planned comparisons testing hypothesis 1 as outlined above. Pearson product moment correlation will be run to establish whether there is a significant relationship between negative attributional style (ASQ-S) and depressive symptoms (CES-D) (Hypothesis 2) and to investigate associations between all the other variables included in the study. Subsequently, Hypothesis 3 will be tested via multiple regression.

Subsidiary analyses:

Multiple regression analyses will be performed to enable a better understanding of the role of attributional style in relation to depressive symptoms, relative to other variables. These analyses will consider demographic, disease related and psychological variables as described above, dependant on the results of initial correlations.

Power and practical significance:

A power of .80 (allowing for the detection of a true effect 80% of the time) and maximum significance level of .05 has been suggested as appropriate in the behavioural sciences (Cohen, 1977). These conventions will be adopted in the proposed study. A conservative, non-directional (2-tailed) critical region will also be used. For the oneway ANOVA with planned comparisons anticipated this means a minimum group size for each of the 3 groups split on the basis of depressive symptoms scores would be

53. This would allow for the detection of a medium size effect based on convention (Effect size $f = .25$) (Faul & Erdfelder, 1992). Should participants report significant depressive symptoms (a score of 17 or over on the CES-D) at the same rate (around 50%) as in the only previous sample with MS in which this figure has been published for this instrument (Shnek et al., 1995), a sample of 212 will be required (50% (106) no or low depression, the further 50% (106) split into two groups, moderate and high depressive symptoms, $n = 53$ for each of the groups). For bivariate correlations, for the same level of power to be achieved, a minimum sample of 195 participants will be required to detect a small-medium population effect ($r = .20$) (Cohen, 1977). This is seen as acceptable and relevant in attribution-depression research (Robins, 1988). For the multiple regression analyses a sample of 250 is required if fairly small R^2 's (around 8%) are to be detected allowing for up to 20 variables to be included in the analyses (Hair, Anderson, Tatham & Black, 1998). Overall, on the basis of the planned statistical analyses, the minimum total number of participants required for the study to be of sufficient power, at the standard set, is 250.

If a large sample is successfully recruited for the study this could raise the problem of statistical analyses being over sensitive, with the potential to indicate any relationship is statistically significant. Accordingly, in line with the levels recommended for attribution-depression research as noted above (Robins, 1988), a level of relationship of .20 obtained in the correlational analyses will be used as a cut off for identifying variables associated with depressive symptoms that are of practical significance.

References

- Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness, depression: A theory based sub-type of depression. Psychological Review, 96, 358-372.
- Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. (1978). Learned helplessness in humans: Critique and re-formulation. Journal of Abnormal Psychology, 87, 49-74.

Barrett, L. (1992) The hopelessness theory of depression: A test of the diathesis-stress component in a multiple sclerosis sample. Dissertations Abstracts International, 53, (5 - B), 2535B.

Chaney, J. M., Mullins, L. L., Vretsky, D. L., Doppler, M. J., Palmer, W. R., Wees, S. J., Klein, H. S., Doud, D. K., & Reiss, M. J. (1996). Attributional style and depression in rheumatoid arthritis: The moderating role of perceived illness control. Rehabilitation Psychology, 41, 204-223.

Cohen, J. (1977). Statistical power analysis for the behavioral sciences. New York: Academic Press.

Dalos, N. P., Rabins, P. V., Brooks, B. R., & Odonnell, P. (1983). Disease activity and emotional state in multiple sclerosis. Annals of Neurology, 13, 573-577.

Devins, G. M., Orme, C. M., Costello, C. G., Binik, Y. M., Frizzell, B., Stam, H. J., & Pullin, W. M. (1988). Measuring depressive symptoms in illness populations: Psychometric properties of the Center for Epidemiological Studies Depression (CES-D) Scale. Psychology and Health, 2, 139-156.

Devins, G. M., & Seland, T. P. (1987). Emotional impact of multiple sclerosis: Recent findings and suggestions for future research. Psychological Bulletin 101, 363-375.

Dykema, J., Bergbower, K., Doctora, J. D., Peterson, C. (1996). An Attribution Style Questionnaire for general use. Journal of Psychoeducational Assessment, 14, 100-108.

Faul, F., & Erdfelder, E. (1992). GPower: A priori, post hoc and compromise power analysis for MS Dos [Computer Program]. Bonn, FRG: Bonn University, Department of Psychology.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). Multivariate data analysis. (5th ed.) London: Prentice Hill

Joffe, R. T., Lippert, G. P., Gray, T. A., Sawa, G., & Horvath, Z. (1987). Mood disorder and multiple sclerosis. Archives of Neurology, 44, 376-378.

Johnston, M., Wright, S., & Weinman, J. (1995). Measures in health psychology: A user's portfolio. Windsor U.K.: Nfer-Nelson.

Mahoney, F. I., & Barthel, D. W. (1965). Functional evaluation: The Barthel Index. Maryland State Medical Journal, 14, 61-65.

Metalsky, G. I., Joiner, T. E., Hardin, T. S., & Abramson, L. Y. (1993). Depressive reactions to failures in a naturalistic setting. A test of the hopelessness and self esteem theories of depression. Journal of Abnormal Psychology, 102, 101-109.

Metalsky, G. I., Joiner, T. E., Wonderlich, S. A., Beatty, W. W., Staton, R. D., & Blalock, J. A. (1997). When will bulimics be depressed and when not? The moderating role of attributional style. Cognitive Therapy and Research, 21, 61-72.

Miller, M. A., & Rahe, R. A. (1997). Life changes scaling for the 1990's. Journal of Psychosomatic Research, 43, 279 - 292.

Radloff, L. S. (1977). The CES-D Scale: A self report depression scale for research in the general population. Applied Psychological Measurement, 3, 385-401.

Robins, C. J. (1988). Attributions and depression: Why is the literature so inconsistent? Journal of Personality and Social Psychology, 54, 880-889.

Seltzer, G. B., Granger, C. V., & Wineberg, D. E. (1982). Functional assessment: Bridge between family and rehabilitation medicine within an ambulatory practice. Archives of Physical and Rehabilitation Medicine, 63, 453-457.

Shnek, Z. M., Foley, F. W., LaRocca, N. G., Smith, R., & Halper, J. (1995). Psychological predictors of depression in multiple sclerosis. Journal of Neurological Rehabilitation, 9, 15-23.

Sinclair, V. G., & Wallston, K. A. (1999). The development and validation of a psychological vulnerability scale. Cognitive Therapy and Research, 23, 119-129.

Zeldow, P. R., & Pavlou, M. (1984). Physical disability, life stress and psychosocial adjustment to multiple sclerosis. Journal of Nervous and Mental Disease, 172, 80-84.

PROFESSIONAL DOSSIER

Ian I Kneebone

I. British Psychological Society Statement of Equivalence in Clinical Psychology

THE BRITISH PSYCHOLOGICAL SOCIETY

Incorporated by Royal Charter • Registered Charity No. 229642

MEMBERSHIP AND QUALIFICATIONS BOARD

COMMITTEE FOR SCRUTINY OF INDIVIDUAL CLINICAL QUALIFICATIONS

STATEMENT OF EQUIVALENCE OF OVERSEAS QUALIFICATIONS

This is to certify that the qualifications and experience of

IAN INDRIK KNEEBONE

have been scrutinised by the Committee for Scrutiny of Individual Clinical Qualifications on behalf of the Membership and Qualifications Board.

In the judgement of the Committee, those qualifications and experience are at least equivalent to those required for registration as a Chartered Clinical Psychologist and therefore for the practice of Clinical Psychology in the UK.

Convener
for and on behalf of the Committee

3 April 1998

PROFESSIONAL DOSSIER

Ian I Kneebone

II. Curriculum Vitae

II. Curriculum Vitae

NAME: KNEEBONE Ian Indrik

EMPLOYMENT

Position	Employer	Period
Consultant Clinical Psychologist (Rehabilitation Specialty)	Surrey Hampshire Borders NHS Trust (North Downs NHS Trust prior to April 1998)	Jan 1997 - Current
Senior Clinical Psychologist (Co-ordinator)	Osborne Park Hospital	Feb 1996 - Dec1996
Seconded Lecturer (Full Time)	School of Psychology Curtin University Bentley WA	Jul 1995 - Dec1995
Senior Clinical Psychologist	Osborne Park Hospital Osborne Place Stirling WA	Oct 1990 - Jan 1996
Clinical Psychologist	Osborne Park Hospital	Apr 1989 - Oct 1990
Programme Area Leader	Commonwealth Rehabilitation Service c/o Pirie Street Adelaide SA	Jul 1985 - Feb 1987
Rehabilitation Counsellor Grade II	Commonwealth Rehabilitation Service	Jul 1984 -Jul 1985
Rehabilitation Counsellor	Bedford Industries Rehabilitation Association Daw Park SA	
at	Katuni ATC 10-14 Tooronga Avenue Edwardstown SA	Jan 1984 - Jul 1984
at	Fleurieu Centre 98 Beach Road Christies Beach SA	Aug 1982 – Dec 1983
Volunteer Psychologist Assistant	Phoenix Society 18 Ashwin Parade Torrensville SA	Apr 1982- Jul 1982

EDUCATION

1978-1980

Bachelor of Arts (University of Adelaide)

Majors: Psychology
Anthropology

1981

Honours Psychology (University of Adelaide)

Thesis: The Perception of Control as a Variable in EEG Alpha Biofeedback Treatment of Headache.

Examinations Passed

- (1) Language
- (2) Sex Differences
- (3) Social Psychology and Stress
- (4) Counselling and Psychotherapy
- (5) History and the Philosophy of Psychology

1982

Visiting Student: Diploma in Applied Psychology
(University of Adelaide)

Psychological Assessment and Measurement *Pass*

1986

Part-time Enrolment: Master of Policy & Administration (Flinders University)

Reading Seminar in Policy and Administration *Credit*
Social Policy B *Pass*
(Degree incomplete)

1987

Master of Psychology (Clinical)
(University of Western Australia)

M.Psych. I

Courses completed:

Assessment

Introduction to Assessment
Child Assessment and Therapy
Neuropsychological Assessment

Clinical Problems

Child and Adolescent Problems
Adult Psychiatry

Behavioural Medicine
 Psychotherapy
 Theory and Research
 Techniques and Application

Research
 Preparation for Thesis Proposal
 Human Service Evaluation

1988

M.Psych. II

Courses Completed:

The Applied Psychologist and Intellectual Handicap
 Family Therapy
 Cognitive Behaviour Therapy
 Child and Adolescent Therapy
 Case Presentations

Thesis: Spouse-Involvement in the Treatment of
 Chronic Headache

1987-1988

Practical Experiences as part of the requirements for
 M.Psych (Clinical)

Apr 1987-Jul 1987

QEII Medical Centre, Dept. of Psychiatry and
 Behavioural Sciences

Aug 1987-Dec 1987

Royal Perth (Rehabilitation) Hospital, Dept. of
 Rehabilitation Medicine

Feb 1988-Apr 1988

Clinical Unit, Dept. of Psychology, University of Western
 Australia

May 1988-Jul 1988

Selby Child and Adolescent Clinic, Dept. of Health
 Western Australia

Aug 1988-Nov 1988

Neurosciences Unit, Dept of Health Western Australia

1994

Part-time Enrolment: Doctor of Psychology
 (University of Western Australia)

Research Project
 Clinical Practicum
 (Degree incomplete)

Ungraded Pass
Distinction

1998-2001

Part-time Enrolment: Doctor of Psychology
(University of Surrey)

Professional Dossier
Academic Dossier
Research Dossier

SCHOLARSHIPS

1987-1988

Commonwealth Postgraduate Coursework Award

1994

UWA, Dept. of Psychology, Part HECS Award

PROFESSIONAL COURSES

1990

Primary Certificate in Rational Emotive Therapy,
Australian Institute of Rational Emotive Therapy
M Bernard & R Dawson

1991-1992

Advanced Psychological Assessment: Psychodiagnostics,
Health Department of WA, R Smith & G Van Ireland

1993

Advanced Certificate in Rational Emotive Therapy,
Australian Institute of Rational Emotive Therapy
A Ellis, M Bernard, R Dawson & M O'Kelly-Collard

1993

Eye Movement Desensitisation and Reprocessing Level 1
F Shapiro

PUBLICATIONS

Kneebone, I. I., & Clarnette, R. (2000). End of life decisions: Who decides? PSIGE Newsletter, 72, 41.

Kneebone I. I., & Dunmore, E. (2000). Psychological management of post stroke depression. British Journal of Clinical Psychology, 39, 53-65.

Kneebone, I. I. & Martin, P. R. (2000). Coping and caregivers of people with dementia (Abstract). Clinical Neuropsychological Assessment, 1 (6), 15.

Kneebone, I. (1999). Post-stroke depression and the non-mental health therapist. British Journal of Therapy and Rehabilitation, 6, 476-481.

Kneebone, I. I. & Wilson, O. H. M. (1998). Cognitive behavioural treatment of balloon phobia in a thirteen year old boy. Clinical Psychologist, 3, 51-56.

Kneebone, I. I., Clarnette, R., & Frendin, L. (1997). The Dysfunctional Behaviour Rating Instrument: Utility in an Australian population. Australian Journal on Ageing, 16, 208-210.

Kneebone, I. I. (1996). Teaching about ageing: The new challenge for Australian clinical psychology. Australian Psychologist, 31, 124-126

Kneebone, I. I., & Harrop, A. (1996). Confidence in return home: Development of a measurement instrument. Australian Occupational Therapy Journal, 43, 19-23.

Kneebone, I. I., & Martin, P. R. (1992). Partner involvement in the treatment of chronic headache. Behaviour Change, 9, 201-215.

CONFERENCE PRESENTATIONS/SEMINARS GIVEN

July 1989	Partner Involvement in the Treatment of Chronic Headache.
Australian Behaviour Modification Association 12th National Conference, Perth, WA.
December 1989	Motivation for Exercise.
Health Department of WA, Physiotherapist Conference, Perth, WA.
August 1990	Confidence in Return Home (Aged Care).
West Australian Association of Occupational Therapists, State Conference (with A Stretch and S Zacconi), Perth, WA.
August 1992	Behaviour Assessment and Management for Hostel Supervisors and Carers. Anglican Aged Care, Adelaide, SA.
June 1994	Senectaphobia: The New Challenge for Australian Clinical Psychology. UWA Dept. of Psychology Conference, Perth, WA.
March 1995	Psychology and Geriatric Medicine. UWA Medical School, Perth, WA.
May 1995	Stress and Coping in Dementia Caregivers.
5th National Conference of the Alzheimer's Association, Brisbane, QLD.

August 1995	Older Adults in the Health Care System: Essentials for the Clinical Psychologist. Health Psychology Course, M.Psych., The University of Western Australia, Perth, WA.
November 1995	The "D"--ilemma: Differential Diagnosis between Depression and Dementia in Older Adults. WA APS Psychology and Ageing Special Interest Group Curtin University, Perth WA.
December 1995	Assessing the Older Adult: A,B,C and D. Seminar for The Clinical College of the APS, WA Branch Perth WA.
September 1997	Cognitive Behaviour Therapy with Older adults. Psychology Seminar Series North Downs NHS Trust.
November 1997	Developments in Cognitive Rehabilitation. Afternoon Seminar for North Downs and Heathlands NHS staff.
May 1998	Memory. Seminar for Headway, Surrey, Head Injuries Association Limited.
October and November 1998	Cognitive Assessment. Section of Workshop, Stroke Study Day, Surrey Hampshire Borders NHS.
October 1998	Management of Post Stroke Depression. Cross Trust Seminar, Surrey Hampshire Borders NHS (with H Boothby).
November 1998	Goal Setting in Practice. Workshop, Surrey Hampshire Borders NHS Clinical Practice Forum (with M Busch and S Lawrie).
March 1999	Merger Opportunities: The Management of Post Stroke Depression. Presentation, Surrey Hampshire Borders NHS Business Forum.
September 1999	Depression in Physical Rehabilitation. Presentation, Dept.of Physiotherapy, Royal Surrey County Hospital.
October and November 1999	Childhood Phobias: "Pop" Goes the Theory. Workshop, Surrey Hampshire Borders NHS Clinical Practice Forum (with O Wilson).
November 1999 and March 2000	Psychological Management of Stroke. Section of Workshop, Surrey Hampshire Borders NHS Stroke Study Days.

June 2000	CVA and Depression. Training session, Multi disciplinary Health Care Support Workers - Intermediate Care Scheme, Surrey Hampshire Borders NHS.
November 2000	Coping and Caregivers of People with Dementia. 1 st International Quality Research in Dementia Conference, London, UK.

ADVANCED HEALTH CARE DIRECTIVES (Let Me Decide)(Workshop Co-presenter)

The workshop considers the medical, ethical and psychological aspects of end of life decision making.

May 1994	Australian Association for Gerontology and Aged Care Australia, Hobart, TAS.
August 1994	Open Workshop for Aged Care Staff, Perth WA.
November 1994	Anglican Community Care, Adelaide, SA.
February 1995	Aged Care Education, Launceston, TAS.
February 1995	Queensland Health Department - Mackay Hospital, Mackay, QLD.
December 1995	Anglican Community Care, Adelaide, SA.
July 1999	Surrey Hampshire Borders NHS, Guildford UK.
July 1999	PSIGE BPS 19 th Annual Conference, Bath, UK.

AFFILIATE RESEARCH

1994-1996	Co-investigator, SAB-INT 12; The evaluation of sabeluzole in the treatment of Alzheimer's disease. Janssen-Cilag.
1995-1996	Co-investigator; Evaluation of the safety and efficacy of E2020 in the treatment of Alzheimer's disease. Quintiles-Eisai.
1996-1997	Consultant Advisor; Evaluation of E202026 in the treatment of Alzheimer's disease. SmithKline Beecham.

PROFESSIONAL SUPERVISION

Supervision received

1982-1984	Supervision for Registration as a Psychologist in South Australia provided by D Chatres, Psychologist.
1989-1991	Supervision for Clinical Registration in Western Australia provided by D Richards, Senior Clinical Psychologist.
1997	Supervision for Statement of Equivalence in Clinical Psychology (BPS) by O Wilson, Consultant Clinical Psychologist (Child and Family Services).

Supervision provided

1992 - 1996	Field Supervisor:
M.Psych. University of Western Australia
M.App.Psych. Murdoch University
M.Psych. Curtin University
July - Nov 1992	Clinical Supervisor (for Clinical Registration in Western Australia)
J. De La Hunt, Homes of Peace, WA.
1998 - Current	Clinical supervision for trainees
Psych.D University of Surrey.
D.Clin.Psychol. South Thames (Salomans)
Clinical Psychology Training Course.

RESEARCH SUPERVISOR

1995-1996	M.Psych. Curtin University
M.App.Psych. Murdoch University. |
|-----------|--|

TEACHING

1995	Clinical Health Psychology 538 (39 hours)
4th Year Curtin University.
1996	694 Applied Psychology and Older Adults (39 hours)
5th and 6th year (Clinical Masters) Curtin University.

605 Interventions Over the Life Span (9 hours)
5th and 6th year (Counselling Masters) Curtin University. |
| 1997, 1998, 1999 | Directive Therapies, The Psychology of Older Adults (3 hours) Year 2 (Clinical Doctorate) University of Surrey. |

2000

Behavioural and Cognitive Therapies for Older Adults
The Psychology of Older Adults (3 hours) Year 2
(Clinical Doctorate) University of Surrey.

WORK EXPERIENCE

Employer

Nature of work

Surrey Hampshire Borders
NHS Trust Rehabilitation
Service

Position: *Consultant Clinical Psychologist, Head of
Speciality, (Physical Rehabilitation).*
(Level B Clinical Psychologist)

The Surrey Hampshire Borders NHS Trust is a major provider of Community and Mental Health Services in its region. Physical rehabilitation services are made available on in, day and out patient bases via a network of community hospitals. The duties of the Clinical Psychologist in these programmes are as follows:

- a) Provide an assessment and treatment service to people with disabilities and health problems within the rehabilitation service
- b) Advise, guide and consult with relevant Trust staff on matters pertaining to the provision of clinical psychology services in rehabilitation
- c) Administer and manage the clinical psychology service in rehabilitation
- d) Carry out research and teaching relevant to the rehabilitation service and the work of the Trust

Osborne Park Health Service
Department of Geriatric
Medicine and Extended Care
/ Department of Psychiatry

Position: *Senior Clinical Psychologist (Co-ordinator)*

The Osborne Park Hospital is 220 bed general hospital situated in the northern suburbs of Perth WA. It provides medical, surgical and maternity services to the local community in addition to geriatric medicine and outpatient psychiatry. The duties of the Senior Clinical Psychologist (Co-ordinator) are as follows:

- a) Undertake the duties of a Senior Clinical Psychologist

- b) Represent the Department of Psychology on Management and other committees
- c) Manage the operations of the department in terms of:
 - i) recruitment and leave
 - ii) quality improvement
 - iii) policy development
 - iv) resource co-ordination
 - v) staff appraisal and development
 - vi) general administration

The Department of Psychology at Osborne Park Hospital currently employs six Clinical Psychologists

School of Psychology
Curtin University of
Technology

The Curtin University of Technology is an 8,000 student university whose School of Psychology conducts approved postgraduate programmes in Clinical, Occupational and Counselling Psychology. My duties included:

Position *Seconded Lecturer*

- a) Lecturer in Clinical and Health Psychology
- b) Supervision of Masters Level research
- c) Co-ordination of Clinical Masters placements
- d) Field liaison regarding Clinical Placements
- e) Participate in forward planning for the Clinical Masters Programme

Osborne Park Health Service Position: *Senior Clinical Psychologist*
Department of Geriatric
Medicine and Extended Care a)
/ Department of Psychiatry

- a) Undertakes a range of psychological assessments and interventions with individuals and systems.
- b) Develops and undertakes a range of psychological research of clinical, applied and evaluative natures.
- c) Contributes to the development of staff training and development.

- d) Co-ordinates support staff as required.
- e) Contributes to policy development.

Osborne Park Health Service Position: *Clinical Psychologist*

Department of Geriatric

Medicine and Extended Care a) undertakes psychological assessment and
/ Department of Psychiatry interventions

- b) Provides advice to colleagues on multidisciplinary teams
- c) Undertakes approved research and evaluation
- d) Contributes to disciplinary and multi-disciplinary team planning

Commonwealth
Rehabilitation Service,
Commonwealth Department
Community Services

Position: *Program Area Leader*

For approximately 8 months from July 1985 I was Program Area Leader of the specialist Vocational Training Unit of the CRS. In March 1986 I became responsible for the Intensive Treatment Unit. Whilst the activities of these two areas was different the duties of the Program Area Leader were similar ie:

- a) Manage and co-ordinate the activities of staff within the program area
- b) Monitor, evaluate and adjust programs as necessary, to ensure that they are aimed at achieving CRS and client objectives
- c) Co-ordinate the forward planning of area policy and programs following consultation with State Professional Seniors.
- d) Liaise with other Program Area Leaders and State Profession Seniors regarding client programmes
- e) Represent the program area on the Management Committee and the Review Committee as required.

The area for which I was last responsible provided intensive multidisciplinary treatment services to clients of the CRS. Most clients were those having acquired head injury. Some fifteen professional staff were responsible to me including: Occupational Therapists, Physiotherapists, Remedial Gymnasts, Speech Pathologists, a Teacher, a Nurse and a Sessional Neuropsychologist.

Commonwealth
Rehabilitation Service,
Commonwealth Department
for Community Services

Position: *Rehabilitation Counsellor Grade 2*

The Commonwealth Rehabilitation Service (CRS) provides for the assessment, treatment and training of Australian disabled persons in the working age group, with a view to assisting people to work or lead more independent, fulfilling lives in the community.

The duties of this position included:

- a) Interviewing referred clients and assisting in determining eligibility for CRS services through assessment of clients' characteristics and needs.
- b) Counselling clients towards realistic rehabilitation goals and planning and oversight of rehabilitation programs
- c) Providing an ongoing effective counselling service to clients and their families.
- d) Arranging training placements for clients or referring to other agencies as appropriate
- e) Establishing and maintaining liaison with Community Health, rehabilitation and training agencies and assisting in the development and arrangement of rehabilitation programs.

Bedford Industries
Rehabilitation Association
Incorporated

Position: *Rehabilitation Counsellor*

Bedford Industries is a multidisciplinary rehabilitation agency, providing vocational and independent living training for over 500 disabled persons. It is the largest provider of sheltered employment in the Southern Hemisphere

Whilst at Bedford, I

- a) Interviewed applicants who wished to receive service from Bedford Industries and in so doing obtained relevant information concerning employment, education and social skills of those applicants.
- b) Carried out psychological assessments
- c) Provided a counselling service to trainees on problems limiting their progress at Bedford Industries
- d) Made assessment of the progress of trainees on the basis of personal observation, interviews with trainees and collection of information from other staff
- e) Assisted in the development of appropriate vocational and non vocational training programs for trainees, and participated in direct supervision of training.
- f) Devised and carried out behaviour modification programs for trainees whose social and vocational skills were inadequate or who had behaviour problems
- g) Participated in seminars and conferences related to rehabilitation practice
- h) Assisted in employer liaison to initiate work experience and work placement for trainees
- i) Assisted in co-ordination and training of volunteer workers
- j) Ensured trainee records were maintained and updated.

In addition, for approximately 12 months of my time with Bedford Industries, my duties also involved

- k) Assisting in the evaluation of the need for services for the disabled in the Southern region, Fleurieu Peninsula, S.A

- l) Trial and review of a community based vocational and non vocational training service.

Phoenix Society Sheltered Workshop

Position: *Volunteer Psychologist's Assistant*

The Phoenix Society aims to improve the welfare of handicapped people in every way possible through training in skills of personal care, interpersonal competence, community survival, work relations; through employment under sheltered workshop conditions, by social activities, and by any other available means.

Whilst at Phoenix, I

- a) Provided counselling and assessment under supervision of the Psychologist
- b) Coached a basketball team of disabled employees

PROFESSIONAL AFFILIATIONS/REGISTRATION:

Member British Psychological Society

Chartered Clinical Psychologist

Member of the Division of Clinical Psychology of the British Psychological Society

Practitioner Full Member of the Division of Clinical Neuropsychology of the British Psychological Society

Member Psychology Special Interest Group Working with Older Adults Division of Clinical Psychology British Psychological Society

Member Physical Health and Rehabilitation Special Interest Group of the British Psychological Society

Member Australian Psychological Society

Member Clinical College of the Australian Psychological Society

Affiliate Member Health College of the Australian Psychological Society

Affiliate Member of the Sports College of the Australian Psychological Society

Member of Psychology and Ageing Special Interest Group of the Australian Psychological Society

Registered Clinical Psychologist (Western Australia)

International Affiliate of the American Psychological Association

Member British Association for Behavioural and Cognitive Psychotherapies

Workshops Attended (Abridged)

8 th July 1989 half day.	Family Therapy for Schizophrenia I Falloon 12th ABMA Conference, Perth, WA
13 th September 1989 full day	Counter Disaster Training M Tunnecliffe Contract for HDWA & DCS, Perth, WA
24 th November 1990 half-day	Conflict Resolution C Chamarette PPOW, Applecross, WA
30 th September 1991 half day	Panic Disorder and its Treatment J Franklin 26th APS Conference, Adelaide, SA
30 th September 1991 half day	The Masterson Approach to Personality Disorders C Andrews 26th APS Conference, Adelaide, SA
1 st July 1993 full day	Assessment and Treatment of Anger and Aggression R Novaco ABMA Workshop, Perth, WA
2 nd October 1993 half day	Behaviour Management in Dementia D Koder 28th APS Conference, Gold Coast, QLD
2 nd July 1994 full day	Treatment of Bulimia Nervosa H Leitenberg 17th ABMA Conference, Fremantle, WA
3 rd July 1994 half day	Cognitive Behaviour Therapy for Borderline Personality Disorder B Kearney 17th ABMA Conference, Fremantle, WA
13 th December 1994 full day	Anxiety Disorders: An Update on Treatment Approaches Bob Montgomery Public Sector Psychologists Training Day, Fremantle, WA

10 th and 11 th April 1997 2 days	Theory, Practice and Recent Developments in Cognitive Rehabilitation B Wilson and J Evans Oliver Zangwill Centre, Ely, England
13 th February 1998 full day	Current Trends in Psychological Psychotherapy. Clinical Psychologists Working in Disability and Rehabilitation L Morrison, J Willison & J Hooper Forum for Clinical Psychologists Working in Physical Disability and Rehabilitation, Bristol, England
28 th March 1998 half day	Psychological Therapies for People with Physical Disabilities M O'Reilly, K Ehlert & J Pimm 1998 BPS Annual Conference, Brighton, England
1 st May 1998 half day	Communication and Caregiving in Dementia: Behaviour Staging and Practical Insights G Jones PGMEC Farnham Road Hospital, Guilford, England
1 st July 1998 full day	Cognitive Behaviour Therapy for Late-Life Depression L Thompson & D Gallagher-Thompson 18 th PSIGE BPS Annual Conference, Edinburgh Scotland
21 st April 1998 full day	PsychD Induction Day Psych D Staff Seminar PsychD Conversion University of Surrey, Guildford, England
4 th June 1998 half day	Critical Reviews J Foulds Seminar PsychD Conversion University of Surrey, Guildford, England
11 th December 1998 full day	Statistics Refresher T Robertson Seminar PsychD Conversion University of Surrey, Guildford, England

26th February 1998
full day

Introduction to SPSS
G Laws
Seminar PsychD Conversion
University of Surrey, Guildford, England

26th November 1999
full day

After the Bad News, Then What?
P Harvey
BPS Special Interest Group in Health and
Disability
Moseley Hall Hospital, Birmingham, England

18th February 2000
full day

Qualitative Research Methods
A Coyle & M Finlay
Department of Psychology Workshop
University of Surrey, Guildford, England

Conference Attendance

8 th July - 12 th July 1989	12 th ABMA Conference, Perth, WA
17 th September 1990	Day Attendance: Alzheimer's Disease and Related Disorders Conference, Perth, WA
30 th September-4 th October 1991	26 th APS Conference Adelaide, SA
29 th September - 2 nd October 1993	28 th APS Conference Gold Coast, QLD
2 nd July - 6 th July 1994	17 th ABMA Conference Perth, WA
19 th October 1994	Aged Care Assessment Team State Conference Perth, WA
7 th May - 10 th May 1995	5 th National Conference of the Alzheimer's Association, Brisbane, QLD
9 th July - 11 th July 1997	17 th Annual PSIGE Conference BPS 1997 London, England
28 th March 1998	Day Attendance 1998 BPS Annual Conference Brighton, England
1 st July - 3 rd July 1998	18 th Annual PSIGE BPS Conference Edinburgh, Scotland
20 th November 2000	Day Attendance 1 st International Quality Research in Dementia Conference, London, England

PROFESSIONAL DOSSIER

Ian I Kneebone

III. Development as a clinical psychologist specialising in work with older adults

Ian I Kneebone: Development as a Clinical Psychologist Specialising in Work with Older Adults

1 Introduction

After completing my Master's Degree in Clinical Psychology at the University of Western Australia I applied for and was successful in obtaining a position at Osborne Park Hospital, a general hospital in the northern suburbs of Perth. I was to work seven years in this position. It is during this time that I became established as a Clinical Psychologist with specialist expertise in working with older adults.

2 Initiating the Process

During my initial interview at Osborne Park Hospital I was told the position for which I had applied was two fifths within a psychiatric out patient clinic and three fifths within the general hospital. It was only after commencing that I was informed the three fifths hospital allocation was completely dedicated to the Department of Geriatric Medicine. This led to some apprehension on my part as I had pre Masters and placement experience in rehabilitation settings but little preparation for working with older people (my clinical training only provided two, three hour seminars on this area).

When I commenced work I sought information and advice from other psychologists in Western Australia practising with older adults. With few exceptions (advice on tests) I was informed to use my knowledge of clinical psychology with younger people and simply apply this to the older people I was seeing. Over time I found this to be unsatisfactory and started to try to improve my knowledge of the area through literature searches and attending training opportunities outside the psychology discipline (none on older adults was available within the profession). Gradually I was able to integrate some of this information into my personal clinical work.

Influenced by my own experience I became concerned that Australian clinical psychology seemed to be overlooking older adults. As well as a seeming lack of

significant training I saw there was little encouragement for students to undertake placements in the area (this is not compulsory in approved clinical training programmes in Australia). In addition, as acknowledged elsewhere (Phillips-Doyle and Thomas, 1993), there was little research activity with older adults. On this basis it became important for me to do what I could to improve the situation.

3 Supervision

My first step in trying to address my concerns about the lack of training in older adults was to supervise clinical trainees. There was demand from clinical trainees for placements in the mental health service side of my work however in order to increase the number of trainees exposed to work with older adults I chose only to offer supervision in the older adult area. I believed that even if working with older adults was not high on a trainees list of priorities, prejudice could be overcome and interest in the area developed through experience. I consider I was successful in the approach I took. A number of those I supervised have gone on to work in locum and permanent positions with older people.

4 Courses on Older Adults

Despite a regular flow of clinical trainees undertaking placements within the Department of Geriatric Medicine I retained a concern about the lack of any specific course on older adults offered within any of the (then three) approved clinical training programmes in Western Australia. Repeating the basics to one student after another, seemed inefficient. It also seemed to me that clinical psychology could miss an opportunity to expand its services. Demographically the over 65 population in Australia was set to double in the coming four decades (Australian Bureau of Statistics, 1988). In this light I felt future practitioners of clinical psychology whatever their chosen speciality (learning disability, forensics, community welfare or private practice), would do well to be aware of the specifics of clinical work in this area.

As my casual interactions with local clinical course organisers met with little success in establishing a course on older adults, I was moved to write to the APS (Australian Psychological Society) to see if pressure could be brought to bear at a national level (where course guidelines and criteria for approval were developed). However I felt I could not write and criticise in a national forum without being fully aware of the situation throughout the country. Accordingly I decided to survey course organisers of APS approved clinical training programmes. The results of this survey confirmed my fears of little being taught on older people. To disseminate this information I presented a conference paper (Kneebone, 1994), which served as the basis for an article published in a peer reviewed Australian psychology journal concerned with professional issues (Kneebone, 1996). The conference paper is presented in the section 2 of this professional dossier. The article (a review rather than research document) is available in Appendix A.

In 1995 I was seconded to the Curtin University of Technology to teach full time for six months. While my main area of teaching was health psychology during this period the contacts I developed, along with the influence of my papers, led to approval for me to deliver the first semester length course in working with older adults offered to clinical psychology trainees in Western Australia. Some six trainees out of twenty elected to take the optional course titled "Applied Psychology and Older Adults". Each of the 13, 3 hour course seminars involved 1 1/2 hours didactic presentation with the remainder of the time being devoted to applied workshops (training in assessment, case discussions etc). Two exercises (an interview and a memory unit assessment) in the course required trainees to have direct contact with older people, something considered essential given that students were not obliged to undertake a placement in the area. Pre seminar readings were designed to maximise trainee interest as well as to compliment the topics covered. An outline of the course and the results of a student evaluation of it is presented in Appendix B.

5 Research

Over my 7 year term at Osborne Park Hospital the lack of clinical research in Australia with older adults also became a focus for me. To address this I first becoming involved

in co-supervision of clinical trainees' research in the area. I played a role in 3 Masters level dissertations and an honours thesis. I also attempted to develop a research programme myself (within the limits of my clinical commitments). My efforts in the latter endeavour led to the publication of two research papers relevant to older adults of which I was first author. One, (Kneebone & Harrop, 1996) documented the development of an instrument to assess older adult inpatients' confidence in returning home when discharged, the other (Kneebone, Clarnette & Frendin, 1997) considered the reliability and validity of an instrument designed to assess dysfunctional behaviour in older adults with dementia.

I also became involved at a variety of levels in international research programmes conducted into the use of different pharmacological compounds to delay deterioration in older adults with dementia. I was initially involved as a co-investigator in two projects (Janssen-Cilag, 1994-1996; Quintiles-Eisai, 1995-1996). My experience in these and my university affiliation then facilitated my employment as a consultant in assessment procedures for Australia/New Zealand in a third project, a multi-centre international drug trial conducted by SmithKline Beecham (1996-97).

6 Other Professional Activity: Two Examples.

Working in a geriatric medicine department provided particular insights for me into the issues facing older adults with illness and disability. It was a concern about difficulties involving end of life decision making, both for older people themselves, their families and the professionals who provide them with care, that led to my participation in a series of workshops on this topic. I co-presented the workshop with a Specialist Physician (Geriatrician) and a Social Worker. The workshops were loosely based around the work of the McMaster Geriatric Research Group and the text "Let Me Decide" (Molloy & Clarnette, 1993). The success of the workshops was such that, by invitation, we presented at venues throughout Australia, and more recently the United Kingdom (Clarnette & Kneebone, 1999; Kneebone & Clarnette, 2000).

While I was concerned about the failure of training programmes in clinical psychology to teach about older adults I also became interested in establishing a forum to foster support and provide continuing professional education for those established in the area. On this account, I became the convenor of a steering committee to establish a section of the APS special interest group, Psychology and Ageing, in Western Australia. Subsequently I was voted foundation convenor of the group. I also gave a paper at its first meeting (Kneebone, 1995, November).

7 Arriving

Late in 1995 I was asked to speak at a seminar run by the College of Clinical Psychologists of the Australian Psychological Society, Western Australian Branch. The seminar was designed to cover issues in assessment relevant to clinical psychologists. I was asked to present on assessing the older adult (Kneebone, 1995, December). This meeting proved to be very significant to me. Apart from my satisfaction in having older adults actually included in the programme (by invitation and not coercion!) I was pleased for myself as well. As I addressed the seminar it occurred to me that the request for my presentation not only acknowledged the importance of clinical psychologists considering older adults, but also that I was now a clinical psychologist identified as having specialist expertise in the area.

References

Australian Bureau of Statistics (1988). Projections of the populations of Australia, States and Territories 1987 to 2031. Canberra: Author.

Clarnette, R., & Kneebone, I. (1999, July). Let me decide: End of life decision making. Workshop presented at the Nineteenth Annual Conference of the Psychologists' Special Interest Group in the Elderly, British Psychological Society, Bath, UK

Kneebone, I. I. (1994, June). Senectaphobia :The new challenge for Australian clinical psychology. Paper presented at the University of Western Australia Psychology conference, Perth WA.

Kneebone, I. I. (1995, November). The "D"-ilemma: Differential diagnosis between depression and dementia in older adults. Paper presented at the Foundation Meeting of the Psychology and Ageing Special Interest Group, Western Australian Region, Australian Psychological Society, Perth, WA.

Kneebone I. I. (1995, December). Assessing the older adult: A, B, C and D. Paper presented at the meeting of the Clinical College of the Australian Psychological Society, Western Australian Branch, Perth, WA.

Kneebone I. I. (1996). Teaching about ageing: The new challenge for Australian clinical psychology. Australian Psychologist, 31, 124-126.

Kneebone, I., & Clarnette, R. (2000). End of life decisions: Who decides? PSIGE Newsletter, 72, 41.

Kneebone, I. I. , Clarnette, R., & Frendin, L. (1997). The Dysfunctional Behaviour Rating Instrument: Validity and reliability in an Australian population. Australian Journal on Ageing, 16, 208-210.

Kneebone, I. I. & Harrop, A. (1996). Confidence in return home: Development of a measurement instrument. Australian Occupational Therapy Journal, 43, 19-23.

Molloy, D. W. & Clarnette, R. (1993). Let Me Decide. Penguin: Sydney

Phillips-Doyle, C. J. & Thomas, T. (1993). Psychology and ageing in Australia: An introduction. Australian Psychologist, 28, 8.

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Ian I Kneebone

IV. Conference Presentation

Conference paper: Kneebone, I. I. (1994, June). Senectaphobia: The new challenge for Australian clinical psychology. Paper presented at the University of Western Australia Psychology Conference, Perth, WA.

Disclaimer: This paper is presented as it was at the conference. It is acknowledged that it uses terms different from those now considered more appropriate e.g., “elderly”, as opposed to “older adults”, “subjects” as opposed to “participants”.

The review paper published based on material reported in this conference presentation can be found in Appendix A

Kneebone, I. I. (1996). Teaching about ageing: The new challenge for Australian clinical psychology. Australian Psychologist, 31, 124-126.

Senectaphobia: The New Challenge for Australian Clinical Psychology

1 Introduction

The Australian population is set to change dramatically over the next 40 years with the proportion that are elderly (over 65 years) predicted to double from 10% to around 20% (Australian Bureau of Statistics, 1988). This demographic change will occur during the working life of those currently undertaking, who or are about to undertake, Clinical Masters training. This means that opportunities for the provision of services to older adults are likely to increase and raises the question as to whether future practitioners are being adequately prepared. This paper reviews the mental health problems of the elderly, the treatment opportunities evident in this developmental group for clinical psychologists and community expectations about service delivery. This review provides the context for a survey considering the adequacy of current training in this area.

1.1 The Mental Health Problems of the Elderly

The elderly have mental health problems similar to those of young adults as well as some particular to their age group. While no survey of the incidence of psychiatric disorder is available for Australia a recent British survey identified a 17% prevalence of psychiatric disorder in the elderly. This consisted of approximately 10% depression, 5% organic disorders and 3% "neurosis". (Saunders, et al., 1993). The prevalence of psychiatric disorder in the general population over 18, is estimated at around 20% (Robins and Regeir, 1991). While these figures suggest a slightly lower rate in older individuals this neglects many areas of difficulty, which are particular to this developmental group. For instance, while the incidence of major depression in the elderly is comparable with the rest of the population, this neglects a 20% prevalence of "significant depressive symptoms" in this age group (Blazer, 1982) and the fact that 50% of the elderly are considered to have at least one symptom of depression (Human Rights and Equal Opportunity Commission, 1993). While there has recently been much attention given to the high rate of youth suicide in Australia it is worthy of note that the

highest suicide rate for any sex/age group is that of men aged 70 - 79 years (Human Rights and Equal Opportunity Commission, 1993).

In addition to the 'depressed' elderly, there are a number of special groups who must also be considered when discussing the mental health needs of this population. These include those suffering from dementia, their carers and the institutionalised elderly.

A report by Zimmer, Watson and Treat (1984) suggest that 62-83% of the institutionalised elderly demonstrate behavioural problems sufficient to require "constant or active consideration" in their patient care plan. Some 23% exhibit behavioural problems such as physical aggression or inappropriate urination/defecation which is considered a "serious" problem. Ames (1993) reviewed the research considering prevalence of depression in Australian institutions for the elderly. The estimate for nursing homes was between 6% and 18% (6,000 beds in Western Australia) and between 27% and 40% in hostels (4,500 beds in Western Australia).

The instance of dementia rises dramatically with age. Approximately 5% of those over 65 will suffer. This rises to over 20% of those over 85 years of age. The major cause of dementia is Alzheimer's disease. This disease results in a progressive loss of the ability to manage financial affairs, to perform domestic tasks and maintain personal hygiene. There can also be instances of psychiatric disorder (including psychotic symptoms) as well as wakefulness and night wandering. Other behavioural disturbance is also common and this can include sexual and social disinhibition (Baumgarten, 1989). While there are a high proportion of individuals with dementia and its associated problems cared for in institutions, it is estimated that at least 50,000 sufferers in Australia are cared for in the community (Flicker, 1992). Most often this is possible through the support given by an informal care giver, usually a close family member. This is usually a spouse (Brown, Holmes & Mitchell, 1991) and it therefore follows almost invariably the majority of caregivers are also elderly. The stress faced by caregivers in the task they undertake presents a further need in the elderly population. The association between caring for a person with dementia and increased

prevalence of mental and physical health problems is well established (Baumgarten et al., 1992; Grafstrom, Fratiglioni, Sandman and Wynblad, 1992).

1.2 Treatment Opportunities

There is substantial evidence to suggest clinical psychology can successfully treat the mental health problems of the elderly. For instance, some of the best controlled studies demonstrating the effectiveness of cognitive behavioural therapy for depression have been conducted with the elderly (Hollon, Shelton and Davis, 1993; Thompson, Gallagher and Breckenridge, 1987). A recent meta-analysis of psychosocial interventions (including cognitive therapy, behaviour therapy, interpersonal and psychodynamic psychotherapy) concludes such treatments can be described as "highly effective" for geriatric depression (Scogin & McElreath, 1994).

Institutions for the elderly continue to be largely run along medical lines, with attention to behavioural problems within this model (i.e., physical or pharmacological restraints). Given the revolution which has occurred over the last 20 years through the use of behavioural modification with the intellectually disabled/developmentally delayed in institutions, perhaps a similar transformation is possible for the elderly (Burgio & Bourgeois, 1992).

Preliminary research into behavioural interventions with the elderly is very promising (Burgio & Bougeois, 1992; Phillips-Doyle 1993), and it is clear the techniques need not be confined to behaviour problems alone to improve quality of life. For example, behaviour modification can be used to maximise social skills, deal with incontinence, as well as assist in the rehabilitation and maintenance of physical function (Iwata, 1986; Rosenthal & Cartensen, 1988). There is also evidence that caregivers of dementia sufferers can be assisted through training in behaviour management skills (Hinchcliffe, Hyman, Blizard & Livingston, 1992), and via stress management programs (Flicker, 1992).

1.3 Community Expectations

Having established that the proportion of the elderly in the Australian population is rising and that they have significant mental health and behaviour problems with which clinical psychology can assist, it is relevant to be aware of the community demand for services to be provided. While nothing has been expressed specifically regarding clinical psychology involvement with the elderly, recent reviews have deplored the current status quo of mental health services generally provided to older adults. The "Burdekin Report" (Human Rights and Equal Opportunities Commission, 1993) or more correctly the National Inquiry into the Human Rights of the Mentally Ill, noted the following;

The elderly are more likely to receive drugs and less likely to receive psychotherapy (p. 511)

The worst images associated with the old mental institutions - for example patients being physically restrained or sedated - are still the case for many sick elderly people (p. 509)

Research and training on mental illness in the elderly are seriously deficient (p. 928)

As previously indicated clinical psychologists can provide interventions to meet the deficiencies in the current mental health services provided to the elderly, of which the community is now aware. However, are clinicians being trained to take advantage of the opportunities that are available? Does the criticism of too little training on mental illness in the elderly, noted broadly in the Burdekin Report apply to clinical psychology training programs? The survey reported below attempted to find this out.

1.4 Survey Aims and Expectations

Based on personal knowledge of the clinical psychology profession in Australia and experience in working with the elderly, the author felt more needed to be done to get

clinical psychologists familiar with and trained in the area. In order to bring this to the attention of the profession and not to unjustifiably criticise solely on impression and the "Burdekin Report" it was considered a survey should be conducted to more clearly establish what training was currently being provided in Clinical Masters Programs.

It was expected that few courses would be identified that specifically address work with the elderly. In order to get some perspective on the extent of any deficiency, it was considered useful to make a comparison with another developmental group, namely children. This comparison is particularly valid given that over the next 40 years the elderly will grow to be roughly equivalent in number to those in the population under the age of 15 years (Australian Bureau of Statistics, 1988). For the comparison with children it was expected that the percentage of teaching time devoted to the elderly would be significantly lower than that devoted to children.

2 Method

2.1 Subjects

Surveys, including stamped return-addressed envelopes, were sent by mail to individuals identified as Course Directors of Australian Psychological Society (APS) approved Australian courses in Clinical Psychology as published in The Bulletin of the Australian Psychological Society (Board of Clinical Psychologists- Clinical Courses Approval Committee, 1993). The list detailed institutions offering Post Graduate Masters' level courses in Clinical Psychology in Australia approved by the Board of Clinical Psychologists, Australian Psychological Society as at January, 1993. Thirteen courses were listed.

For subjects who did not respond within one month, attempts were made to make contact by phone ($n = 5$). If this method was not successful facsimiles repeating the request and containing an additional copy of the survey form were sent ($n = 3$). By this method in all 10 responses (77%) were received.

2.2 Measures

The questionnaire was designed to obtain information on any current or planned courses, or parts of courses in Clinical Master's Programs in Australia specific to preparing students for work with the elderly (Appendix C). The questionnaire enquired after the course title and number of teaching hours for the program. Questions also asked about practical components to the courses, as well as if the programs offered placements in environments devoted to providing services for older adults. For comparison purposes a further item requested an estimate of the percentage of total teaching hours for programs devoted to courses or parts of courses specifically or predominantly to do with the provision of services to children.

An opportunity was also provided for respondents to make general comments in regard to clinical psychology training specific to older adults.

Those completing the questionnaire signed an authority allowing publication of the information.

3 Results

Only one respondent indicated that their program provided courses specifically to prepare students for work with the elderly. Together these courses involved a total of 12 teaching hours. The other 9 respondents indicated that parts of units of study in their program were relevant to clinical psychology with older adults, 17 courses were so nominated. The names of all the units are presented in Table 1. As is evident from the table, 7 of the courses offered related to neuropsychological and psychological assessment / measurement of the elderly.

One of the 10 respondents could not estimate the number of hours in the courses they had indicated as relevant to the elderly. The mean number of hours in the other 9 courses was 6.5 hours. This gave a mean estimate of the percentage of total hours in

Table 1
Courses relevant to older adults

Course	Core Unit -C or option -O	Course	Core unit -C or option -O
Wholly specific to elderly		Psychological assessment	C
Problem Solving	C	Contemporary issues	C
Working with the elderly	C	Psychological measurement*	C
Partly specific to elderly		Psychopathology and neuropsychological conditions*	C
Empirical approaches to adult psychopathology	C	Diagnosis and assessment	C
Clinical neuropsychology*	C	Case Conference	C
Psychology of womans health	O	Neuropsychology and neuropsychological treatment methods*	C
Rehabilitation	O	Neuropsychology*	C
Neuropsychological assessment and clinical syndromes*	C	Adult assessment	C
Neuropsychological assessment*	C	Case reports	C
		Clinical problems	C

*Neuropsychology/psychological measurement course

the programs, devoted to teaching specific to providing services to the elderly, of 3.46%. The range was 0.7% to 7.5%. For the one program which offered some of its' nominated courses as optional units, these calculations assumed a student took these options. No Course Director indicated plans to offer a new course specific to work with the elderly in the near future.

The survey found that the mean percentage of total teaching hours provided in clinical programs, which were specifically, or predominantly to do with service position to children was 20.24%. A t test comparing the percentage of hours devoted to preparing students for work with the elderly, with the percentage of hours devoted to preparation for work with children was highly significant, $t(8) = 6.53$, $p < .001$. Course Directors reported much more time is given to training students to work with children than to work with the elderly. Figure 1 visually displays the percentage of teaching time devoted to the different age groups.

All courses were found to offer placements in environments in which experience of working with older adults could be obtained. Six respondents indicated the courses they conducted relevant to the elderly had practical components. The nature of these practical components varied widely. One respondent included "placement" in this category. Others reported components from "role play" through to "a workshop presentation format". Four respondents took the opportunity to make general comments in the space provided at the end of the survey form. Three of these acknowledged the need for greater course material orientated to intervention with the elderly, including one that stated "it should be mandatory". A further comment made the point that "much of the general content of the program is relevant to the elderly".

4 Discussion

The survey results indicate that insufficient attention is being paid in Australian clinical psychology training programs to preparing future practitioners for work with the elderly. Few courses specific to work with this group are offered. When courses are relevant there appears to be a predominant focus on psychological/neuropsychological

Figure 1. Percentage of teaching time devoted to different developmental groups.

assessment versus treatment. Compared to children, another developmental group, which the elderly are to grow to be numerically comparable, much less is taught.

Despite the fact some Course Directors are aware of the need for further training in this area, none plan to offer a course in the near future. The only positive finding in the survey was that most courses do offer placements in the area. Overall the results are most disappointing given Australia's changing population demographics, the mental health needs of the elderly, the efficacy of psychological interventions with this population and community concerns.

There may be a number of factors, which singularly, or in combination, explain the neglect of the elderly by clinical training programs. These include; lack of recognition of the needs of the elderly, experience/knowledge deficits in teaching staff, lack of employment opportunities, fear of ageing and ageism.

The proposal that Course Directors "just don't know" must be tempered by the fact three of the ten who completed the current survey considered more needed to be offered. Nonetheless, ignorance may be the cause of neglect of training in this area at some institutions.

If clinical training programs are to teach more on how to work with the elderly it is evident that staff qualified to educate in this area have to be available. It is likely academic staff do not have the necessary knowledge base or experience to provide teaching, at least given the limited research activity in the area in Australia (Phillips-Doyle & Thomas, 1993).

A further reason that there is a neglect of training clinicians to work with the elderly may be a feeling that such training is not justified based on the limited work opportunities in the area. If we consider work in this area predicts interest, only 1% of APS members devote part of their service to the ageing (Over, 1991). As far as clinical psychology is concerned, again only 1% (6 out of 660) APS Clinical Board members

are members of the APS special interest group for the elderly (APS, Personal Communication, 1994)).

Clinical psychologists and those who teach clinical psychologists may not wish to work with the elderly for other reasons. This may be based on the issues it brings up for them in terms of their own ageing. It is likely most of us will live to old age. It may well be that coming to terms with the possibility of institutionalisation, physical and mental frailty (e.g., dementia) provides sufficient anxiety for clinical psychologists to avoid the work in the area, even though many of the mental health problems faced by the elderly will not necessarily be suffered by the majority.

Ageism describes the negative attitudes and stereotypes about ageing and old people widely held within society (Gatz & Pearson, 1988). There is no reason for us to expect that clinical psychology escapes the ageism prevalent in Australian society. It is likely just as the community devalues the elderly without reasonable knowledge, thought or fact, clinical psychology does as well. As well expressed in the Burdekin Report:

Apart from ignorance, there is another reason why the mental health needs of the elderly are constantly rejected. It is prejudice --- the idea that old people are disposable items, no longer useful and not worth spending money or energy on. It is the attitude that old people are not entitled to quality of life, because getting sick, feeling depressed and losing one's memory are just natural parts of getting old which must be expected; because they are old and going to die anyway; or because they are not assertive enough to complain.

(Human Rights and Equal Opportunity Commission, 1993, p.538-539)

Even if the prejudice is not as marked as this statement suggests, it is very likely that the profession subscribes to specific biases, for example 'psychotherapy for depression is ineffective in the elderly' (Gatz & Pearson, 1988) and 'depression and cognitive decline are a normal part of old age' (Rosenthal & Cartensen, 1988), which act to

inhibit required training and education. The predominance of cognitive assessment in the little that is taught specific to the elderly may reflect the focus of the profession on decline versus positive intervention.

Senecta, from the Latin, translates as the period or condition of old age, of oldness (Glare, 1992). A phobia can be described as a fear out of proportion to true danger, usually with avoidance. A case can be made that "senectaphobia" has become the new challenge for Australian clinical psychology. Perhaps there is fear, if not prejudice out of proportion to the opportunity for clinical psychologists to contribute to the field. Certainly in the survey reported we have documented avoidance. As for phobia, exposure based treatment is recommended. If our training does not expose students, extinguishing anxieties and prejudice we will lose an opportunity to provide valuable service to a major segment of the population and a significant opportunity for the profession.

Not enough training in how to work with the elderly is being offered in Australian clinical psychology training programs. If we do not teach more in this area the prejudice that permeates the community will continue within the profession. Education needs to be provided at the first level of clinical training, the Clinical Masters programmes. Course Directors of these programs need to be aware of the need for further teaching on the elderly, developing skills themselves or using existing practitioners in the field to train their students. There is every indication that with increased awareness of our ageing population that funds will be released to improve employment opportunities. Reports like that of Burdekin have already stimulated action in the area. Special funds are also being released to assist those with Alzheimer's Disease and their caregivers. Opportunities may also be developed by the adequate preparation of students and by promoting the profession's abilities in this area. Course Directors may also need to confront their own fears of ageing, ageism or specific myths about clinical work with this population. If information such as that supplied here is not sufficient to bring about changes in curriculum it behooves the APS, via its power to approve training courses in clinical psychology, to take action. This could mean of withholding approval/re-approval to courses that don't demonstrate adequate content in this area. It

should be Clinical Board policy that clinical psychology training programs have at least one complete course devoted to the elderly. We need to treat the senectaphobia.

References

- Australian Bureau of Statistics (1988). Projections of the Populations of Australia, States and Territories 1987 to 2031. Canberra: Author
- Baumgarten, M. (1989). The health of persons giving care to the demented elderly: A critical review of the literature. Journal of Clinical Epidemiology 42, 1137-1148.
- Ames, D. (1993). Depressive disorders among elderly people in long-term institutional care. Australian and New Zealand Journal of Psychiatry 27, 379-391.
- Baumgarten, M., Battista, R. N., Infante-Rivard, C., Hanley, A., Becker, R., & Gauthier, S. (1992). The psychological and physical health of family members caring for an elderly person with dementia. Journal of Clinical Epidemiology, 45, 61-70.
- Blazer, D. G. (1982). Depression in Late Life. St. Louis: Mosely.
- Board of Clinical Psychologists-Clinical Courses Approval Committee. (1993). Approved courses in clinical psychology. The Bulletin of the Australian Psychological Society, 15, 30.
- Brown, P. J., Holmes, A. B., & Mitchell, R. A. (1991). Australian caregivers of family members with dementia. Journal of Gerontological Nursing, 17, 25-29.
- Burgio, L. D., & Bourgeois, M. (1992). Treating severe behavioral disorders in geriatric residential settings. Behavioral Residential Treatment, 7, 145-168.
- Flicker, L. (1992). The effects of caregiving for the demented elderly. Australian Journal on Ageing, 11, 9-15.
- Gatz, M., & Pearson, C. G. (1988). Ageism revised and the provision of psychological services. American Psychologist, 43, 184-188.
- Glare, P. G. W. (Ed.) (1982). Oxford Latin Dictionary. Oxford: The Clarendon Press.

Grafstrom, M., Fratiglioni, L., Sandman, P. O., & Winblad, B. (1992). Health and social consequences for relatives of demented elderly: A population based study. Journal of Clinical Epidemiology, 45, 861-870.

Hinchcliffe, A. C., Hyman, I., Blizard B., & Livingstone, G. (1992). The impact on carers of behavioural difficulties in dementia: A pilot study on management. International Journal of Geriatric Psychiatry, 7, 579-583.

Hollon, S. D., Skelton, R. C., & Davis, D. D. (1993). Cognitive therapy for depression: Conceptual difficulties and clinical efficacy. Journal of Consulting and Clinical Psychology 61, 270-275.

Human Rights and Equal Opportunities Commission. (1993). Human Rights and Mental Illness: Report of the Enquiry into the Human Rights of People with Mental Illness. Canberra: Australian Government Publishing Service.

Iwata, B. A. (Ed.) (1986). Special section on behavioral gerontology. [Special issue]. Journal of Applied Behavior Analysis, 19, 321-326

Over, R. (1991). Interest patterns of Australian psychologists. Australian Psychologist 26, 49-53.

Phillips-Doyle, C. J. (1993). Social interventions to manage mental disorders of the elderly in long term care. Australian Psychologist, 28, 25-30.

Phillips-Doyle, C. J., & Thomas, T. Psychology and ageing in Australia: An introduction. Australian Psychologist, 28, 8.

Robins, L. N., & Regeir (Eds.) (1991). Psychiatric Disorders in America. New York: The Free Press.

Rosenthal, T. A., & Cartensen, L. A. (Eds.) (1988). Mini-series on aging: Clinical needs and research opportunities. [Special issue]. Behavior Therapy, 19 (3).

Saunders, P. A., Copeland, J. R., Dewey, M. E., Gilmore, C., Larkin, B. A., Phaterpekar, H., & Scott, A. (1993). The prevalence of dementia, depression and neurosis in later life: The Liverpool MRC-ALPHA study. International Journal of Epidemiology, 22, 838-847.

Scogin, F., & McElreath (1994). Efficacy of treatments for geriatric depression: A quantitative review. Journal of Consulting and Clinical Psychology, 62, 69-74.

Thompson, L. W., Gallagher, D., & Breckenridge, J. S. (1987). Comparative effectiveness of psychotherapies for depressed older adults. Journal of Consulting and Clinical Psychology, 55, 385-390.

Zimmer, J. G., Watson, N., & Treat, A. (1984). Behavioral problems among patients in skilled nursing facilities. American Journal of Public Health, 74, 118-112.

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VII. Appendices

Appendix A: Journal article, "Teaching about Ageing: The New Challenge for Australian Clinical Psychology"

PSYCHOLOGY IN PRACTICE

Teaching About Ageing: The New Challenge for Australian Clinical Psychology

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The paper reviews the issues relevant to the training of Australian clinical psychologists to work with older adults. On the basis of the review, current levels of teaching in clinical masters programs are judged to be inadequate. Possible reasons for this state of affairs are canvassed and suggestions made to address the deficiency. A major recommendation is that courses on older adults should be considered a core area of study for the future; teaching about ageing is the new challenge for Australian clinical psychology.

The Australian population is set to change dramatically over the next 40 years, with the number that are older (over 65 years) predicted to double from 10% to 20% (Australian Bureau of Statistics, 1988). Potentially, this means that opportunities for the provision of clinical psychology services to older adults are likely to increase and raises the question as to whether future practitioners are being satisfactorily prepared. Consideration of the mental health issues for this group, the intervention opportunities evident, community expectations about service delivery, the need for specific courses, and information on current teaching levels, allows for an assessment of the adequacy of current clinical training in this area.

Mental Health Issues for Older People

Older people do have mental health issues similar to those of younger adults as well as some specific to their age group. While no survey of the incidence of psychiatric disorder is available for Australia, a recent British survey identified a 17% incidence of psychiatric disorder in older adults. This consisted of approximately 10% depression, 5% organic disorders, and 3% "neurosis" (Saunders et al., 1993). The incidence of psychiatric disorder in the general population over 18 is estimated at around 20% (Robins & Regier, 1991). While these figures suggest a slightly lower rate in older individuals, this neglects many areas of difficulty which are specific to this developmental group. For example, while the incidence of major depression in the older people is comparable with the rest of the population, this neglects 20% incidence of "significant depressive

symptoms" in this age group (Blazer, 1982) and the fact that 50% are considered to have at least one symptom of depression (Human Rights and Equal Opportunity Commission, 1993). While there has recently been much attention given to the high rate of youth suicide in Australia, it is worthy of note that the highest suicide rate for any sex or age group is that of men aged 70-79 years (Human Rights and Equal Opportunity Commission, 1993).

Further to the needs of the "depressed" older adults, there are a number of special groups who also need to be considered when discussing their mental health issues. These include institutionalised older people, those with dementia, and dementia caregivers.

A report by Zimmer, Watson, and Treat (1984) suggests that 62% to 83% of institutionalised older people demonstrate behavioural problems sufficient to require "constant or active consideration" in their patient care plan. Ames (1993) has reviewed the research on the incidence of depression in institutions for older Australians. The estimate for nursing homes was 6% to 18% and for hostels from 27% to 40%.

The risk of dementia increases dramatically with age. Approximately 5% of those over 65 will develop this condition. This rises to over 20% in those over 85 years of age. While approximately half the 100,000 or so people with dementia in Australia live in institutions; the other half are supported at home (Flicker, 1992). The opportunity for a psychological contribution with the latter group is great, given the stress faced by family caregivers in the task they undertake. The association between caring for a person with dementia and increased prevalence of mental and physical health problems is well established (e.g., Graftstrom, Fratiglioni, Sandman, & Winblad, 1992).

Intervention Opportunities

There is substantial evidence to suggest that clinical psychology can make a significant contribution to improving the mental health of older adults. For instance, a recent meta-analysis of psychosocial interventions for depression (including cognitive therapy, behaviour therapy, and interpersonal and psychodynamic psychotherapy) concluded that such treatments can be described as "highly effective" for geriatric depression (Scogin & McElreath, 1994).

The author wishes to express his thanks to Ms Deborah Koder, Prince Henry Hospital and Professor Paul Martin, The University of New England, for comments on an early draft of this paper.
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Institutions for older persons continue to be largely run along medical lines, with attention to behavioural problems within this model (i.e., physical or pharmacological restraints). Given the revolution which has occurred over the last 20 years through the use of behavioural modification with the intellectually disabled or developmentally delayed in institutions, perhaps a similar transformation is possible for older people (Burgio & Bourgeois, 1992). Preliminary research into behavioural interventions with this group is very promising (Burgio & Bourgeois, 1992; Phillips-Doyle, 1993). There is also evidence that caregivers of dementia sufferers can be assisted through training in behaviour management skills (Hinchcliffe, Hyman, Blizard, & Livingston, 1992), and via stress management programs (Flicker, 1992).

Community Expectations

While nothing specific to clinical psychology involvement with older Australians has been expressed in the community, recent reviews have deplored the current status quo in terms of the mental health services generally provided to older adults. For instance, the Burdekin report (*Human Rights and Mental Illness: Report of the Inquiry into the Human Rights of People with Mental Illness*; Human Rights and Equal Opportunity Commission, 1993) noted the following: "The elderly are more likely to receive drugs and less likely to receive psychotherapy" (p. 511); "The worst images associated with the old mental institutions — for example patients being physically restrained or sedated — are still the case for many sick elderly people" (p. 509); "Research and training on mental illness in the elderly are seriously deficient" (p. 928). Such comments support the report's demand for greater and improved services.

The Need for Specific Courses

Currently, the APS (Australian Psychological Society) Board (College) of Clinical Psychologists, Course Approval Guidelines and Standards (APS, personal communication, 1994) maintains that clinical training programs should be relevant to older adults, but falls short of determining this area to be a core topic. Courses specific to older people are considered as a potential option only. Just in light of population projections and the special needs identified, this seems insufficient. Add to this the greater complexity of assessment with this age group (Czurr & Gallagher, 1984; Hersen, Van Hasselt, & Goreczny, 1993), the requirement for treatments to be significantly modified (Gallagher & Thompson, 1981), and the use of specialised instruments (e.g., Teri & Lewisohn 1982; Yesavage et al., 1983) then the case for specific courses is even stronger. Over and above this are the benefits of courses on older adults in significantly exposing students to this population in order to generate skills and interest.

Current Teaching About Ageing

As indicated above, clinical psychologists can provide interventions to meet the deficiencies in the current mental health services provided to older Australians, of which the community is now aware. However, are clinicians being trained to take advantage of the opportunities that are available and likely to grow? Does the criticism of too little training on mental illness in older people, noted broadly in the Burdekin report, apply to training programs in clinical psychology?

A survey by the author (Kneebone, 1994) suggests that clinicians are not receiving adequate training in how to work

with older Australians. The survey found that course directors of approved Australian courses in clinical psychology reported that only a small amount of time (3.5% of course teaching) in Australian clinical psychology training programs is specifically devoted to preparing future practitioners for work with older people. A sense of proportion is given to this finding by a comparison with the teaching provided to another developmental group, namely children. Over 20% of course teaching is child specific. The survey also found that few complete courses on working with older adults are offered (two only for a total of 12 hours instruction), and where parts of courses are relevant, it found a disproportionate focus on psychological/neuropsychological assessment versus treatment. Unfortunately, while three of the ten course directors who completed the survey acknowledged the need for greater course material on older adults, including one who stated "it should be mandatory", none indicated plans to offer a new course in this area in the near future.

Summary and Discussion

As reviewed, within the working life of most clinical practitioners training today, the number of Australians over the age of 65 years is set to double. The mental health needs of this population are also demonstrable both generally and in terms of specific groups (e.g., older people with dementia, nonprofessional caregivers). It is disappointing that despite this and despite the evidence that psychology can provide effective interventions for older people, there is a paucity of necessary training at the base level; that is, approved clinical masters programs. There is all the more reason to be concerned about this, given that the community has clearly expressed the need for greater services and training. If the profession is to address this problem, it is important to consider what might account for its failure in this area. It is to be hoped that this will lead to the suggestion of strategies to address the deficiency.

There may be a number of factors singly or in combination which explain the neglect of older people in clinical training programs. These include lack of recognition of the needs of older Australians, experience/knowledge deficits in teaching staff, lack of employment opportunities, fear of ageing, and ageism.

The proposal that course directors "just don't know" of the need must be tempered by the fact that, as noted, three of the ten who completed the author's (Kneebone, 1994) survey considered that more needed to be offered. Nonetheless, lack of awareness may be the cause of the neglect of training in working with older adults in some programs. Lack of experience on which to base teaching may also be a problem. It is likely that academic staff do not have the necessary knowledge base or experience to provide teaching, at least given the limited research activity in this area in Australia (Phillips-Doyle & Thomas, 1993). It is to be hoped that articles such as this one will alert course directors to the need for courses. If their department's staff do not have the experience to teach in this area, perhaps course directors could consider developing the skills or using field practitioners.

A further reason that training clinicians to work with older people has been neglected may be the belief that such training is not justified based on concern about limited work opportunities. If we consider that work in this area predicts interest, only 1% of APS members devote part of their service to the ageing (Over, 1991) and only 1% (6 out of 660 APS Clinical Board members) are members of the relevant APS special interest group (APS, personal communication, 1994). Certainly, reports of consultation with psychologists by older Australians are extremely low (Jorm,

IAN I. KNEEBONE

1994). Indications are, however, that with increasing awareness resulting from documents such as the Burdekin report and from the imminent population change, employment opportunities will rise. The profession needs to be prepared to take advantage of this.

Clinical psychologists and those who teach clinical psychologists may not wish to work with older people because of issues it may bring up for them in terms of their own ageing. It is likely that most of us will live to old age. It may well be that coming to terms with the possibilities of institutionalisation and/or physical or mental frailty (e.g., dementia) provides sufficient anxiety for clinical psychologists to avoid working in the area even though many of the mental health issues faced by older adults will not necessarily be encountered by the majority. If anxiety based on misinformation does exist, it needs to be tackled with education.

Ageism can be defined as the negative attitudes and stereotypes about ageing and old people widely held within society (Gatz & Pearson, 1988). There is no reason for us to expect that clinical psychology escapes the ageism prevalent in Australian society. It is likely that just as the community devalues older people without reasonable knowledge, thought, or fact, clinical psychology does as well. As expressed in the Burdekin report:

Apart from ignorance, there is another reason why the mental health needs of the elderly are constantly rejected. It is prejudice — the idea that old people are disposable items, no longer useful and not worth spending money or energy on. It is the attitude that old people are not entitled to quality of life, because getting sick, feeling depressed and losing one's memory are just natural parts of getting old which must be expected; because they are old and going to die anyway; or because they are not assertive enough to complain." (Human Rights and Equal Opportunity Commission, 1993, pp. 538–539)

Even if the prejudice is not as marked as this statement suggests, it is very likely that the profession may subscribe to specific biases, for example, "psychotherapy for depression is ineffective in the elderly" (Gatz & Pearson, 1988) and "depression and cognitive decline are a normal part of old age" (Rosenthal & Cartensen, 1988), which act to inhibit required training and education. The predominance of cognitive assessment in the little that is taught specific to older people may reflect the focus of the profession on decline versus positive intervention. Once again, educating clinical psychologists and their trainers is the way to correct any mistaken beliefs.

Considering the information reviewed in this paper, the case can be made that teaching about ageing has become the new challenge for Australian clinical psychology. If lack of knowledge or experience in trainers, a failure to recognise the developing opportunities, or anxiety or prejudice are responsible for older adults being neglected, then these need to be overcome. Perhaps the place to start is with the APS changing the Board (College) of Clinical Psychologists Course Approval Guidelines and Standards to recommend courses on the elderly as a core area of study. Three and one half per cent of programs is certainly not enough.

References

- Australian Bureau of Statistics (1988). *Projections of the populations of Australia, States and Territories 1987 to 2031*. Canberra: Author
- Ames, D. (1993). Depressive disorders among elderly people in long-term institutional care. *Australian and New Zealand Journal of Psychiatry*, 27, 379–391.
- Blazer, D.G. (1982). *Depression in late life*. St Louis: Mosely.
- Burgio, L.D., & Bourgeois, M. (1992). Treating severe behavioral disorders in geriatric residential settings. *Behavioral Residential Treatment*, 7, 145–168.
- Czirt, R., & Gallagher, D. (1984). Assessing depression in older adults. In P.A. Keller & L.G. Ritt (Eds.), *Innovations in clinical practice: A source book* (Vol. 3, pp. 100–116). Sarasota, FL: Professional Resource Exchange.
- Flicker, L. (1992). The effects of caregiving for the demented elderly. *Australian Journal on Ageing*, 11, 9–15.
- Gallagher, D., & Thompson, L.W. (1981). *Depression in the elderly: A behavioral treatment manual*. Los Angeles: University of Southern California Press.
- Gatz, M., & Pearson, C.G. (1988). Ageism revised and the provision of psychological services. *American Psychologist*, 43, 184–188.
- Grafstrom, M., Fratiglioni, L., Sandman, P.O., & Winblad, B. (1992). Health and social consequences for relatives of demented elderly: A population based study. *Journal of Clinical Epidemiology*, 45, 861–870.
- Hersen, M., Van Hasselt, V.B., & Goreczny, A.K. (1993). Behavioral assessment of anxiety in older adults. *Behavior Modification*, 17, 99–112.
- Hinchcliffe, A.C., Hyman, I., Blizard B., & Livingstone, G. (1992). The impact on carers of behavioural difficulties in dementia: A pilot study on management. *International Journal of Geriatric Psychiatry*, 7, 579–583.
- Human Rights and Equal Opportunity Commission. (1993). *Human rights and mental illness: Report of the inquiry into the human rights of people with mental illness*. Canberra: Australian Government Publishing Service.
- Jorm, A.F. (1994). Characteristics of Australians who reported consulting a psychologist for a health problem: An analysis of data from the 1989–90 National Health Survey. *Australian Psychologist*, 29, 212–215.
- Kneebone, I.I. (1994, June). *Senectophobia: The new challenge for Australian clinical psychology*. Paper presented at the University of Western Australia Psychology Conference, Perth, WA.
- Over, R. (1991). Interest patterns of Australian psychologists. *Australian Psychologist*, 26, 49–53.
- Phillips-Doyle, C.J. (1993). Social interventions to manage mental disorders of the elderly in long term care. *Australian Psychologist*, 28, 25–30.
- Phillips-Doyle, C.J., & Thomas, T. (1993). Psychology and ageing in Australia: An introduction. *Australian Psychologist*, 28, 8.
- Robins, L.N., & Regier, D.A. (Eds.). (1991). *Psychiatric disorders in America*. New York: Free Press.
- Rosenthal, T.A., & Cartensen, L.A. (Eds.). (1988). Mini-series on aging: Clinical needs and research opportunities. [Special issue]. *Behavior Therapy*, 19(3).
- Saunders, P.A., Copeland, J.R., Dewey, M.E., Gilmore, C., Larkin, B.A., Phaterpekar, H., & Scott, A. (1993). The prevalence of dementia, depression and neurosis in later life: The MRC-ALPHA study. *International Journal of Epidemiology*, 22, 838–847.
- Scogin, F., & McElreath, L. (1994). Efficacy of treatments for geriatric depression: A quantitative review. *Journal of Consulting and Clinical Psychology*, 62, 69–74.
- Teri, L., & Lewisohn, P. (1982). Modification of the Pleasant and Unpleasant Events Schedules for use with the elderly. *Journal of Consulting and Clinical Psychology*, 50, 444–445.
- Yesavage, J., Brink, T., Rose, T., Lum, O., Huang, O., Adey, V., & Leirer, V. (1983). Development and validation of a geriatric depression screening scale: A preliminary report. *Journal of Psychiatric Research*, 17, 37–49.
- Zimmer, J.G., Watson, N., & Treat, A. (1984). Behavioral problems among patients in skilled nursing facilities. *American Journal of Public Health*, 74, 1118–1121.

PROFESSIONAL DOSSIER

Ian I Kneebone

VII. Appendices

Appendix B: Outline and student evaluation of a post graduate course,
“Applied Psychology and Older Adults”

PSYCHOLOGY 694 APPLIED PSYCHOLOGY WITH OLDER ADULTS

Course code: 06468

Tuition Pattern: 3 hours per week

Credit Points: 25

Lecturer Co-ordinator: Ian Kneebone

Course Description

This unit aims to develop skills and knowledge relating to the psychological assessment and treatment of older adults (persons over 65 years of age). It will include a review of the developmental context of older adults, the pertinent mental health issues for this population and the management opportunities for the professional psychologist. In addition to a general perspective on older people the course will provide attention to particular sub groups including older adults in rehabilitation settings, those in institutions, older people with dementia and those providing care to an older adult.

Course Objectives

1. Knowledge of the developmental context of older adults
2. Knowledge of the prevalence of particular mental issues in older adults generally and in relation to specific sub-groups
3. Knowledge of, and ability to use, specialist psychometric instruments pertinent to the assessment of older adults and the ability to appropriately interview and assess an older person
4. Knowledge of the appropriate means of psychological intervention with older people.

Course Content

1. Introduction and overview: Psycho-social issues of ageing. Ageism.
2. Mental health issues for older adults: General
3. Depression and suicide in older adults
4. Dementia
5. Grief and Loss in older people
6. Assessing the older person A: Interview and counselling skills
7. Assessing the older person B: Specialised instruments
8. Treatment A: The well aged
9. Treatment B: The older adult with physical disability
10. Treatment C: The older person with dementia
11. Older person abuse
12. Older people health and lifestyle issues
13. Caregivers
14. Death and dying

Assessment

1. Seminar presentation and summary (30%).
Student will be required to present for approximately 30 minutes on a topic relevant to older adults. A summary of their presentation should be also provided to the class (2,000 words). The level of the presentation should be consistent with that which might apply to a seminar for a multi-disciplinary team group.
2. Client Interview (30%)
Students will be required to undertake an initial assessment of an older person at a community agency. A video tape of the assessment must be submitted. The interview may be conducted conjointly with another health professional, but the student must be the interview leader and have a major role in the procedure. Alternatively students may conduct as initial assessment in an early dementia detection unit.
3. Literature Review (40%)
Students will write a critical review of the literature focusing on a relevant issue for older adults or a particular means of intervention with this population. The review is expected to be of around 4,000 words.

References

Specific reading lists for each lecture will be provided. General texts include:

Baltes, P. B., & Baltes M. M. (Eds.). (1990). Successful Ageing: Perspectives from the Behavioural Sciences. Cambridge University Press.

Birren J. E., Sloane R. B., & Cohen, G. D. (1992). Handbook of Mental Health and Ageing (2nd ed.) San Diego CA: Academic Press.

Cartensen, M. A., & Edelsten, B. A. (Eds.). (1987). Handbook of Clinical Gerontology. New York: Pergamon

Knight, B. G. (1992). Older Adults in Psychotherapy: Case Histories. Newbury Park, CA: Sage.

Kurrie, S., & Sadler, P. (1994). Assessing and Managing Abuse Of Older People: A Handbook for the Helping Professions. Sydney: Office on Ageing and Alpha Medical Communications

Oliver, R., & Bock F. A. (1987). Coping with Alzheimer's. New York: Melvin Powers

Schultz, C.L., & Schultz, N.C. (1990). The Key to Caring. Melbourne: Longman Cheshire

Storandt, M., & Vandenbos, G.R., (1994). Neuropsychological Assessment of Dementia and Depression in Older Adults: A Clinicians Guide. Washington DC: American Psychological Association.

Stroebe, M.S., Hansson, R.O., & Stroebe, W. (Eds.), (1993). Handbook of Bereavement. Cambridge: Cambridge University Press.

**CURTIN UNIVERSITY OF TECHNOLOGY
SCHOOL OF PSYCHOLOGY**

694: Applied Psychology with Older Adults

COURSE OUTLINE

Index No	06468
Teaching School	School of Psychology
Content Hours	3 Hours per week
Credit Points	25
Course Co-ordinator	Ian Kneebone Ph 346 8000 Message Ph 346 8100
Time and Venue	Thursdays 1600hrs - 1900hrs 401 : 376
Aim	This unit aims to develop skills and knowledge relating to the psychological assessment and treatment of older adults (those over the age of 65 years).

Objectives

1. Knowledge of the developmental context of older adults.
2. Knowledge of the nature and prevalence of particular mental health issues in older adults generally and in relation to particular sub groups.
3. Knowledge of, and ability to use, specialist instruments pertinent to the assessment of older adults and the ability to appropriately interview and assess an older person.
4. Knowledge of the appropriate means of psychological intervention with older people.

Outline

Older adults area growing segment of the Australian population that present with unique characteristics. This necessitates the use of specialised instruments and approaches to their psychological assessment and management. The course will provide a review of the developmental context of older adults, the pertinent mental health issues for this population and the

management opportunities for the professional psychologist. In addition to a general perspective on older people the course will provide attention to particular sub groups including older adults in rehabilitation settings, those in institutions, older people with dementia and those providing care to an older adult.

Lectures

Seminar 1
29/02/96 Introduction and overview: Psychosocial issues of ageing. Ian Kneebone and Sue Lowe.

Seminar 2
07/03/96 Mental health issues for older adults.

Seminar 3
14/03/96 Depression and suicide in older adults.

Seminar 4
21/03/96 Grief and Loss in older people

Seminar 5
28/09/96 Assessing the older person A: Interview and counselling skills.

Seminar 6
04/04/96 Assessing the older person B: Specialised instruments.

WEEK FREE

Seminar 7
18/04/96 Treatment A: The well aged

ANZAC DAY

Seminar 8
02/05/96 Treatment B: The older adult with physical disability.

Seminar 9
09/05/96 Treatment C: The older person with dementia.

Seminar 10
16/05/96 Older person abuse

Seminar 11
23/05/96 Older people health and lifestyle issues
Stephen Griew

Seminar 12
30/05/90 Caregivers

Seminar 13 Death and Dying
06/06/96 Roger Clarnette

Assessment

- 1. Seminar presentation and summary (30%)**
- 2. Essay (40%)**

Students can choose one topic from the list below for both their seminar presentation and essay. The topics cover areas and issues considered relevant to the course, but not covered in detail in the lecture series.

Presentations are required to be of 30 minutes (including time for questions). Students are to provide handouts of up to 2,000 words. An abridged reference list is also required. The presentation should be at a level consistent with that which might apply to a seminar for a multidisciplinary team.

Essays should fully review the topic and are expected to be of 4,000 words.

Students must present/submit on different topics. Where more than one student wishes to consider the same area; allocation will be decided by coin toss/lottery.

Students' essays/presentations can cover theoretical and aetiological issues of their topic and/or consider treatment. Contrasts with the state of knowledge as regards younger adults is encouraged.

Students may present/prepare essays on topics not on the list, but only with the approval of the Course Co-ordinator.

Topics

Psychosocial factors in Parkinson's Disease

Sexuality and older adults

Built environments and older adults

Well-being in older people

Ethical issues in working with older people

Reliability of family caregiver information on older people

Arthritic pain and older people

Loneliness in older people

Insomnia and older people

Family therapy with older people

Gestalt therapy with older people

Adherence to medical regimens by the older person

Psychosexual orientation in old age

Stress in professional caregiving of older people

Social support and older adults

Health promotion and older people

Smoking and older adults

The psychology of post-stroke recovery

Psychopharmacology in old age

The use of ECT with older adults

Issues for older adults with intellectual disabilities

PRESENTATION SUMMARIES ARE REQUIRED ON THE DAY OF PRESENTATION. ESSAYS ARE DUE ON MONDAY 3RD JUNE 1996

3. Client interview (30%)

Students are required to undertake an initial assessment of an older person at a Community agency. The assessment must either be observed by the Course Co-ordinator or be recorded on video tape.

It is expected the majority of students will elect to be observed at the Memory Evaluation Unit of the Department of Geriatric Medicine and Extended Care, Osborne Park Hospital. Students doing this will need to make themselves available at Osborne Park on a Wednesday afternoon from approximately 2:00 pm to 4:30 pm.

In exceptional circumstances it may be possible to arrange another time.

Students completing their assessment at Osborne Park will have to:

- 1) Administer a structured interview
- 2) Administer a cognitive screening test
- 3) Attend a team diagnosis meeting
- 4) Complete a brief report detailing the most significant information obtained through the assessment, conclusions and recommendations.

Students completing an assessment elsewhere will need to produce an assessment report detailing the major information they obtained, their formulation and recommendations.

REPORTS ARE DUE ONE WEEK AFTER THE ASSESSMENT

Applied Psychology with Older Adults: Seminar Practicum Components

Seminar 1

No practicum. Discussion of course requirements, assessment components. Preliminary allocation of topics.

Seminar 2

Diagnosing dementia review.

Seminar 3

Camdex overview. Scoring the Camdex.

Seminar 4

Administration of the Camdex.

Seminar 5

Presentation on older adult interview.

Seminar 6

Initial interview assessment. Collection of information from video tape using the BASIC - ID. Assessment for guardianship (care and protection).

Seminar 7

Video case presentation and discussion

Seminar 8

Video case presentations and discussion

Seminar 9

Extended case presentation and video "Managing People with Dementia in Hostels".

Seminar 10

Elder abuse: Videotape case scenarios.

Seminar 11

Visiting lecturer.

Seminar 12

Case presentation "Caregiver group".

Seminar 13

Summary session.

OLDER ADULTS LIST OF READINGS

Lecture 1: Introduction and overview: Psychosocial issues of ageing, Ageism

Kneebone, I.I. (1996). Teaching about ageing: The new challenge for Australian clinical psychology. Australian Psychologist, 31.

Gatz, M & Pearson, C.G. (1988). Ageism revised and the provision of psychological services. American Psychologist, 43, 184-188.

Lecture 2: Mental Health Issues for older adults

Roth, M., Huppert, F.A. Tym, E., & Mountjoy, C.Q. (1988). Camdex: The Cambridge Examination for Mental Disorders in the Elderly. Cambridge: Cambridge University Press.

Draper, B. (1990). The effectiveness of services and treatment in psychogeriatrics. Australian and New Zealand Journal of Psychiatry, 21, 238-251.

Lecture 3: Depression and suicide in older adults

Alexopoulos, A. (1989). Late life depression and neurological brain disease. International Journal of Geriatric Psychiatry, 4, 187-190.

Oltmans, T.L., Neale, J.M. & Davison, G.C. (1991). Depression and a suicide attempt in an older adult. In Case studies in abnormal psychology (p.p. 301-316). New York: Wiley.

Lecture 4: Grief and Loss in Older People

Gluhoski, V.L. (1995). A cognitive perspective on bereavement: Mechanisms and treatment. Journal of Cognitive Psychotherapy, 9, 75-84.

Lund, D.A., Caserta, M.S. & Dimond, M.F. (1993). The course of spousal bereavement in later life. In M. Stroebe, W. Stroebe and R. Hansson (Eds). Handbook of Bereavement: Theory, Research and Intervention. Cambridge: Cambridge University Press.

Lecture 5: Interview and Counselling skills

Horowitz, M., (1992). Transference and countertransference in the therapeutic relationship with the older adult. In R.J. Hartke (Ed.), Psychological aspects of geriatric rehabilitation. (p.p211-228). Gaithersburg: Aspen.

Lecture 6: Assessing the older person: Specialised instruments

House, A., Dennis, M., Hawton, K., & Warlow C. (1989). Methods of identifying mood disorder in stroke patients: Experience in the Oxfordshire Community Stroke Project. Age and Ageing, 18, 271-279.

Hersen, M Van Hasselt, V.B. & Goreczny, A.J (1993). Behavioural assessment of anxiety in older adults: Some comments. Behaviour Modification, 17, 99-112.

Lecture 7: Treatment A: The well aged

Benbow, S., Egan. D., Merriott, A., Tregay, K., Walsh, S., Wells, J. & Wood, J. (1990). Using the family life cycle with later life families. Journal of Family Therapy, 12, 321-340.

Ellis, A. (1991). Aging with style (audiocassette). New York: Institute for Rational Emotive Therapy.

Lecture 8: Treatment B: The older adult with physical disability

Hibbard, M.R., Grober, S.E., Gordon, W.A., Aletta, E.G., & Freeman, A. (1990). Cognitive therapy and the treatment of post-stroke depression. Topics in Geriatric Rehabilitation, 5, 43-55.

Donahue, B., Acierno, P., Van Hasselt, V.B. & Hersen, M. (1995). Social skills training in a depressed, visually impaired older adult. Journal of Behaviour Therapy and Experimental Psychiatry, 26, 65-75.

Rybarczyk, B., Gallagher-Thompson, D., Rodman, J., Zeiss, A, Gantz, F.E. & Yesavage, J. (1992). Applying cognitive behavioural psychotherapy to the chronically ill elderly; Treatment issues and case illustration. International Psychogeriatrics, 4, 127-140.

Lecture 9: Treatment C: The older person with dementia

Post, S.G., & Whitehouse, P.J. (1995). Fairhill guidelines on ethics of the care of people with Alzheimer's disease: A clinical summary. Journal of the American Geriatrics Society, 43, 1423-1429.

Bird, M., (1995). Success and failure in five case studies: Use of cued recall to ameliorate behaviour problems in senile dementia. International Journal of Geriatric Psychiatry, 10, 305-311.

Lecture 10: Older person (Elder) abuse

Kurrie, S.E., Sadler P.M., & Cameron, I D (1991). Elder abuse: An Australian case series. The Medical Journal of Australia, 155, 150-153.

Kurrie, S. (1993). Responding to elder abuse: A follow-up study of interventions and outcomes. Australian Journal on Ageing, 12, 5-9.

Kingsley, B., & Johnson, S. (1995). Resolving elder abuse: Issues arising from a perpetrator program. Australian Journal on Ageing, 13, 168-171.

Lecture 11: Older people health and lifestyle issues

To be announced

Lecture 12: Caregivers

Pearlin, L.I., & Mullan, J.T. (1990). Caregiving and the stress process. An overview of concepts and their measures. The Gerontologist, 30, 583-591.

Schulz, C.L., Schulz, N.C., & Greenwood, K.M. (1992). Caring for family caregivers. A replication study. Australian Psychologist, 27, 181-185.

Lecture 13: Death and Dying

To be announced.

PSYCHOLOGY 694 APPLIED PSYCHOLOGY AND OLDER ADULTS

Dr Roger Clarnette: DEATH AND DYING: THE EUTHANASIA DEBATE

Seminar 13: 06.06.96

Gordon M., & Singer PA. (1995). Decisions and care at the end of life. The Lancet, 346, 163-166.

Muller M.T., Van der Wal, G., Van Eijk J., Th. & Ribbe M.W. (1994). Voluntary active euthanasia and physician-assisted suicide in Dutch nursing homes. Are the requirements for prudent practice properly met? Journal of the American Geriatrics Society, 42, 624-629.

Pijnenborg L, Van der Maas P.J., Van Deden J.J.M., and Loornan C.W. (1993). Life-terminating acts without the explicit request of the patient. The Lancet, 341 1196-1199.

Van der Wal G., Muller M.T., Christ L.M., Ribbe M.W., and Van Eijk J.Th.M. (1994). Voluntary active euthanasia and physician-assisted suicide in Dutch nursing homes: Requests and administration. Journal of the American Geriatrics Society, 42, 620-623.

PSYCHOLOGY 694: APPLIED PSYCHOLOGY AND OLDER ADULTS

CLASS EXERCISE

Interview with an Older Person

The exercise is designed to enhance your understanding of the developmental context of older people, the significant issues for them as well as familiarise you with interviewing an older person.

You are required to interview an older person (over 65 years) and take notes for later class discussion. You should collect information in a number of areas:

1. Life History:
 - Family
 - Education
 - Vocation/Retirement
 - Military Service/Wartime Experience
 - Life stages: childhood, adolescence, adulthood
2. Major challenges in their lives and how they coped
3. What it's like being older, good things, not so good things.
What's important to them now.

Be sure to get permission from the older person. Confidentiality should be assured. Make it clear you will not give the older person's name, but will discuss the material they provide with a small group of post-graduate students and your course co-ordinator.

Allow at least 45 minutes for the interview.

[Note: this is not a clinical interview, sensitive issues should not be explored in detail].

The interviews will be considered at the class session on 04/04/1996.

INSTRUCTOR: Ian Kneebone
SCHOOL: Psychology
UNIT: 06922 - Applied Psychology and Older Adults
STANDARD SURVEY

Please ring the number that corresponds to your response

	STRONGLY DISAGREE	DISAGREE	DISAGREE	AGREE	AGREE	STRONGLY AGREE	MEAN
1. I am satisfied with the way the company handles its customers' complaints.							
2. I am satisfied with the way the company handles its employees' complaints.							
3. I am satisfied with the way the company handles its suppliers' complaints.							
4. I am satisfied with the way the company handles its shareholders' complaints.							
5. I am satisfied with the way the company handles its competitors' complaints.							
6. I am satisfied with the way the company handles its community's complaints.							
7. I am satisfied with the way the company handles its government's complaints.							
8. I am satisfied with the way the company handles its industry's complaints.							
9. I am satisfied with the way the company handles its customers' complaints.							
10. I am satisfied with the way the company handles its employees' complaints.							
11. I am satisfied with the way the company handles its suppliers' complaints.							
12. I am satisfied with the way the company handles its shareholders' complaints.							
13. I am satisfied with the way the company handles its competitors' complaints.							
14. I am satisfied with the way the company handles its community's complaints.							
15. I am satisfied with the way the company handles its government's complaints.							
16. I am satisfied with the way the company handles its industry's complaints.							

1	2	3	4	3.8
1	2	3	4	3.0
1	2	3	4	3.7
1	2	3	4	3.5
1	2	3	4	3.2
1	2	3	4	3.5

1. I have been able to understand the content of this unit.
2. Most of the subject material has been new to me.
3. The subject material has been treated in suitable in depth.
4. The content has been well illustrated by helpful examples.
5. I see applications of this material in my intended area of employment.
6. I have found the subject interesting.

SECTION C - RESOURCES AVAILABLE

1.	The prescribed text(s) have assisted my learning.	1	2	3	4	3.0
2.	Additional reference materials have been available when needed.	1	2	3	4	3.5
3.	The handouts provided have been helpful.	1	2	3	4	3.8
4.	There has been an adequate amount of handout material provided.	1	2	3	4	3.8
5.	Staff teaching this unit have been available to students out of class	1	2	3	4	3.2
6.	Items of equipment have been available when needed.	1	2	3	4	3.2

SECTION D - LECTURE OR DIRECT PRESENTATION SEGMENTS

1.	The lecturer has presented material clearly.	1	2	3	4	3.5
2.	The lecturer has made use of relevant illustrations and examples.	1	2	3	4	3.7
3.	Within lectures the material has been presented in an orderly sequence.	1	2	3	4	3.5
4.	I have managed to cope with the quantity of material presented in lectures.	1	2	3	4	3.7
5.	The lecturer has been responsive to students' questions or problems.	1	2	3	4	3.8
6.	I have found the lecture valuable.	1	2	3	4	3.3

SECTION E - TUTORIALS, SEMINARS OR DISCUSSION SESSIONS

1.	The intended purpose of these sessions have been clearly specified.	1	2	3	4	3.7
2.	The tutor/leader has been well prepared for these sessions.	1	2	3	4	3.5
3.	The tutor/leader has sound knowledge of the subject.	1	2	3	4	4.0
4.	The required preparation has been clearly specified in advance.	1	2	3	4	3.7
5.	There have been adequate opportunities for me to participate in discussions.	1	2	3	4	3.5
6.	I have increased my understanding of the subject through these sessions.	1	2	3	4	3.7

SECTION F - LABS, WORKSHOPS OR ACTIVITY SESSIONS

1.	The intended purpose of these sessions has been clearly specified.	1	2	3	4	3.6
2.	The staff involved have been well prepared for these sessions.	1	2	3	4	3.6
3.	In these sessions the necessary information has been clearly presented.	1	2	3	4	3.6
4.	The time and effort demanded by these sessions is not excessive.	1	2	3	4	3.6
5.	There have been adequate opportunities to ask questions and get help.	1	2	3	4	3.8
6.	I have increased my understanding of the subject through these sessions.	1	2	3	4	3.8

SECTION G - OUT-OF-CLASS ASSIGNMENTS

1.	The requirement for each assignment have been clear.	1	2	3	4	3.6
2.	I have managed to cope with the amount of work required by assignments.	1	2	3	4	3.0
3.	The comments and feedback from the marker(s) have been helpful.	1	2	3	4	3.3
4.	The marking of assignments has been prompt.	1	2	3	4	3.2
5.	The marking has been fair and consistent.	1	2	3	4	3.2
6.	I feel that I have learned by doing the assignments.	1	2	3	4	3.2

SECTION H - ASSESSMENT SYSTEM

1.	The allocation of marks to the assessment tasks is balanced.	1	2	3	4	3.6
2.	The current assessment system is suited to this unit.	1	2	3	4	3.6
3.	The assessment system appears to have been well thought out.	1	2	3	4	3.2
4.	The time required by assessment tasks is reasonable.	1	2	3	4	3.0
5.	The assessment system enables me to demonstrate what I have learned	1	2	3	4	3.2
6.	I have been clear about the assessment procedures since the beginning.	1	2	3	4	3.4

SECTION I

The good things about the course were:

Practical components (2)
Lecture handouts (3)
Clear presentation (2)
Friendly, humorous lecturer (1)
Lecturer's interest (1)
Theory content (1)
Guest lecturers (1)
Case studies (1)
Lecturer's experience (1)
Video of cases (2)
Mixture of presentation medium (1)

The less good things about the course were:

Too many assignments (1)
Three hour sessions too long some videos too long (1)
4,000 word essay (1)
Break too late to get coffee (1)
The amount of theory - would like more (1)

The course could be improved by:

More opportunity for class discussion (1)
Substitute essay for more applied assessment (1)
More video (1)

Other comments:

PROFESSIONAL DOSSIER

Ian I Kneebone

VII. Appendices

Appendix C: Survey of Clinical Psychology Training Specific to Older Adults

SURVEY OF CLINICAL PSYCHOLOGY TRAINING**SPECIFIC TO OLDER ADULTS**

1. Does your Clinical Masters programme offer a unit of study specific to preparing students for working with the elderly (persons over 65), that is of a course in Psychology and the Aged, Psychogeriatrics, Geropsychology or similar?

YES ☐

Go to next question

NO ☐

Turn to question 8.

2. What is the title or the course?

3. How many teaching hours are provided?

4. Express the above as a percentage of total teaching hours in your clinical programme.

5. Is the course an option or a core (compulsory) unit?

Core ☐

Option ☐

6. Is there a practical component to the course?

Yes ☐

No ☐

7. Please describe any practical component.

8. Is part of any unit(s) of study offered in your Clinical Masters programme specifically relevant to Clinical Psychology with older adults?

Yes ☐ Go to next question

No ☐ Go to question 15

9. What is the name of the unit(s)?

10. How many teaching hours are provided specific to preparing students for work with the elderly?

11. Express the above as a percentage of total teaching hours for your programme.

12. Is the course(s) an option or a core unit?

Core ☐

Option ☐

13. Is there a practical component to the course?

Yes ☐ No ☐

14. Describe any practical component.

15. Does your Clinical Masters programme plan to offer a course specific to preparing students to work with the elderly in the near future?

Yes ☐ Go to next question

No ☐ Go to question 23

16. When do you plan to offer the programme?

19.....

17. What will the programme be called?

18. How many teaching hours will be provided?

19. Express the above as a percentage of total teaching hours for your programme in regard to hours provided in the year in which the course will be offered.

20. Will the course be an option or a core unit?

Core ☐

Option ☐

21. Will there be a practical component to the course?

Yes

☐

No

☐

22. Please describe any practical component?

23. Does your Clinical Masters programme offer placements in environments devoted to the service of older adults?

Yes

☐

No

☐

24. What percentage of total teaching hours in your programme are devoted to courses or parts of courses specifically or predominantly to do with service provision to children. That is courses in Child assessment, Child Psychotherapy, Family Therapy, Juvenile Protection or Justice etc.?

25. Are there any further comments you would like to make in regard to Clinical Psychology training specific to older adults?

I

on behalf of the Masters programme in Clinical Psychology at

Institution

give permission for the information I have provided in the survey of Clinical Psychology Training Specific to Older Adults to be published.

I understand that neither myself nor the institution for which I work will be identified in any research report.

Signature

Please write name in block letters.

Thank you once again

ACADEMIC DOSSIER

I. Critical Review

Psychological Management of Post Stroke Depression

An abridged version of this paper has been published and is presented in Appendix A:

Kneebone, I. I. & Dunmore, E. (2000). Psychological management of post stroke depression. British Journal of Clinical Psychology, 39, 53-67.

Abstract

Purpose. To evaluate existing research literature on psychological interventions to manage post stroke depression (PSD).

Method. First, the particular nature of post stroke depression (PSD) was established. Then, relevant published material was identified through computerised literature searches (to May 1999) and via the author's clinical experience in the area. This material was critically reviewed against recommended standards for the empirical validation of treatment effectiveness.

Results. Methodological limitations in existing research prevents conclusion any one psychological intervention has empirical support for its effectiveness. However, cognitive behaviour therapy in particular was identified as worthy of further investigation.

Conclusions. It is recommended future research investigate treatments for PSD appropriate for those with cognitive impairment and communication difficulties, younger versus older stroke victims and those in institutional settings. Studies should also consider the necessity of specialist assessment strategies and allow for possible sub types of PSD for which psychological treatments might be differentially effective.

Psychological Management of Post Stroke Depression

1 Stroke and Post Stroke Depression

Stroke disease is the major cause of disability in the United Kingdom with almost 350,000 people affected at any one time and every year about 100,000 suffering a first stroke (Stroke Association, 1996). Of those surviving stroke around half will receive in-patient rehabilitation (Noad, Lincoln & Challen, 1998), though some 37% are still left with a significant physical disability (Greveson, Gray, French & James, 1991) and up to 35% with significant intellectual impairment (Tatemichi, Desmond, Stern, Paik, Sano & Bagiella, 1994). Stroke is predominantly “a disease of older people” with a modal age of occurrence of 72 years (Skilbeck, 1995) however substantial numbers of younger people are affected with 10% of those suffering a first stroke being under retirement age (Stroke Association, 1996). Approximately 23% of those who survive a stroke may proceed to some form of institutional care 3 years later (Greveson et al., 1991).

Depression has been considered the most common neuro-psychiatric consequence of stroke (Robinson, 1997). Estimates of its incidence range widely from 25% to 79% with this variability being attributed to methodological differences such as the point at which patients are assessed relative to stroke onset and what instruments and criteria are used in assessment (Gordon & Hibbard, 1997). A longitudinal study by Astrom, Adolfsson & Apslund (1993) found depression prevalence rates of 25% at the acute stage, 31% at 3 months, 16% at 12 months and 19% at two years. Three years post stroke the prevalence was 29%.

There has been some concern in the literature as to whether post-stroke depression (PSD) is a transient phenomena or a longer term disorder (Robinson, Starr & Price, 1984). Longitudinal follow up and pharmacological treatment studies of those who have had a stroke suggest that up to half the approximately 20% of individuals exhibiting depression less than seven weeks after onset, spontaneously recover in the following few months (Andersen, 1997; Andersen, Vestergard & Lauritzen, 1994).

With the other 50% there is a high risk of major depression becoming chronic as well as an additional rate of new depression of up to 10% per year (Astrom et al., 1993). The existence of different “types” of PSD according to time of onset time is further suggested by the reports that both response to pharmacological treatment and spontaneous recovery rates drop at around seven weeks post stroke (Anderson, 1997).

It has been debated whether PSD is of organic aetiology or is primarily a result of the psycho-social adjustment required by the disease. Early studies suggested post stroke depression was reliably related to left brain damage, though subsequent research did not find this or found the opposite (Gordon & Hibbard, 1997). Recent reviews indicate the organic contribution to post stroke depression may be a complicated one potentially involving an interaction of factors including lesion location within hemispheres, blood flow, neurotransmitter dysfunction and hormone secretion (Gordon & Hibbard, 1997; Robinson 1997). It is possible that certain sub types of PSD may be reliably related to organic factors. One commonly referred to is the “catastrophic reaction” post stroke (Starkstein, Fedoroff, Price, Leigurda & Robinson, 1993). The catastrophic reaction (associated with sub cortical lesions) is a disorder occurring post stroke, which involves “anxiety, tears, aggressive behaviour, swearing, displacement, refusal, renouncement and compensatory boasting” (Starkstein et al., 1993 p.189). The catastrophic reaction is considered to commonly, though not necessarily, co-occur with post stroke depressive disorder. Depression with excessive emotional lability (correlated with left frontal and temporal location and size of lesion) may also represent another organic sub-syndrome of post stroke depression (Anderson, Vestergard & Ingeman-Neilson, 1995; House, Dennis, Molyneux, Warlow & Hawton, 1989).

A number of psycho-social variables have been associated with PSD. These include institutionalisation, divorce, pre stroke alcohol consumption (Burvill, Johnson, Jamrozik, Anderson & Stewart, 1997), younger age, activities of daily living impairment (Burvill et al., 1997; Robinson, Starr, Kubos & Price, 1983) and perception of social support (Morriss, Robinson, Raphael, & Bishop, 1991; Robinson, Bolduc & Price, 1987). A recent epidemiological study has also concluded that depression is no

more frequent in persons post stroke than it is among older adults with similar levels of physical disability of other origin (Burvill et al., 1997). Together this research reinforces the view that despite the organic hypotheses, psychological management approaches are valid for PSD.

2 Assessment of Post Stroke Depression

Assessment of depression in persons who have had a stroke is a difficult task. Most obviously it is problematical with those who have communication problems due to dysphasia or other cognitive losses. Unfortunately this has meant that such individuals are excluded from many research studies compromising the generalisation of results.

Lack of awareness can also compromise PSD assessment. For some individuals this is so frank that it extends to a complete denial of the stroke itself (Hibbard, Gordon, Stein, Grober & Sliwinski, 1992). Specific to PSD up to 45% of those having suffered a stroke on average at one year since the incident, were found to substantially minimise their mood disorder when their responses were compared with a structured clinical interview modified to allow better assessment of depression in brain damaged individuals (Hibbard, Gordon, Stein, Grober & Sliwinski, 1992). This lack of insight has led writers in the area to suggest specialist assessment strategies are required for PSD, perhaps involving a family member or caregiver in the process (Gordon & Hibbard, 1997; Hibbard, Grober, Stein & Gordon, 1992).

The natural presentation of stroke disease itself creates diagnostic difficulty in determining the presence or absence of depression. The main diagnostic systems in use for determining depression place significant weight on somatic symptoms. Unfortunately preoccupation with physical ailments, lethargy and memory impairment are common in persons with stroke as a response to neurological assault rather than reflecting affective disorder (Gordon & Hibbard, 1997). This concern is supported by research indicating that unlike depression in persons without neurological impairment, somatic symptoms on traditional screening instruments are not as good discriminators of depression as non-somatic symptoms post stroke (Stein, Sliwinski, Martin, Gordon

& Hibbard, 1996). Taken together this information suggests that assessment strategies and instruments may need to be modified to determine the presence, nature, and severity of PSD. Accordingly, devices like the Post-Stroke Depression Rating Scale (Gainotti, Azzoni, Razzano, Lanzillota, Mara & Gasparini, 1997), and specialised interview systems such as the Structured Assessment of Depression in Brain Damaged Individuals (Gordon, Hibbard, Egelko, Riley, Simon, Diller, Ross & Lieberman, 1991) are recommended. The former examines the different components of PSD, and the latter uses standard measures and a clinical interview modified to meet the needs of those with cognitive impairment. The Stroke Aphasic Depression Questionnaire (Sutcliffe & Lincoln, 1998) is being developed for the assessment of those with communication difficulties after stroke. The Wimbledon Self Report Scale (Coughlan & Storey, 1988), an instrument assessing feelings only is also recommended for the assessment of emotional state in individuals having a neurological disorder.

3 Evaluation of Psychological Management of Post Stroke Depression

Chambless & Hollon (1998) maintain that to reach a conclusion that a psychological treatment is “empirically supported” requires that it has been subject to a randomised controlled trial in which it is proved statistically significant to no treatment or an alternative treatment in which the treatments are defined by manuals or their logical equivalent and in which reliable and valid outcome assessment measures have been used appropriate to the target population. Further they consider replication of results obtained through such a strategy is required and that it is preferable for treatment quality monitoring procedures to be in place. Empirical support of a given therapy can also be provided by use of single case design studies. A stable baseline should be established for the problem of concern and appropriate (e.g., an ABAB design) utilised. Treatment via this type of design needs to prove effective for at least three participants and be subject to further replication by two or more independent research groups (Chambless and Hollon, 1998).

Given the nature of stroke and PSD as reviewed above it is apparent comprehensive evaluation the utility of psychological interventions for this disorder would also need to

take into account a number of additional factors. Firstly, research should consider identifying treatments to address PSD in those persons also having significant communication problems or cognitive deficits. Secondly, as a small but significant number of persons with stroke are of pre retirement age, studies should consider whether a different approach to PSD treatment might be required for younger as opposed to older adults, given the variation in life stage at which their stroke has occurred. Interventions for use in the different settings in which persons with PSD may find themselves (hospitals, at home with support or in institutional accommodation) and the potential for a differential effect of psychological treatments on different sub types of PSD (e.g., stage post stroke, the catastrophising, the labile PSD) should also not be overlooked. Finally, any research should use diagnostic procedures and assessment instruments specific to PSD and its possible sub-types.

4 Research to Date

Despite the growing attention to PSD in research literature over the last 20 years (Anderson, 1997) recent reviews have decried the lack of consideration given to the development and evaluation of psychological interventions (Diller & Bishop, 1995; Gordon & Hibbard, 1997). This is an important endeavour given the distress associated PSD and the substantial effect it can have on recovery from stroke (Morris, Raphael, & Robinson, 1992; Parikh, Robinson, Lipsey, Starkstein, Federoff & Price, 1990). Additionally while pharmacological interventions have proved useful for PSD (e.g., Anderson et al., 1994; Lipsey, Robinson, Pearlson, Rao & Price, 1984), antidepressant treatments carry the potential for discontinuation reactions (dizziness, insomnia, nervousness, agitation) (Lejoyeux & Ades, 1997), side/interaction effects (Cunningham, 1994) and compliance problems (Lorenc & Branthwaite, 1993).

The paucity of research into psychological interventions for PSD means that any consideration of literature in this area requires broad inclusion criteria and that pointers for future developments may need to draw upon research and practice from related areas. Tables 1 and 2 list all the published material identified by the author as assessing psychological interventions for PSD. It was determined on the basis of Medline and

Table 1

Post-Stroke Depression Intervention Case Studies and Uncontrolled Trials

Study	Sample	Treatment	Assessment	Follow Up	Findings
Craslineck & Hall (1970)	N = 1	Hypnosis daily for 30 days, then weekly for one year.	Nil formal	9 years	Subjective description of substantial functional gains.
Watzlawick & Coyne (1980).	N = 1	Problem - focused family therapy (5 sessions)	Nil formal	3 months	Subjective description of symptom resolution.
Jain (1982).	N = 1	Operant conditioning reinforcement of desired behaviours. Differential reinforcement of depressive and non depressive statements. Positive visualisation.	Meals consumed ADL's performed Therapy attendance	3 months & 12 months	Improvement in meals consumed, ADL's and in therapy attendance. Subjective report of reduced depression
Hibbard, Grober, Stein & Gordon (1992).	N = 1	Cognitive behavioural including social skills training. Estimated 52 sessions plus individual sessions with spouse.	Other evaluations subjective. BDI (subject) Post - stroke awareness rating HRSD (clinician) HRSD (spouse) Clinical Interview	12 months	Not depressed on clinical interview. BDI & HRSD reduction
Hatcher, Durbon & Richey (1985).	N = 1	Medical management, co-ordinated care, cognitive behaviour therapy 2 x 1 hour weekly. Supervised activity programme 12 hours a day.	Nil Formal	Ongoing 1 x weekly managed care.	Subjective description of improved self-esteem and mood.
Lincoln, Flannagan, Sutcliffe & Rother (1997).	N = 19	Cognitive behavioural therapy 8.4 session average, no control group.	BDI HAD's WDI	Nil	n = 4 Consistent benefit n = 6 some benefit n = 9 no benefit
Kemp, Corgiat & Gill (1992).	N = 41	Cognitive behavioural group therapy n = 18 (older persons with disability) n = 23 (older persons without disability)(12 sessions) Stroke numbers unspecified.	DSM III - R GDS OAHMI	6 months & 12 months	Both groups improved. Non-disabled continued to improve to 6mth follow-up.

ADL = Activities of Daily Living
BDI = Beck Depression Inventory
DSM - III R = Diagnostic and Statistical Manual of Mental Disorders.

GDS = Geriatric Depression Scale
HADS = Hospital Anxiety and Depression Scale
HRSD = Hamilton Rating Scale for Depression

OAHMI = Older Adult Health and Mood Index
WDI = Wakefield Depression Inventory

Table 2

Post-Stroke Depression Intervention: Controlled Trials

Study	Sample	Treatment	Assessment	Follow Up	Findings
Towle, Lincoln & Mayfield (1989).	$\underline{N} = 44$	Social work including counselling, visits up to 2 x weekly for 16 weeks, $\underline{n}=21$ No-treatment control, $\underline{n}=23$	GHQ WDI	8 weeks & 16 weeks	No effect of treatment.
Drummond & Walker (1996).	$\underline{N} = 65$	Leisure group, $\underline{n} = 21$ v's. Conventional OT, $\underline{n}=21$ v's (19 sessions) No-treatment control, $\underline{n}=23$	WDI Depression 'caseness'	3 months	No change in WDI Improved mood Improved mobility Increased leisure participation.
Forster & Young (1996)	$\underline{N} = 240$	Counselling and support average 10 visits over 12 months Treatment, $\underline{n} = 120$ No treatment control, $\underline{n} = 120$	HAD's	Nil	No effect for treatment on depression.
Dennis, O'Rourke, Slattery, Staniforth, & Warlow (1997)	$\underline{N} = 417$	Counselling, goal setting, problem solving and specific advice, number of contacts based on need, over 6 months Treatment, $\underline{n} = 210$ Standard care control, $\underline{n} = 207$	NHP	Nil	Borderline significant advantage to control group

GHQ = General Health Questionnaire

HADS = Hospital Anxiety and Depression Scale

NHP = Nottingham Health Profile

WDI = Wakefield Depression Inventory

Psychlit CD Rom searches (to May 1999), additional sources identified from the papers thus obtained, as well as some collected over the course of many years work in post stroke rehabilitation.

4.1 Case Studies

Five studies have simply described single cases of intervention for PSD. Crasilneck and Hall (1970) provide details on the use of hypnosis for post stroke depression. Treatment was administered daily for 30 days then weekly for one year with a nine year follow up. Substantial functional gains are described but in the absence of any formal assessment or diagnosis few conclusions can be drawn from the study. No other research into hypnosis as a treatment of PSD was found. A single case of treating PSD using five sessions of problem focused family therapy also had no diagnostic criteria or objective assessment (Watzlawick & Coyne, 1980) and this novel approach has failed to receive any further attention in the research literature. However it is notable for its recognition of the contribution the family environment may make to the maintenance of PSD.

Jain (1982) utilised an operant conditioning approach involving reinforcement of desired behaviours, differential reinforcement of depressive and non-depressive statements and positive visualisation, on a single individual with PSD in an inpatient rehabilitation setting. A substantial improvement in numbers of meals consumed, ADL's (Activities of Daily Living) completed and therapy attendance is described but only a subjective description of benefits in other aspects of depression.

The need for a multi-disciplinary approach in the intervention for PSD was addressed in the case study of Hatcher, Durham and Richey (1985). Their intervention involved a nurse psychotherapist, nurse carers, a physician and a psychologist. It included a rationalisation of medication as well as a complete change in environment (from institutional to an "own home" context). Cognitive behaviour therapy (CBT)

including attention to the negative thinking maintaining depressed mood, assertion skills training and a supervised activity programme were further components. Unfortunately in the absence of any formal assessment it is impossible to draw any empirically based conclusions about this treatment, despite a subjective description of improved self-esteem and mood being provided.

Hibbard, Grober, Stein & Gordon (1992) describe a cognitive behaviour therapy (CBT) treatment for PSD modified to consider aspects particular to the disorder including grief at losses, problems with insight and cognitive difficulties (Hibbard, Grober, Gordon & Aletta, 1990). The treatment took place over a considerable period of time and involved over 52 sessions plus some separate contacts with the client's spouse. A social skills component was also included in this treatment. While not incorporating desirable single case design practice (e.g., an ABAB design), evaluation was comprehensive. It included both the subject and spouse completing psychometric rating scales and the therapist administering formal clinical assessment interviews. Diagnosis after the 6 months of treatment and at one year follow up was as "not depressed".

4.2 Uncontrolled Studies

Lincoln, Flannaghan, Sutcliffe and Rother (1997) describe a CBT intervention for post stroke depression in a case design series (AB, non randomised, uncontrolled). Nineteen participants received on average 8.4 sessions of treatment by a community psychiatric nurse (CPN) or a psychology assistant. Treatment included distracting activities, behavioural tests, graded task assignments, activity scheduling as well as identifying/challenging negative thoughts. Effectiveness was principally assessed by considering Beck Depression Inventory (BDI) scores on the basis of visual inspection, comparison of post treatment with pre treatment and the proportion of scores below lowest baselines. Overall it was considered that four patients consistently showed benefit, six some benefit and nine no benefit from the treatment. A statistically significant decrease in BDI scores across all the participants was also noted.

While the Lincoln et al. (1997) study is an important initiative in evaluating the use of CBT with a relatively large number of individuals suffering PSD it is only a preliminary study. Apart from the lack of a control group the method of obtaining a sample of persons with PSD for intervention also raises questions. The experimenters identified 155 persons with depression from a stroke register of 626 patients. Of these 136 were visited but only 19 agreed to participate. This seems a startling lack of willingness to take part among those interviewed and raises the question of whether a representative sample was obtained. It also demonstrates the need for treatments to identify possible barriers to participation such as lack of insight, or care giver support and overcome them. The Lincoln et al (1997) study also failed to follow up its subjects.

A number of reservations about the standard of the treatment in the Lincoln et al. (1997) study can also be raised. While the therapists are described as having "training and experience" in cognitive behaviour therapy (Lincoln et al., 1997, p.166), it is generally considered that an assistant psychologist should not undertake duties involving direct clinical contact that demands "reactive" clinical decision making (Wilson, 1990). One must ask whether the psychology assistant was therefore sufficiently experienced in therapy to provide a true test of the treatment modality. Treatment adequacy is also questionable given the acknowledgment that substantial modifications to CBT is required for those with stroke (Hibbard, Grober, Gordon & Aletta, 1990) and that CBT treatment for older adults as a standard is given in research trials for consistently longer than the average 8.4 sessions in the Lincoln et al (1997) trial, usually 20 sessions (Thompson, 1998).

No studies have investigated group therapy interventions specifically for persons with PSD though one study (Kemp, Corgiat, & Gill, 1991/1992) has compared CBT for depression in a group of non-disabled older adults with a group of older adults with disabling illness including some persons (numbers not given) who had suffered a stroke. In the absence of a no treatment control it was concluded that the psychotherapy was equally as effective initially in the presence of disability as for non-disabled older adults. At follow-ups (6 and 12 months) it was noted the non-disabled group continued to improve post treatment while the group containing persons with

disabilities' improvement levelled off. The researchers suggest longer treatment or booster sessions may be useful for older adults with disability who are possibly more at risk of developing new health problems or face the exacerbation of old ones as time progresses.

4.3 Controlled Studies

Towle, Lincoln & Mayfield (1989) conducted a randomised and controlled (no treatment) study of social work intervention amongst 44 individuals on average 12 months post stroke and who were experiencing significant depression. Their intervention included counselling participants as well as contacting day centres and advising on services and benefits. Contacts were twice a week for 16 weeks. They found no significant differences between the treatment and control group. Similarly, Forster and Young (1996) found no significant effect on the percentage of participants with depressed mood in a controlled trial assessing the benefits of specialist nurse support for 120 patients with stroke in the community. Support in this instance included counselling, goal setting, problem solving and advice on specific issues over 12 months post stroke, with an average eight visits in the first 6 months and an average of four in the second. Unfortunately the training to prepare the nurses in this study for their counselling role in the study was just two days long.

The possibility non-specific counselling and support may have a negative influence on depression after stroke is raised by the findings of Dennis, O'Rourke, Slattery Staniforth & Warlow, (1997). They conducted a randomised controlled trial considering the benefits of such an intervention alongside facilitation of access to health, social and voluntary services. They had a total sample of 417 patients with the number of contacts varying widely, based on the intervening worker's assessment of need. A 'borderline significant' advantage on the depression subscale of the HAD's (Hospital Anxiety and Depression Scale)(Zigmond & Snaith, 1983) was identified for controls. The researchers suggest provision of a stroke family care worker may have induced a passive response to illness in their treatment group with greater depression a result.

Drummond and Walker (1996) investigated the benefits of leisure rehabilitation to patients allocated to a specialist stroke unit. The leisure rehabilitation involved giving advice and equipment to enable patients' access to leisure pursuits as well as liaison with specialist agencies. The effect of this intervention was compared with conventional occupational therapy and a no treatment control condition. From a behavioural perspective the leisure rehabilitation can be perceived as aimed at increasing pleasant events, a fundamental aspect of this psychological model's treatment for depression (Lewisohn, Antonuccio, Steinmetz & Teri, 1984). In the Drummond and Walker (1996) study the interventions were not directed specifically at treating depression but preventing its development post stroke. The study failed to find an impact on their main measure of depression, the Wakefield Depression Inventory (Snaith, Ahmed, Mehta & Hamilton, 1971), but noted fewer "diagnosable cases of depression" for the condition of interest post treatment as well as a positive effect on mood.

5 Conclusions

The literature reviewed above demonstrates that research into psychological interventions for PSD remains unsophisticated and none meets the standards outlined by Chambless & Hall (1998). Only four randomised controlled intervention studies were identified. Three undefined counselling interventions in conjunction with miscellaneous problem solving and service assistance appeared to be of no benefit or indeed detrimental to participants. One study did suggest "leisure rehabilitation" may be of benefit but is complicated by the fact treatment included depressed and non-depressed individuals. Replication of these latter findings is required.

Unfortunately none of the interventions described in the literature have developed a complete treatment manual to which reference can be made to demonstrate the efficacy as is required in at least "two independent research settings" (Chambless & Hollon, 1998). There is no evidence that any treatments have been subject to quality monitoring procedures, nor have any of the case studies has been of empirically acceptable design. The research undertaken has also largely failed to take into account

the specific nature of PSD and the implications of this for intervention research. Only one anecdotal case study has used caregiver assessment to control for lack of awareness (Hibbard, Grober, Stein & Gordon, 1992) and no study used assessment instruments or criteria designed specifically for use with PSD. Also no appreciation has been given to the sub groups of PSD (early versus late onset, catastrophisers, the labile PSD) in order to assess whether therapies might be differentially effective for them. Large groups of people with PSD have also been neglected in the few treatment investigations which have been undertaken. No research has been reported on persons who have had strokes and have substantial cognitive or communication disabilities. Treatment strategies specific to the needs of younger as opposed to older adults with depression post stroke have also been left unconsidered. Only anecdotal single case studies have addressed intervention with persons in residential institutions (Hatcher et al., 1985) or hospital (Jain, 1982).

The opportunities indicated in case studies considering hypnosis and family therapy have thus far failed to be subject to any empirical investigation. This leaves a chasm of opportunity for further research. The situation with CBT is more promising, with case studies added to by a case series (Lincoln et al., 1997). Unfortunately in the latter its AB design is sub standard in demonstrating treatment efficacy.

Further evaluation of CBT as a treatment for PSD is warranted not only on the basis of the research reviewed but given that it has been identified as efficacious in treating those with depression in the general population (Scott, 1996) as well as older adults (the bulk of those who suffer stroke) in a modified format (Thompson, Gallagher & Breckenridge, 1987) and its utility has been demonstrated with others suffering neurological conditions (e.g., Larcombe & Wilson, 1984). CBT also integrates the behavioural strategies which have found support in an occupational therapy study of "leisure rehabilitation" as well as when administered by caregivers to persons with dementia who are depressed (Teri, Logsdon, Umoto & McCurry, 1997). Persons with PSD and cognitive disability share some commonality with those having dementia. There is some evidence that post stroke depression is more a "depression of dementia" than a "dementia of depression", that is depression develops as a result of cognitive

impairment, rather than is caused by it post-stroke (Andersen, Vestergaard, Riis & Ingeman-Nielsen, 1996). Support for the further evaluation of CBT in the treatment of PSD is also found in the evidence one of its components, problem solving contributes to improved family function post stroke (Evans, Matlock, Bishop, Stranahan & Pederson, 1988). Problem solving has also been used to reduce depression in older adults in institutions (Hussian, 1987; Hussian and Lawrence, 1981).

A further advantage of CBT is that it lends itself to the development of treatment manuals, a significant aid to replication studies. Table 3 lists currently available treatment descriptions that could form the basis of a comprehensive CBT manual for treatment of post stroke depression. Treatment developed for older adults (e.g., Thompson, Gallagher-Thompson & Dick, 1995; Dick, Gallagher, Thompson, Coon, Powers & Thompson, 1995) could be integrated with guidelines for stroke depression CBT treatment (Hibbard, Grober, Gordon & Aletta, 1990; Hibbard, Grober, Gordon, Aletta & Freeman, 1990) and the development of behavioural treatments of depression in dementia outlined by Teri (1994). A section considering how/if to include caregivers given a typology established at initial assessment (Dempster, Knapp & House, 1998) might also be a component.

The above proposition does not rule out consideration of research into the utility of other psychological therapies in the treatment of PSD. In particular, given the losses to which a person with stroke may have to adjust, different styles of therapy may be useful at different stages post stroke. For instance, research with depressed older caregivers of persons with dementia has identified interpersonal psychotherapy as more useful early in the process, CBT later (Gallagher-Thompson & Steffen, 1994).

Given the relative heterogeneity of stroke there also remains an opportunity for more powerful exploitation of single case study design methodology in assessing utility of treatments for PSD. This could prove more cost effective than group studies and allow valid research in environments in which it is difficult to gain large numbers of participants (e.g., hospitals, institutions).

Table 3

Treatment Descriptions Which Could Form the Basis for a Comprehensive Cognitive-Behavioural Post-Stroke Depression Treatment Manual

Reference	Treatment Description
Dempster, Knapp & House (1998).	Identifying carer types and modifying treatment accordingly.
Dick, Gallagher-Thompson, Coon & Powers (1995).	Cognitive-behaviour therapy for late-life depression. A client manual.
Hibbard, Grober, Gordon & Aletta (1990), Hibbard, Grober, Gordon, Aletta & Freeman (1990).	Modification of cognitive psychotherapy for the treatment of post-stroke depression.
Teri (1994).	Behavioural treatment of depression in patients with dementia.
Thompson, Gallagher-Thompson & Dick (1995).	Cognitive-behaviour therapy for late life-depression: A therapist manual.

Overall the information reviewed relating to psychological interventions for PSD indicates that while the research to date is very preliminary, the basis for investigations that could identify empirically valid treatments exists. A number of studies suggest the type of therapy worthy of trial (CBT), there is an understanding of sub groups within PSD that should be considered and a knowledge of the particular nature of the disorder and the specialist assessment techniques appropriate to use on this basis. At this point it remains for researchers and funding bodies to take up the gauntlet.

References

- Anderson, G. (1997). Post-stroke depression: Diagnosis and incidence. European Psychiatry 12. (Suppl. 3), 255s - 260s.
- Andersen, G., Vestergard, K., Ingeman-Neilsen M. (1995). Post-stroke pathological crying: Frequency, and correlation to depression. European Journal of Neurology 2, 45-50.
- Andersen, G., Vestergard, K., & Lauritzen, L. (1994). Effective treatment of post-stroke depression with a selective serotonin reuptake inhibitor, citalopram. Stroke, 25, 1099-1104.
- Andersen, G., Vestergard, K., Riis, J. & Ingemann-Neilson, M. (1996). Dementia of depression or depression of dementia in stroke. Acta Psychiatrica Scandinavica, 94, 272-278.
- Astrom, M., Adolfsson, R., & Asplund, K. (1993). Major depression in stroke patients. A three year longitudinal study. Stroke, 24, 976 - 982.
- Burvill, P., Johnson, G., Jamrozik, K., Anderson, C., & Stewart-Wynne, E. (1997). Risk features for post-stroke depression. International Journal of Geriatric Psychiatry. 12, 219 - 226.
- Chambless, D. H., & Hollon, S. D. (1998). Defining empirically supported therapies. Journal of Consulting and Clinical Psychology, 66, 7 - 18.
- Coughlan, A. K. & Storey, P. (1988). The Wimbledon Self-Report Scale: Emotional and mood appraisal. Clinical Rehabilitation, 2, 207-213.
- Crasileck, H. B., & Hall, J. A. (1970). The use of hypnosis in the rehabilitation of complicated vascular and post-traumatic neurological patients. International Journal of Clinical and Experimental Hypnosis, 18, 145 - 159.
- Cunningham, L. A. (1994). Depression in the medically ill: Choosing an antidepressant, Journal of Clinical Psychiatry, Supplement A, 90-97.
- Dempster, C., Knapp, P., & House, A. (1998). The collaboration of carers during psychological therapy. Mental Health Nursing, 18, 24 - 27.
- Dennis, M., O'Rourke, S., Slattery J., Staniforth, T., & Warlow, C. (1997). Evaluation of a stroke family care worker: Results of a randomised controlled trial. British Medical Journal, 314, 1071-1077.

Dick, L. P., Gallagher-Thompson, D., Coon, D. W. (1995). Cognitive-behavioural therapy for late life depression: A client manual. Palo Alto CA: Older Adult and Family Center, Veterans Affairs, Palo Alto Health Care System.

Diller, L., & Bishop, D. S. (1995). Depression and stroke. Topics in Stroke Rehabilitation, 2, 44 - 45.

Drummond, A. E. R., & Walker, M. F. (1996). Generalisation of the effects of leisure rehabilitation for stroke patients. British Journal of Occupational Therapy, 59, 330 - 334.

Evans, R., Mallock, A., Bishop, D. S., Stranahan, S., & Pederson, C. (1988). Family intervention after stroke: Does counselling or education help? Stroke, 19, 1243 - 1249.

Forster, A., & Young, J. (1996). Specialist nurse support for patients with stroke in the community: A randomised controlled trial. British Medical Journal, 312, 1642-1646

Gainotti, G., Azzoni, A., Razzano, C., Lanzillota, M., Marra, C., & Gasparini, F. (1997). The Post-Stroke Depression Rating Scale: A test specifically devised to investigate affective disorders of stroke patients. Journal of Clinical and Experimental Neuropsychology, 19, 340 - 356.

Gallagher-Thompson, D., & Steffen, A. M. (1994). Comparative effects of cognitive behavioral and brief psychodynamic psychotherapies for depressed family caregivers. Journal of Consulting and Clinical Psychology, 62, 543 - 549.

Gordon, W. A., & Hibbard, M. R. (1997). Post-stroke depression: An examination of the literature. Archives of Physical Medicine and Rehabilitation, 78, 658 - 663.

Gordon, W. A., Hibbard, M. R., Egelko, S., Riley, F., Simon, D., Diller, L., Ross, E. D., & Lieberman, A. N. (1991). Issues in the diagnosis of post-stroke depression. Rehabilitation Psychology, 36, 71 - 87.

Greveson, G. C., Gray, C. S., French, J. M., & James, D. F. W. (1991). Long-term outcome for patients and carers following hospital admission for stroke. Age and Ageing, 20, 337 - 344.

Hatcher, B. J., Durham, J. D., & Richey, M. (1985). Overcoming stroke-related depression. Journal of Gerontological Nursing, 11, 35 - 39.

Hibbard, M. R., Gordon, W. A., Stein, P. N., Grober, S., & Sliwinski, M. (1992). Awareness of disability in patients following stroke. Rehabilitation Psychology, 37, 103 - 120.

Hibbard, M. R., Grober, S. E., Gordon, W. A., & Aletta, E. G. (1990). Modification of cognitive psychotherapy for the treatment of post-stroke depression. The Behaviour Therapist, 13, 15 - 17.

Hibbard, M. R., Grober, S. E., Gordon, W. A., Aletta, E. G., & Freeman, A. (1990). Cognitive therapy and treatment of post-stroke depression. Topics in Geriatric Rehabilitation, 5, 43 - 55.

Hibbard, M. R., Grober, S. E., Stein, P. N., & Gordon, W. A. (1992). Post-stroke depression. In A. Freeman & F. M. (Eds), Comprehensive casebook of cognitive therapy (pp 303-310). New York: Plenum.

House, A. Dennis, M., Molyneux, A., Warlow, C., & Hawton K. (1989). Emotionalism after stroke. British Medical Journal, 298, 991-994.

Hussian, R. A. (1987). Problem solving training and institutionalized elderly patients. In A. Freeman & V. B. Greenwood (Eds.) Cognitive therapy: Applications in psychiatric and medical settings (pp199-212). Human Sciences Press: New York.

Hussian, R. A., & Lawrence, P. S. (1981). Social reinforcement of activity and problem solving training in the treatment of depressed institutionalised elderly patients. Cognitive Therapy and Research, 5, 57-69.

Jain, S. (1982) Operant conditioning for management of a non-compliant rehabilitation case after stroke. Archives of Physical and Medical Rehabilitation 63, 374-376

Kemp, B. J., Corgiat, M., & Gill, C. (1991/92). Effects of brief cognitive-behavioural group psychotherapy, with and without disabling illness. Behaviour, Health and Aging, 2, 21-27.

Larcome, N. A., & Wilson, P. H. (1984). Evaluation of cognitive behaviour therapy for depression in patients with multiple sclerosis. British Journal of Psychiatry, 145, 366-371.

Lejoyeux, M., & Ades, J. (1997). Antidepressant discontinuation: A review of the literature. Journal of Clinical Psychiatry, 58, Suppl. 7, 11-15.

Lewisohn, P. M., Antonuccio, D. O., Steinmetz, J., & Teri, L. (1984). The coping with depression course. Eugene OR : Castalia.

Lipsey, J. R., Robinson, R. G., Pearlson, G. D., Rao, L., & Price, T. R. (1984). Nortryptiline treatment of post stroke depression: A double - blind study. Lancet, 1, 297-300.

Lincoln, N. B., Flannaghan, T., Sutcliffe, L. & Rother, L. (1997). Evaluation of cognitive behavioural treatment for depression after stroke: A pilot study. Clinical Rehabilitation 11, 114-122.

Lorenc, L., & Branthwaite, A. (1993). Are older adults less compliant with medications than younger adults. British Journal of Clinical Psychology, 32, 485-492.

Morris, P. L., Raphael, B., & Robinson, R. F. (1992). Clinical depression is associated with impaired recovery from stroke. Medical Journal of Australia, 157, 239-242.

Morris, P. L. P., Robinson, R. G., Raphael, B., & Bishop, D. (1991). The relationship between perception of social support and post-stroke depression in hospitalized patients. Psychiatry, 54, 306-315.

Noad, R., Lincoln, N., & Challen, K. (1998). Community and hospital stroke patients: Long-term rehabilitation. British Journal of Therapy and Rehabilitation, 5, 578-581.

Parikh, R., Robinson, R., Lipsey, J., Starkstein, S., Federoff, J., & Price, T. (1990). The impact of post-stroke depression on recovery in activities of daily living. Archives of Neurology, 47, 785-789.

Robinson, R. G. (1997). Neuropsychiatric consequences of stroke. Annual Review of Medicine, 48, 217-229.

Robinson, R. G., Bolduc, P., & Price, T. R. (1987). A two year longitudinal study of post-stroke depression: Diagnosis and outcome at one and two year following. Stroke, 18, 837-843.

Robinson, R. G., Starr, L. B., Kubos, K. L., & Price, T. R. (1983). A two years longitudinal study of mood disorder following stroke: Findings during the initial evaluation. Stroke, 14, 736-744.

Robinson, R. G., Starr, L. B. & Price, T. R. (1984). A two-year longitudinal study of mood disorder following stroke. British Journal of Psychiatry, 144, 256-262.

Scott, J. (1996). Cognitive therapy of affective disorders. Journal of Affective Disorders, 37, 1-11.

Skilbeck, C. (1995). Psychological aspects of stroke. In R.T. Woods (Ed). Handbook of the clinical psychology of ageing. Wiley: Chichester.

Snaith, R. P., Ahmed, S. N., Mehta, S., & Hamilton, M. (1971). Assessment of the severity of primary depressive illness: Wakefield Self Assessment Depression Inventory. Psychological Medicine, 1, 143-149.

Starkstein, S. E., Fedoroff, J. P., Price, T. R., Leigurda, R. S., & Robinson, R. G. (1993). Catastrophic reaction after cerebrovascular lesions: Frequency, correlates and validation of a scale. Journal of Neuropsychiatry and Clinical Neuroscience, 5, 189-194.

Sutcliffe, L. M., & Lincoln, N. B. (1998). The assessment of depression in aphasic stroke patients: The development of the Stroke Aphasic Depression Questionnaire. Clinical Rehabilitation, 12, 506-513.

Stein, P. N., Sliwinski, M. J., Martin, J., Gordon, W. A., & Hibbard, M. R. (1996). Discriminative properties of somatic and non-somatic symptoms for post stroke depression. Clinical Neuropsychologist, 10, 141-148.

Stroke Association (1996). Reducing the risk of stroke. (Stroke series 3). London, UK: Author.

Tatemichi, T. K., Desmond, D. W., Stern, Y., Paik, M., Sano, M., & Bagiella, E. (1994). Cognitive impairment after stroke. Frequency, patterns and relationship to functional impairment. Journal of Neurology, Neurosurgery and Psychiatry, 57, 202-207.

Teri, L. (1994). Behavioural treatment of depression in patients with dementia. Alzheimer's Disease and Related Disorders, 8, 66-74

Teri, L., Logsdon, R. G., Uomoto, J., & McCurry, S. M. (1997). Behavioural treatment of depression in dementia patients: A controlled clinical trial. Journals of Gerontology, Psychological Sciences, Social Sciences, Series B, 52, 159-166.

Thompson L. W. (1998, July). Cognitive therapy with older adults. Paper presented at the annual conference of Psychologists Special Interest Group in the Elderly, British Psychological Society, Edinburgh, UK.

Thompson, L. W., Gallagher, D., & Breckenridge, J. S. (1987). Comparative effectiveness of psychotherapies for depressed elders. Journal of Consulting and Clinical Psychology, 53, 385-390.

Thompson, L. W., Gallagher-Thompson, D., & Dick, L. P. (1995). Cognitive-behavioral therapy for late life depression: A therapist manual. Palo Alto, C.A: Older Adult and Family Center, Veterans Affairs, Palo Alto Health Care System.

Towle, D., Lincoln, N. B., & Mayfield, L. M. (1989). Evaluation of social work on depression after stroke. Clinical Rehabilitation, 3, 89-96.

Watzlawick, P., & Coyne, J. C. (1980). Depression following stroke: Brief, problem-focused family treatment. Family Process, 19, 13-18.

Clinical Psychology Forum, 25, 41 - 42.

Wilson, L. (1990). Psychological technicians: Guidance on employment. Clinical Psychology Forum, 25, 41-42.

Zigmond, A. S., & Snaith, R. P. (1983). The Hospital Anxiety and Depression Scale. Acta Psychiatrica Scandinavica 67, 361-370.

ACADEMIC DOSSIER

II. Critical Review

Coping and Caregivers of People with Dementia

An abridged version of this paper was presented at the 1st International Quality Research in Dementia Conference, 19th - 22nd November 2000, London, England:

Kneebone, I. I. & Martin, P. R. (2000). Coping and caregivers of people with dementia (Abstract). Clinical Neuropsychological Assessment, 1 (6), 15.

Abstract

Purpose. To critically review the research based on Lazarus and Folkman's (1984) stress and coping model, in respect to the coping of those caring for persons with dementia in the community, in an attempt to establish its implications for interventions aimed at improving caregiver adjustment.

Method. First, the stressful nature of caregiving for a person with dementia and the nature of the stress and coping model were established. Then, relevant published material on the coping of caregivers of persons with dementia was identified through computerized literature searches. This material was then critically reviewed against the tenets of the model.

Results. The research suggests a general tendency towards problem solving and acceptance styles of coping is likely to be advantageous to caregivers of people with dementia.

Conclusions. Despite this finding it is concluded that the ability of the research to inform the clinician is severely limited. It is proposed that while longitudinal studies considering specific caregiver problems which incorporate coping measures specific to the caregiving task may improve understanding, a substantial revision of methodology and perspective may be required to produce findings that are likely to influence practice.

Coping and Caregivers of People with Dementia

1 Introduction

Dementia is a disorder that involves global impairment of intellectual function and self-care skills, and deterioration in personality and behaviour (Haley, Levine, Brown, & Bartolucci, 1987). Dementia affects at least 2% of persons over 65 years of age, rising to over 20% in those over 80 years. The commonest causes of dementia are Alzheimer's disease, Multi-infarct disease or Lewy Body disease (Lishman, 1998). The majority of those with dementia who reside in the community depend on an informal caregiver, usually a close family member, for assistance. Such caregivers have to cope with the individual's cognitive and behavioural decline, as well as the loss of the relationship with that person as he or she used to be. Understandably, the role of these caregivers has been considered stressful and it is not surprising that research has been able to document comprehensively the association between caring for a person with dementia and increased prevalence of mental and physical health problems (Baumgarten et al., 1992; Graftstrom, Fratiglioni, Sandman, & Winblad, 1992). Despite this association, it has been noted that there are consistent individual differences, and some carers appear to cope quite well (Haley, Levine, Brown, Berry, & Hughes, 1987). To understand why this occurs and to identify opportunities to improve coping in caregivers, researchers have used theories and models of stress to investigate this phenomenon. One of the most popular of these theories is the stress and coping paradigm espoused by Lazarus and Folkman (1984).

The model of Lazarus and Folkman (1984) proposes that adaptation to stress is mediated by appraisal of that stress and by the coping strategies employed by the individual. Appraisal is considered in two forms; primary and secondary. Primary appraisal concerns what is at stake for the person and secondary appraisal involves the person's evaluation of the coping options available to him/her. What is at stake in primary appraisal is harm/loss, threat and challenge (for instance, the caregiver of a person with dementia may be facing 'the loss of a loved one as they knew them'). Secondary appraisal considers what, if anything, can be done to manage the problem.

Coping strategies are considered to be of two main types; emotion-focused and problem-focused. The first of these types describes processes, primarily cognitive, that are directed at lessening emotional distress. These can include the use of avoidance, minimisation, distancing, selective attention, positive comparisons and wresting positive value from negative events. Problem-focused strategies 'are similar to strategies used for problem solving, that is, defining the problem, generating alternative solutions, weighting the alternatives in terms of the costs and benefits, choosing among them and acting. What coping strategies may be beneficial in a given situation is considered to depend on the nature of the stressor. In the example of the dementia caregiver facing 'the loss of a loved one as they knew them', an individual may choose between 'try not to think about it' (avoidance) and 'identify what they can do with the person that will bring out their previous character' (problem solving). Finally, Lazarus and Folkman's model is a transactional one that views the person and the environment in a dynamic, mutually reciprocal, bi-directional relationship. What follows from this conceptualisation is the notion of process in understanding the relationship between stress, coping and adaptation.

It is the purpose of this review to evaluate the research driven by the model of Lazarus and Folkman (1984), specifically with regard to the coping strategies employed by caregivers of persons with dementia to deal with the problems that they face, and to determine the clinical relevance of the research to interventions to improve caregiver coping. The studies included in this review were identified through Med-line and Psych-Info computerized literature searches (to December 1999) designed to identify research considering the coping used by informal caregivers of persons with dementia and its relationship to their adaptation. Table 1 lists the studies considered in detail in this review along with an attempt to relate the dimensions of coping assessed to those proposed by Lazarus and Folkman.

2 Cross-Sectional Studies

By far the most common research design used to consider the coping of those caring for persons with dementia has been the cross-sectional design employing generic

Table 1

Coping Dimensions Conceptually Related to the Division Proposed by Lazarus and Folkman (1984)

Study	Emotion-Focussed	Problem-Focussed
Almberg, Grafstrom & Winblad (1994); McKee et al. (1997); Pruchno & Resch (1989); Vitaliano, Russo, Young, Teri & Maiuro (1991).	Emotion-Focussed	Problem-Focussed
Gallagher, Wagenfield, Baro & Haepers (1994); Saad et al. (1995); Winslow (1997).	Management of the symptoms of distress Management of meaning	Management of the situation
Goode, Haley, Roth & Ford (1998).	Avoidance coping	Approach coping
Gottlieb & Gignon (1996).	Positive framing Making meaning Emotional inhibition	Symptom management
Hinrichsen & Niederehe (1984).	Avoidance Active cognitive	Dementia management strategies Active behavioral
Neundorfer (1991).	Escape-avoidance	Planful problem solving
Pett, Casenta, Hutton & Lund (1988).	Avoidant-Evasive	Problem Solving
Pratt, Schmull, Wright & Cleland (1985).	Passivity (avoidance) Use of social resources Reframing problems	Confidence in problem solving
Williamson & Schulz (1993).	Wishfulness Acceptance Stoicism Relaxation Seeking Social Support	Direct action
Wright (1994).	Palliative Emotive	Confrontive

coping questionnaires to assess coping. Neundorfer (1991) for example, administered the Ways of Coping Checklist (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986) to 60 spousal caregivers of persons with a diagnosis of probable Alzheimer's disease. The caregivers were asked to rate the extent to which they used the strategies listed in stressful caregiving situations. Adjustment was evaluated using measures of caregiver stress, health, depression and anxiety. Neundorfer found significant positive correlations between health problems, depression and anxiety on the one hand, and emotion-focused coping characterized as "escape avoidance", (wishing the situation would go away), 'confrontive coping', (angry confronting of the patient and the situation and letting one's feelings out) and 'accepting responsibility', (blaming and criticizing oneself for problems)" (Neundorfer, 1991, p. 264), on the other hand.

The findings of Pett, Caserta, Hutton and Lund (1988) were similar to those of Neundorfer (1991). In a total sample of 181, they found co-residing, middle-aged women caregivers to an 'older demented relative' considered to be at high-risk (i.e., having demonstrated high levels of burden and low life satisfaction) were more likely than those classified as low-risk to describe the use of 'avoidant-evasive coping' (e.g., wishing a problem away, resigning oneself to one's fate), and a 'regressive coping style' (e.g., overeating, drinking, getting angry and taking it out on someone else). Coping in this study was assessed using the Jaloweic Coping Scale (Jaloweic, Murphy, & Powers, 1984). Similar results using this instrument have been found in a more recent cross-sectional study by Brown, Sloman, Brown and Mitchell (1995).

With a larger sample (240 caregivers to Alzheimer's patients), Pratt, Schmall, Wright and Cleland (1985) found significant negative associations between 'confidence in problem solving', 're-framing problems', 'seeking spiritual support', 'seeking family support', and a measure of caregiver burden, while 'passivity' was positively associated with caregiver burden. Similar findings for 'passivity' were found in a later study by this same research group (Pratt, Wright, & Schmall, 1987). Pratt and colleagues used the F-COPE (Family Crisis Orientated Personal Evaluation Scales) measure, (McCubbin, Larsen, & Olsen, 1981) to assess coping in their studies. This is a 30 item

scale considered to identify eight particular coping strategies for use by individuals or families in the face of problems.

Studies employing cross-sectional designs that include a comparison group have also been utilized to investigate the relationship between caregiver coping and adjustment. For instance, Haley et al. (1996), identified that the better adjustment of black versus white caregivers was not a result of race per se, but was likely to relate to the different use of coping strategies between the groups. In their combined sample ($N = 197$), they found 'avoidance coping' positively associated with depression and negatively associated with a measure of life satisfaction. 'Approach coping' (which includes 'logical analysis', 'positive re-appraisal', 'seeking guidance and support' and 'taking problem solving action') was positively related to life satisfaction and inversely related to depression. A different coping instrument was used in this study, the CRI (Coping Response Inventory) (Moos, 1988).

Taken together the findings of the cross-sectional studies reviewed above and of others of similar design (e.g., Brashares & Cantanzaro, 1994; Haley, Levine, Brown, & Bartolucci, 1987; Kramer, 1997; Lutzky & Knight, 1994; Quayhagen & Quayhagen 1988), suggest that emotion-focused strategies are more likely to lead to adjustment difficulties for caregivers than problem-focused strategies and acceptance. Unfortunately, a major drawback of cross-sectional studies is that they do not allow inferences to be made about causality. Also, such research fails to consider the perspective of Lazarus and Folkman, that stress, coping and adaptation are dynamic processes. It follows from this view that a temporal context is important in understanding coping. Different coping strategies may be useful in dealing with stresses at different times as the stress-coping encounter unfolds. Coping responses that are adaptive at one stage of the transaction may be used less or may have different effects if used at a different phase of the transaction (Carver & Scheier, 1994).

It can also be proposed that the use of a coping strategy at one point in time may not result in problems at that point, but may affect adaptation at a later date. Research with populations other than caregivers of people with dementia, supports this

possibility. For instance, Carver et al. (1993) identified a reciprocal influence between coping and distress pointing to a spiral of distress and dysfunctional avoidance coping amongst a sample of women in the early stages of breast cancer. Carver and colleagues were also able to provide evidence of the prospective benefits of acceptance and humour as coping resources. Other work has demonstrated that coping differs at different points in the stress transaction, and that individuals respond differently at different phases of the transaction (Carver & Scheier, 1994). Accordingly, it is important for research to consider that the coping of caregivers of persons with dementia may change over time as the individual being cared for deteriorates and what proves useful becomes established. Presumably, there is a time when caring for a person with dementia starts to more severely challenge the coping of a caregiver. In the early stages it is likely that the problems are mild and have less impact and therefore largely go unnoticed or are simply put down to benign ageing. Avoidance and denial may be useful at this time, but less so as the problems become more significant and have the potential for greater impact. Certainly from the point of view of assisting the adjustment of caregivers, different interventions appear more suitable to those new to the experience as opposed to those who have been caring for a longer period of time. For example, interpersonal psychotherapy appears to be more useful initially and cognitive behavior therapy later (Gallagher-Thompson & Steffen, 1994).

3 Longitudinal Studies

Only four longitudinal studies were identified by the literature searches. Vitaliano, Russo, Young, Teri and Maiuro (1991) assessed spousal caregivers of persons with a diagnosis of primary degenerative dementia at two points in time, 15 to 18 months apart. Their initial sample consisted of 95 caregivers and they were able to follow-up 79. They used a modified and extended version (Vitaliano, Russo, Carr, Maiuro, & Becker, 1985; Vitaliano, Becker, Russo, Magana-Amato, & Maiuro, 1989) of the Ways of Coping Checklist (Folkman & Lazarus, 1980). They found only one significant coping strategy influenced initial and later caregiver burden. 'Counting one's blessings', a dimension of coping including items such as 'compared myself to others who were less fortunate', negatively correlated with baseline burden and follow-

up burden. Interestingly, given the results of the cross-sectional studies, this dimension of coping might best be described as emotion-focused, that is, a strategy which regulates feelings, as opposed to a problem-focused strategy. Accordingly, it is at odds with the findings from the cross-sectional studies.

A study by Winslow (1997) undertook a secondary analysis of data from another study to consider the effects of coping on spousal and adult child caregivers of persons with Alzheimer's disease. A strength of the study was its large sample size at baseline ($N = 452$), but the information it provides is limited by the fact that only one coping measure was considered, the 'management of meaning', a dimension of Pearlin, Mullan, Semple and Skaff's (1990) caregiver coping measure. This coping construct is based on scale items such as 'how often do you remind yourself there are others that are worse off?' No effect for this variable was found on self-reported physical health, anxiety or yielding of role to institutionalization.

Goode, Haley, Roth and Ford (1998) also considered the coping of caregivers of persons with dementia, at two points in time. Their initial sample included 197 participants, 122 of whom were reviewed 12 months later. Using the CRI, they found that the percentage of 'approach coping' ('logical analysis', 'positive re-appraisal', 'seek guidance and support' and 'take problem solving action') as opposed to avoidance coping ('cognitive avoidance', 'acceptance-resignation', 'seek alternative rewards' and 'emotional discharge'), provided an impact on caregiver adaptation, operationalised as depression and physical health. Increases in approach coping were associated with decreased depression, and the initial percentage of approach coping was associated with fewer changes in physical health.

Wright (1994) also employed a longitudinal design to consider coping in spousal caregivers ($n = 30$) of those with Alzheimer's disease. The study included 34 participants (17 couples) of a similar age who were relatively healthy, as a comparison group. The Jaloweic Coping Scale (Jaloweic et al., 1984) was used to measure coping initially and at follow-up two years later. The researchers considered coping in respect of three follow-up categories for the caregivers, 'continued in home caregiver', $n = 12$,

'widowed spouses', $n = 8$, and 'nursing home placement spouses', $n = 7$. They found that coping strategies at baseline were not related to health outcomes at follow-up for those continuing to care for a spouse with dementia at home. For those who were faced with a change in their role over the two years from an 'at home' to 'institutional care', however, 'confrontive coping', that is 'actively trying to change the situation', was significantly associated with fewer depressed moods at follow-up. For widowed spouses, high use of 'palliative coping' (cognitive and stress reducing strategies) at baseline was associated with higher baseline depressed mood, an association which held at follow-up, by which time the effect of this coping strategy was extended to include a relationship with poorer health. If we accept that those with different caregiver outcomes, that is, 'continued caring', 'widower' or 'relinquishing care to an institution', are likely to have been facing different problems, it follows that Wright's (1994) study supports the view that different coping strategies may be differentially effective depending on the nature of the patient/caregiver circumstances. This hypothesis extends concerns from the temporal aspect of coping to a view that for a better understanding of coping and adaptation, the specific problems and strategies used in respect of these problems by caregivers of persons with dementia, also needs to be considered. This is consistent with the propositions of the model of Lazarus and Folkman (1984).

4 Specificity in Stress and Coping

All of the studies described so far have a common failing in relation to the model of Lazarus and Folkman (1984). None of them consider that the coping strategies that may be adaptive in particular situations may be dependent on the nature of the stressor. The research has neglected the importance of situation specificity. This relates to both the diversity of coping strategies that may be employed by caregivers, and what it is that caregivers have to cope with.

4.1 Coping Specificity

As evident in the studies reviewed, a variety of measures have been used to measure coping in research addressing stress and coping in caregivers of persons with dementia. Principally, these have been established, generic measures of coping. A tension exists, however, as to whether researchers should use such established measures (thereby making their results comparable with stress and coping research in other areas), or should develop measures specific to caregiving, or indeed specific to the caregivers of persons with dementia, so that strategies that may be unique and potentially influential to the problem are not overlooked. The dilemma of whether to use population-specific, problem-specific or general measures of coping, is certainly not confined to the area of caregiver coping and has been reviewed elsewhere (Steed, 1998).

A number of studies have attempted to use measures of coping specific to caregiving when investigating this phenomenon in dementia caregivers. Gallagher, Wagenfeld, Baro and Haepers (1994), for example, used Pearlin et al.'s (1990) measure of coping devised specifically for caregivers. They investigated 'role overload' in two caregiver groups; those caring for someone with dementia ($n = 55$) and those caring for someone with another chronic disorder ($n = 71$). Pearlin and colleague's (1990) measure, places coping in three dimensions, 'management of meaning' (e.g., try to keep a sense of humour), 'management of the situation' (e.g., 'try to find ways to keep your relative busy') and 'management of the symptoms of distress' (e.g., 'drink some alcohol'). Within these dimensions, they found that management of meaning was negatively related to role overload, in caregivers supporting a person with dementia, an effect not found in the other caregiver group. They also found that the category of coping, 'let things slide', within the dimension 'management of situation', was related to greater reported role overload as was 'take medication', within the dimension 'management of distress', for both groups.

Saad et al. (1995) also used Pearlin et al.'s (1990) measure with 109 caregivers of patients who all fulfilled specific criteria of mild or moderate dementia (caregivers living with the person with dementia, $n = 62$), though they used the Research

Diagnostic Criteria (RDC) for depression as their measure of caregiver adaptation. Similar to Gallagher et al. (1994), they found that caregivers who prioritised their daily routines, that is, 'do the things you really have to do and let the other things slide', were more likely to be depressed, while those employing the 'management of meaning' strategy of 'constructing a larger sense of the illness', were less likely to be depressed. In addition, however, they found an active management strategy of 'trying to be firm in directing a relative's behaviour' was associated with less depression. They failed to find an effect for any of the 'management of distress' coping strategies. Gallagher et al. (1994) found significant associations with role overload and the strategy 'take medication'.

Pruchno and Resch (1989) also used a specially derived measure of coping to assess those providing care to an individual with dementia (Kiyak, Montgomery, Borson, & Teri, 1985). In their large sample ($N = 315$), participants were asked to "indicate how often during the past months each strategy was used in dealing with the stress of care giving" (Pruchno & Resch, 1989, p. 456). They found that emotion-focused type strategies like 'wishfulness' (e.g., 'wishing you were stronger') and 'intrapsychic strategies' (e.g., 'daydreamed') were associated negatively with most measures of adjustment, while, as observed elsewhere, 'acceptance' was related to more positive adjustment. Instrumental 'problem solving' type strategies were found to be associated with a measure of positive affect.

McKee et al. (1997) used the Revised Ways of Coping Checklist (Vitaliano et al., 1985) but added coded responses to an open-ended interview to assess coping. The responses were able to be categorized within the model of Lazarus and Folkman (1984). The study sample consisted of 228 family supporters of community resident, older adults, half of whom were supporting older people with dementia. They found that regardless of the diagnosis of dementia, those supporters who reported using a problem-focused strategy scored better in terms of their outcome measure (supporter self-perceived coping and interviewer global rating of coping).

Hinrichsen and Niderehe (1994) also utilized a combined approach for measuring the coping strategies of 152 persons who were the primary providers of care to a family member with a medical diagnosis of dementia. Concerned to include problem solving activities specific to dementia care, they used a measure that added 34 new items to a generic coping measure (Health and Daily Living Form; Moos, Cronkite, Billings, & Finney, 1984). Participants were asked about the frequency of their use of particular strategies over the past month. This cross-sectional study identified that dementia management strategies accounted for a substantial variance in emotional adjustment; the use of 'active management strategies' (e.g., 'safeguard my relative's environment' and 'tried to divert my relative's attention when he/she was upset'), and 'criticism' (e.g., 'I yelled or acted in rage', 'I blamed my older relative for having created the difficulties') were associated with greater burden, and 'encouragement' (e.g., 'I made a point of praising him/her when she did what I considered appropriate', 'I tried to suggest ideas my older relative might accept and follow through') was associated with less burden and less desire to institutionalize.

For the traditional coping measures, Hinrichsen and Niderehe (1994) obtained similar results to those of other studies, that is, avoidance coping was associated significantly with increased burden, and active cognitive coping with decreased burden. The finding for active management from the open interviews was repeated for the dimension 'active behavioral coping', that is, a positive association was identified. The correlations were small, however (.19 to .33), despite having reached significance. Unfortunately, the study was not specific with respect to which strategy was used for which problem. Consequently, the findings remain difficult to interpret. The fact that active management appeared to have a negative impact on the caregiver is difficult to reconcile with the benefits of a problem solving opportunity found in the other studies reviewed. Perhaps given the progressive nature of dementia, the utility of problem solving depends on the stage of dementia in the population under study and the problems thrown up. That is, whether the population under study was at that point in time, in this case, a mean of 4.5 years since symptoms first appeared, generally experiencing problems that were soluble.

Almberg, Grafstrom and Winblad (1997) undertook a cross-sectional study with a group of caregivers of persons with dementia ($N = 46$) split according to whether they were suffering 'burnout' or not. Instead of using a standard or an adapted standard measure of coping, they established coping on the basis of caregiver responses to open-ended questions. The interviews focused predominately on caregiver's experience of a major strain consistently reported as one of three main types: 'memory difficulties', 'changed behavior', and 'feelings of loss and their new role'. They were able to code responses into categories similar to those proposed by Lazarus and Folkman (1984), that is, emotion-focussed and problem-focussed. In line with findings in other cross-sectional studies, those considered to be suffering from burnout reported more use of emotion-focused strategies including 'grieving', 'worrying' and 'self-accusation', with those in the 'unburdened' group using more problem solving and the emotion-focused strategy of 'acceptance'.

4.2 Stressor Specificity

The failure of the majority of studies of caregiver coping to consider the importance of stressor specificity, is of particular concern. Researchers have typically asked participants how often or how likely they are to use particular strategies to deal with the stress of caregiving (e.g., Haley, Levine, Brown, & Batrolucci, 1987; Neundorfer, 1991; Pett et al., 1988; Quayhagen & Quayhagen, 1988), or to recall a specific situation that they appraised as stressful in caregiving and comment on their coping in respect to the situation (Stephens, Norris, Kinney, Ritchie, & Grotz 1988; Vitaliano, Russo, Young, Teri, & Maiuro, 1991). This overlooks the view of Lazarus and Folkman (1984) that coping responses can be highly variable and that particular strategies may be useful for particular problems. In the studies considered, the methodology has assessed only the general coping style of caregivers: what people typically do, which has only a low to moderate correlation with situation specific coping (Carver & Scheier, 1994). In the research reviewed, the methodology has meant that coping is likely to be considered in relation to quite different problems for individual caregivers. One caregiver may for instance, consider 'the loss of a loved one as they knew them', something for which nothing can be done, and conceptually it

seems emotion-focused coping may be more useful than problem solving. Another caregiver may be concerned about 'wandering', a difficulty which may be resolved via a problem solving approach. However, the difficulty of considering specific problems in research should be acknowledged. In the case of 'wandering', for example, further delineation may be necessary. This problem may be quite different for different caregivers as 'wandering down the road' may be a different stress to 'wandering around the house'.

Striking differences in useful coping strategies across different problems in other coping research, supports the utility of considering coping with specific stressors in research with caregivers of people with dementia. For example, Carver et al. (1993) identified how 'acceptance' played an important role in dealing with distress in women suffering early-stage breast cancer, a coping response that was not significant at all in the stress of students preparing for an examination (Carver & Scheier, 1994). Presumably the nature of the stressor, such as whether one can do something about it or not, makes a difference as to what coping strategies may be useful. It has already been proposed elsewhere that emotional outcomes may be influenced by the fit between perceived controllability and the coping responses selected (Valentine, Holahan, & Moos, 1994). Problem-focused coping may suit controllable stressors, emotion-focused coping, uncontrollable stressors. The utility of problem-focused coping certainly appears to be related to perceived controllability (Osowiecki & Compas, 1999).

Only two papers were identified in the literature search in which researchers have attempted to consider the specific nature of stressors with respect to caregiver coping. Gottlieb and Gignac (1996) asked their sample ($N = 51$) of caregivers to describe their coping in respect of two stressor domains, 'the most upsetting symptom (behavioral or cognitive) of the disease', and 'a deprivation occasioned by the caregiving role'. Coping was assessed specific to the experience of the caregivers, based on a systematic content analysis of interview transcripts, which established 53 categories of coping analyzed in 11 classes. They considered five classes of coping were important, given that they showed problem-domain specificity (they were more likely to be used in one

of the domains considered than the other), and they accounted for a large proportion of all the coping efforts. Specific to caregiver adjustment, as determined by measures of life satisfaction, psychiatric symptoms and perceived physical health, they found different relationships between coping and adjustment depended on the stressor category, associations that largely did not hold if analysis was conducted across the stressor domains. Specifically, they identified that the deprivation domain 'making meaning' (e.g., 'searching for meaning in adversity' to 'normalizes feelings') was significantly related to better health. 'Positive framing' with specific categories including items like 'focusing on the positive' to 'minimizing negative repercussions', was also related to better health, but also to fewer psychiatric symptoms for the 'deprivations' domain. For the domain of 'symptom', they found that use of 'positive framing' was associated with poorer physical health, and 'verbal management', covering responses from 'verbal commands' to 'changing and avoiding distressing topics', with increased psychiatric symptoms and less life satisfaction. For 'symptom', they also found 'emotional inhibition', including specific categories such as 'admonishes self not to express emotion', was significantly associated with increased life satisfaction.

Williamson and Shultz (1993) evaluated caregiver coping strategies in respect to even more precisely defined stressors; the most commonly cited problems of 'memory deficit', 'loss of ability to communicate' and 'the gradual decline of a loved one'. They used a measure of depression as their dependent variable relating this to 10 coping dimensions, eight derived from a generic measure (Stone & Neale, 1984) and two from the researchers' work specifically with caregivers. For 'memory deficits', they found a positive association for the coping strategies of 'wishfulness', 'direct action' (indicating increasing depression for increased report of strategy use) and a negative association for 'relaxation' (indicating less depression with increased use). For 'loss of the ability to communicate', depression was more likely with the use of 'wishfulness' and less likely with the use of 'acceptance'. In relation to 'decline of a loved one', more depression was associated with the strategy of 'wishfulness' and 'stoicism', and less depression with 'acceptance' and 'seeking social support'.

The Williamson and Shultz (1993) study comes as a breath of fresh air for the clinician. It is the only study that gets close to the interest of the individual wishing to assist caregivers. It starts the process of describing what strategies might be useful for what problems with caregivers. Unfortunately, there remains some difficulty with this research. It lacks the temporal/longitudinal dimension considered necessary for the reasons previously outlined. We need to know not only what coping works for what problem, but when.

5 Conclusions and Recommendations

Overall, the research on coping in caregivers to people with dementia to date provides evidence to suggest a general tendency to problem solving and an acceptance style of coping, is likely to be advantageous. Despite the large number of research studies undertaken however, it is clear that the ability of the research to inform the clinician for intervention purposes remains severely limited. If the objective is to identify what works, for what problem, and when, then a lot more research needs to be done. Only four longitudinal studies were identified to consider what strategies work when. Much research has failed to incorporate measures of strategies that might be specific to the care giving problem under consideration, though some measures have been developed specific to the caregiver role. Most studies have also failed to identify specific stressors against which to consider coping strategies. In addition, the diversity of coping measures in use makes comparisons between studies difficult.

On the basis of this review, it appears that the most appropriate recommendation should be that researchers undertake longitudinal studies of specific caregiver problems that consistently incorporate measures of coping strategies particular to caregiving and the specific problems that arise for the caregiver. No such studies were identified in the literature search. While this may be one way to move forward, however, the failure of the large amount of research to be applicable to intervention raises the question as to whether other aspects of Lazarus and Folkman's (1984) model, such as appraisal factors, should become the principal focus of attention. Alternatively, perhaps what is needed is a radical revision of methodology and perspective. Could the quality

(applicability) of coping research with caregivers of persons with dementia be improved by having caregivers monitor their coping responses to particular problems as opposed to simply using retrospective measures (though repeated by a longitudinal design)? Caregiver coping strategies and mood responses could also be frequently/continuously measured in relation to particular stressors. There may also be a role for in-house or role play observations of caregivers. Matson (1994) has pioneered this approach in terms of judging the quality of caregiver/care recipient interaction, and his methods could be extended to investigating the specific nature of the coping response. Methodologies like this could reduce the reliance on memory that has doubtless, created 'noise' in the research to date. Further, such methods would provide much greater face validity to the clinician, and the findings would more likely be applied and have a greater impact on caregiver adjustment.

References

Almberg, B., Grafstrom, M., & Winblad, B. (1997). Major strain and coping strategies as reported by family members who care for aged demented relatives. Journal of Advanced Nursing, 26, 683 - 691.

Baumgarten, M., Battista, R. N., Infante-Rivard, C., Hanley, A., Becker R., & Gauthier, S. (1992). The psychological and physical health of family members caring for an elderly person with dementia. Journal of Clinical Epidemiology, 45, 61-70.

Brashares, H. J., & Catanzaro, S. J. (1994). Mood regulation expectancies, coping responses, depression and sense of burden, in female caregivers of Alzheimer's patients. Journal of Nervous and Mental Diseases, 182, 437-442.

Brown, P. J., Sloman, R., Brown, L. M., & Mitchell, R. (1995). Coping strategies of caregivers of family members with dementia. Australian and New Zealand Journal of Mental Health Nursing, 4, 70-76.

Carver, C. S., Pozo, C., Harris, S. D., Noriega, V., Scheier, M. F., Robinson D. S., Ketcham, A. S., Moffat, F. L., & Clark, K. C. (1993). How coping mediates the effects of optimism on distress: A study of women with early stage breast cancer. Journal of Personality and Social Psychology, 65, 275-391.

Carver, C. S., & Scheier, M. F. (1994). Situational coping and coping dispositions in a stressful transaction. Journal of Personality and Social Psychology, 66, 184-195.

Folkman, S., & Lazarus, R. S. (1980). Analysis of coping in a middle-aged community sample. Journal of Health and Social Behavior, 21, 219-239.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter. Cognitive appraisal, coping and encounter outcomes. Journal of Personality and Social Psychology, 50, 992-1003.

Gallagher, T. J. Wagenfield, M. O., Baro, F., & Haepers, K. (1994). Sense of coherence, coping and caregiver role overload. Social Science and Medicine, 39, 1615-1622.

Gallagher-Thompson, D., & Steffen, A. M., (1994). Comparative effects of cognitive behavioral and brief psychodynamic psychotherapies for depressed family caregivers. Journal of Consulting and Clinical Psychology, 62, 543-549.

Gignac, M. A. M., & Gottlieb, B. H. (1997). Changes in coping with chronic stress: The role of caregivers appraisals of coping efficacy. In H. Benjamin (Ed.), Coping with chronic stress (pp. 245-267). New York: Plenum.

Gignac, M. A. & Gottlieb, B. H. (1997). Caregivers appraisals of efficacy in coping with dementia. Psychology and Ageing, 11, 214-225.

Goode, K. T., Haley, W. E., Ruth, D. L., & Ford, G. R. (1998). Predicting longitudinal changes in caregiver physical and mental health: A stress process model. Health Psychology, 17, 190 - 198.

Gottlieb, B. H., & Gignac, M. A. M. (1996). Content and domain specificity of coping among family caregivers of persons with dementia. Journal of Ageing Studies, 10, 137-155.

Graftstrom, M., Fratiglioni, L., Sandman, P. O., & Winblad, B. (1992). Health and social consequences for relatives of demented and non-demented elderly. A population based study. Journal of Clinical Epidemiology, 45, 861-870.

Haley, W. E., Levine, E., Brown, L., & Bartolucci, A. (1987). Stress, appraisal, coping and social supports as mediators of adaptational outcome among dementia caregivers. Psychology and Aging, 2, 323-330.

Haley, W. E., Levine, E. G., Brown, S. L., Berry, J. W., & Hughes, G. H. (1987). Psychological, social and health consequences of caring for a relative with senile dementia. Journal of the American Geriatrics Society, 35, 405-411.

Haley, W. E., Roth, D. L., Coleton, M. I., Ford, G. R., West, C. A., Collins R. P., & Isobe, T. L. (1996). Appraisal, coping and social support as mediators of well being in black and white family caregivers of patients with Alzheimer's disease. Journal of Consulting and Clinical Psychology, 64, 121-129.

Hinrichsen, G. H., & Niederehe, G. (1994). Dementia management strategies and adjustment of family members of older patients. The Gerontologist, 34, 95-102.

Jaloweic, A., Murphy, S., & Powers, M. (1984). Psychometric assessment of the Jaloweic Coping Scale. Nursing Research, 33, 157-161.

Kiyak, H. A., Montgomery, R., Borson, S., & Teri, L. (1985, November). Coping patterns among patients with Alzheimer's disease and non-demented elderly. Paper presented at meeting of the Gerontological Society, New Orleans, LA.

Kramer, B. J., (1997). Differential predictors of strain and gain among husbands caring for wives with dementia. The Gerontologist, 37, 239-249.

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal and coping. New York: Springer.

Lishman, W. A. (1998). Organic Psychiatry: The psychological consequences of cerebral disorder (3rd ed.). Oxford: Blackwell.

Lutzky, S. M., & Knight, B. G. (1994). Explaining gender differences in caregiver distress: The roles of emotional attentiveness and coping styles. Psychology and Aging, 9, 513-519.

Matson, N. (1994). Coping, caring and stress: A study of stroke carers and carers of older confused people. British Journal of Clinical Psychology, 33, 333-344.

McCubbin, H., Larsen, A., & Olsen, D. (1981). F - COPEs (Family Crisis Orientated Personal Evaluation Scales) (measurement instrument). St Paul, MN: Family Social Science, University of Minnesota.

McKee, K. J., Whittick, J. E., Ballinger, B. B., Gillhooly, M. M., Gordon, D. S., Mutch, W.J., & Phillip, I. (1997). Coping in family supporters of elderly people with dementia. British Journal of Clinical Psychology, 36, 323-340.

Moos, R. H. (1988). Coping Response Inventory Manual. Palo Alto, CA: Stanford University Medical Centre and Department of Veterans Affairs.

Moos, R. H., Cronkite, R. C., Billings, A. G., & Finney, J. W. (1984). Health and Daily Living Form Manual. Palo Alto, CA: Social Ecology Laboratory, Department of Psychiatry, Stanford University.

Neundorfer, M. M. (1991). Coping and health outcomes in spouse caregivers of persons with dementia. Nursing Research, 40, 260-265.

Osowiecki, D. M., & Compas, B. E. (1999). A prospective study of coping, perceived control and psychological adaptation to breast cancer. Cognitive Therapy and Research, 23, 169-180.

Pearlin, L. I., Mullan, J. T., Semple, S. J., & Skaff, M. M. (1990). Caregiving and the stress process: An overview of concepts and their measures. The Gerontologist, 30, 583-591.

Pett, M. A., Caserta, M. S., Hutton, A. P., & Lund, D. A. (1988). Intergenerational conflict: Middle-aged women caring for demented older relatives. American Journal of Orthopsychiatry, 58, 405-417.

Pratt, C., Schmall, V., Wright, S., & Cleland, M. (1985). Burden and coping strategies of caregivers to Alzheimer's patients. Family Relations, 34, 27-33.

Pratt, C., Wright, S., & Schmall, V. (1987). Burden, coping and health status: A comparison of family caregivers to community dwelling and institutionalised Alzheimer's patients. Journal of Gerontological Social Work, 10, 99-112.

Pruchno, R. A., & Resch, N. L. (1989). Mental health of caregiving spouses. Coping as mediator, moderator or main effect? Psychology and Aging, 4, 454-463.

Quayhagen, M. P., & Quayhagen, M. (1988). Alzheimer's stress: Coping with the caregiving role. The Gerontologist, 28, 391-396.

Saad, K., Hartman, J., Ballard, C., Kurian, M., Graham, C., & Wilcock, G. (1995). Coping by carers of dementia sufferer. Age and Ageing, 24, 495-498.

Sporks, M. B., Farran, C. J., Donner, E., & Keane - Hagerty, E. (1998). Wives, husbands and daughters of dementia patients: Predictors of caregivers' mental and physical health. Scholarly Inquiry for Nursing Practice, 12, 221 - 234.

Steed, L.G. (1998). A critique of coping scales. Australian Psychologist, 33, 193-202.

Stephens, M. P., Norris, V. K., Kinney, J. M., Ritchie, S. W., & Grotz, R. C. (1988). Stressful situations in caregiving: Relations between caregiver coping and well being. Psychology and Aging, 3, 208-209.

Stone, A. A., & Neale, J. M. (1984). New measure of daily coping: Development and preliminary results. Journal of Personality and Social Psychology, 46, 892-906.

Valentine, D. P., Holahan, C. J., & Moos, R. H. (1994). Social support appraisals of event controllability and coping: An integrative model. Journal of Personality and Social Psychology, 66, 1094-1102.

Vitaliano, P. P., Becker, J., Russo, J., Magana-Amato, A., & Maiuro, R. D. (1989). Expressed emotion in spouse caregivers of patients with Alzheimer's disease. The Journal of Applied Social Sciences, 13, 215-250.

Vitaliano, P. P., Russo, J., Carr, J. R., Young, H. M., Maiuro, R. D., & Becker, J., (1985). The Ways of Coping Checklist: Revision and psychometric properties. Multivariate Behavioral Research, 20, 3-26.

Vitaliano, P. P., Russo, J., Young, H., Teri, L., & Maiuro, R. D. (1991). Predictors of burden in spouse caregivers of individuals with Alzheimer's disease. Psychology and Aging, 6, 392-402.

Williamson, G. M., & Schulz, R. (1993). Coping with specific stresses in Alzheimer's disease caregiving. The Gerontologist, 33, 747-755.

Winslow, B.W. (1997). Effects of formal support on stress outcomes in family caregivers of Alzheimer's patients. Research in Nursing and Health, 20, 27-37.

Wright, L.K. (1994). AD spousal caregivers: Longitudinal changes in health, depression and coping. Journal of Gerontological Nursing, 20, 33-48.

IV. Appendix

Appendix Publication

Kneebone, I. I. & Dunmore, E. (2000). Psychological management of post-stroke depression. British Journal of Clinical Psychology, 39, 53 - 65.

Psychological management of post-stroke depression

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Purpose. To evaluate existing research literature on psychological interventions to manage post-stroke depression (PSD).

Method. First, the particular nature of post-stroke depression (PSD) was established. Then, relevant published material was identified through computerized literature searches (to May 1999) and via the first author's clinical experience in the area. This material was critically reviewed against recommended standards for the empirical validation of treatment effectiveness.

Results. Methodological limitations in existing research prevent a conclusion as any one psychological intervention has empirical support for its effectiveness. However, cognitive behaviour therapy in particular was identified as worthy of further investigation.

Conclusions. It is recommended that future research investigates treatments for PSD appropriate for those with cognitive impairment and communication difficulties, younger versus older stroke victims and those in institutional settings. Studies should also consider the necessity of specialist assessment strategies and allow for possible subtypes of PSD for which psychological treatments might be differentially effective.

Stroke disease is the major cause of disability in the UK with almost 350 000 people affected at any one time and every year about 100 000 suffering a first stroke (Stroke Association, 1996). Stroke survivors are a diverse group of people. There are older and younger victims (10 % of strokes affect those under retirement age). Many end up with physical limitations, others cognitive and communication problems. Up to 23 % may go on to live in institutional contexts (Greveson, Gray, French, & James, 1991). Depression has been considered the most common neuropsychiatric consequence of stroke (Robinson, 1997). Estimates of its incidence range widely from 25 % to 79 % with this variability being attributed to methodological differences, such as the point at which patients are assessed relative to stroke onset and what instruments and criteria are used in assessment (Gordon & Hibbard, 1997).

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Post-stroke depression (PSD) appears to be far from an homogeneous phenomenon. Subtypes suggested by research include early versus late onset (differentiated by development in the first 7 weeks post stroke or after this (Andersen, 1997)), alongside 'catastrophic' (Starkstein, Federoff, Price, Leigurda, & Robinson, 1993) and 'labile' reactions (Andersen, Vestergard, & Ingeman-Neilsen, 1995) (the latter thought to be the result of specific organic pathology).

It has been debated whether PSD is of organic aetiology or is primarily a result of the psychosocial adjustment required by the disease. A number of psychosocial variables have been associated with PSD. These include institutionalization, divorce and pre-stroke alcohol consumption (Burvill, Johnson, Jamrozik, Anderson, & Stewart, 1997), younger age and activities of daily living impairment (Burvill *et al.*, 1997; Robinson, Starr, Kubos, & Price, 1983) and perception of social support (Morris, Robinson, Raphael, & Bishop, 1991; Robinson, Bolduc, & Price, 1987). A recent epidemiological study has also concluded that depression is no more frequent in persons post stroke than it is among older adults with similar levels of physical disability of other origin (Burvill *et al.*, 1997). Together this research reinforces the view that despite the organic hypotheses, psychological management approaches are valid for PSD.

Assessment of post-stroke depression

Assessment of depression in persons who have had a stroke is a difficult task. Features of some strokes, such as pathological emotionalism, lethargy and memory impairment, can suggest depression when in fact they are common results of such neurological assault. Assessment is most obviously a problem with those who have communication difficulties due to dysphasia or other cognitive losses. In the latter case lack of awareness can also compromise PSD assessment. For some individuals this is so frank that it extends to a complete denial of the stroke itself (Hibbard, Gordon, Stein, Grober, & Sliwinski, 1992a). Up to 45% of those having suffered a stroke approximately 1 year previously have been found to minimize their mood disorder substantially when their responses were compared with a structured clinical interview modified to allow better assessment of depression in brain-damaged individuals (Hibbard *et al.*, 1992a). Such lack of awareness has lead writers in the area to suggest specialist assessment strategies are required for PSD, perhaps involving a family member or caregiver in the process (Gordon & Hibbard, 1997; Hibbard, Grober, Stein, & Gordon, 1992b). Specialist devices have also been developed to determine the presence, nature, and severity of PSD. These include instruments like the Post-Stroke Depression Rating Scale (Gainotti *et al.*, 1997), and specialized interview systems such as the Structured Assessment of Depression in Brain Damaged Individuals (Gordon *et al.*, 1991). Currently the Stroke Aphasic Depression Questionnaire (Sutcliffe & Lincoln, 1998) is being developed for the assessment of those with communication difficulties after stroke.

Evaluation of psychological management of post-stroke depression

Chambless and Hollon (1998) maintain that to reach a conclusion that a psychological treatment is 'empirically supported' requires that it has been subject to a randomized

controlled trial in which it is proved statistically superior to no treatment or to an alternative treatment, in which the treatments are defined by manuals or their logical equivalent and in which reliable and valid outcome assessment measures have been used appropriate to the target population. Replication of results obtained through such a strategy is also required and it is preferable for treatment quality monitoring procedures to be in place.

Empirical support of a given therapy can also be provided by use of single case design studies. A stable baseline should be established for the problem of concern and an appropriate design (e.g. ABAB) utilized. Treatment via this type of design needs to prove effective for at least three participants and be subject to further replication by two or more independent research groups (Chambless & Hollon, 1998).

In addition to the criteria above Chambless and Hollon (1998) state '...that, if psychological treatment research is to be informative, researchers must have a clearly defined population for which the treatment was designed and tested' (p. 9). Specific to stroke and PSD as described, it is apparent that comprehensive evaluation of the effectiveness of psychological interventions for this disorder may need to take into consideration a number of different populations. Research should consider identifying treatments or modification of existing treatments to address PSD in those persons also having significant communication problems or cognitive deficits. Given a small but significant number of persons with stroke are of pre-retirement age, studies should also consider whether a different approach to PSD treatment might be required for younger as opposed to older adults, in respect of the variation in life stage at which their stroke has occurred. Interventions for use in the different settings in which persons with PSD may find themselves (hospitals, at home with support or in institutional accommodation) and the potential for a differential effect of psychological treatments on different subtypes of PSD (e.g. stage post stroke, the catastrophizing, the labile PSD) should also not be overlooked.

Research to date

Despite the growing attention to PSD in research literature over the last 20 years (Andersen, 1997) recent reviews have decried the lack of consideration given to the development and evaluation of psychological interventions (Diller & Bishop, 1995; Gordon & Hibbard, 1997). This is an important endeavour given the distress associated PSD and the substantial effect it can have on recovery from stroke (Morris, Raphael, & Robinson, 1992; Parikh *et al.*, 1990). Additionally, while pharmacological interventions have proved useful for PSD (e.g. Andersen *et al.*, 1994; Lipsey, Robinson, Pearlson, Rao, & Price, 1984), antidepressant treatments carry the potential for discontinuation reactions (dizziness, insomnia, nervousness, agitation) (Lejoyeux & Ades, 1997), side/interaction effects (Cunningham, 1994) and compliance problems (Kaplan, 1997).

The paucity of research into psychological interventions for PSD means that any consideration of literature in this area requires broad inclusion criteria and that pointers for future developments may need to draw upon research and practice from related areas. Tables 1 and 2 list all the published material identified by the authors

Table 1. Post-stroke depression intervention case studies and uncontrolled trials

Study	Sample	Treatment	Assessment	Follow-up	Findings
Crasileck & Hall (1970)	N = 1	Hypnosis daily for 30 days, then weekly for 1 year	Nil formal	9 years	Subjective description of substantial functional gains
Watzlawick & Coyne (1980)	N = 1	Problem-focused family therapy (5 sessions)	Nil formal	3 months	Subjective description of symptom resolution
Jain (1982)	N = 1	Operant conditioning reinforcement of desired behaviours. Differential reinforcement of depressive and non-depressive statements.	Meals consumed ADLs performed Therapy attendance Other evaluations	3 months & 12 months	Improvement in meals consumed, ADLs and in therapy attendance
Hilbard, Grober, Stein, & Gordon (1992b)	N = 1	Positive visualization Cognitive behavioural, including social skills training. Estimated 52 sessions plus individual sessions with spouse	subjective BDI (subject) Post-stroke awareness rating HRSD (clinician) HRSD (spouse) Clinical Interview	12 months	Subjective report of reduced depression Not depressed on clinical interview BDI & HRSD reduction
Hatcher, Durham, & Richey (1985)	N = 1	Medical management, coordinated care, cognitive behaviour therapy 2 x 1 hour weekly. Supervised activity programme 12 hours a day Cognitive behavioural therapy 8.4 session average, no control group	Nil formal	Ongoing 1 x weekly managed care	Subjective description of improved self-esteem and mood
Lincoln, Flannagan, Surliffe, & Rother (1977)	N = 19	Cognitive behavioural therapy 8.4 session average, no control group	BDI HADS WDI	Nil	N = 4 consistent benefit N = 6 some benefit N = 9 no benefit
Kemp, Corgiat, & Gill (1991/92)	N = 41	Cognitive behavioural group therapy N = 18 (older persons with disability) N = 23 (older persons without disability) (12 sessions) Stroke numbers unspecified	DSM-III-R GDS OAHMI	6 months & 12 months	Both groups improved Non-disabled continued to improve to 6 months follow-up.

ADL = Activities of Daily Living
BDI = Beck Depression Inventory
DSM-III R = Diagnostic and Statistical Manual of Mental Disorders.
GDS = Geriatric Depression Scale
HADS = Hospital Anxiety and Depression Scale
HRSD = Hamilton Rating Scale for Depression
OAHMI = Older Adult Health and Mood Index
WDI = Wakefield Depression Inventory

Table 2. Post-stroke depression intervention: controlled trials

Study	Sample	Treatment	Assessment	Follow-up	Findings
Towle, Lincoln, & Mayfield (1989)	N = 44	Social work including counselling, visits up to 2 x weekly for 16 weeks, N = 21 No treatment control, N = 23	GHQ WDI	8 weeks & 16 weeks	No effect of treatment
Drummond & Walker (1996)	N = 65	Leisure group, N = 21 Conventional OT, N = 21 (19 sessions) No treatment control, N = 23	WDI Depression 'caseness'	3 months	No change in WDI Improved mood Improved mobility Increased leisure participation
Forster & Young (1996)	N = 240	Counselling and support average 10 visits over 12 months Treatment, N = 120 No treatment control, N = 120	NHP	Nil	No effect of treatment on depression
Dennis, O'Rourke, Slattery, Staniforth, & Warlow (1997)	N = 417	Counselling, goal setting, problem solving and specific advice, number of contacts based on need, over 6 months Treatment, N = 210 Standard care control, N = 207	HADS	Nil	Borderline significant advantage to control group

GHQ = General Health Questionnaire

HADS = Hospital Anxiety and Depression Scale

NHP = Nottingham Health Profile

WDI = Wakefield Depression Inventory

as assessing psychological interventions for PSD. They were determined on the basis of Medline and Psychlit CD Rom (May 1999) searches (using terms including stroke, cerebrovascular accident, depression, psychotherapy, cognitive therapy, behaviour therapy and psychosocial intervention). Additional sources were identified from the papers thus obtained, as well as some collected over the course of many years' work in post-stroke rehabilitation. While specialist stroke units do appear to provide a benefit to patients' mood (Juby, Lincoln, & Berman, 1996) these were not included in the review as it is considered that they are not clearly distinguishable as 'psychological management'. Such interventions involve a multitude of factors including better medical management (preventing fatal complications); a concentration on stroke needs without the distraction of having to care for patients who are acutely ill; specialist skills in medical, nursing and therapy staff; involvement of carers (Stone, 1999); and better integrated and more timely care (Indredavic, Bakke, Slodahl, Rosketh, & Haheim, 1999).

Case studies

Five studies have simply described single cases of intervention for PSD. Crasilneck and Hall (1970) provide details on the use of hypnosis. Treatment was administered daily for 30 days then weekly for 1 year with a 9-year follow-up. Substantial functional gains are described but in the absence of any formal assessment or diagnosis few conclusions can be drawn from the study. No other research into hypnosis as a treatment of PSD was found. A single case of treating PSD using five sessions of problem-focused family therapy also had no diagnostic criteria or objective assessment (Watzlawick & Coyne, 1980). This novel approach has also failed to receive any further attention in the research literature. However it is notable for its recognition of the contribution the family environment may make to the maintenance of PSD.

Jain (1982) utilized an operant conditioning approach involving reinforcement of desired behaviours, differential reinforcement of depressive and non-depressive statements and positive visualization, on a single individual with PSD in an in-patient rehabilitation setting. A substantial improvement in numbers of meals consumed, ADLs (Activities of Daily Living) completed and therapy attendance is described but only a subjective description of benefits in other aspects of depression.

The need for a multidisciplinary approach in the intervention for PSD was addressed in the case study of Hatcher *et al.* (1985). Their intervention involved a nurse psychotherapist, nurse carers, a physician and a psychologist. It included a rationalization of medication as well as a complete change in environment (from institutional to an 'own home' context). Cognitive-behaviour therapy (CBT) including attention to the negative thinking maintaining depressed mood, assertion skills training and a supervised activity programme were further components. Unfortunately, in the absence of any formal assessment, it is impossible to draw any empirically based conclusions about this treatment, despite a subjective description of improved self-esteem and mood being provided.

Hibbard *et al.* (1992b) describe a CBT treatment for PSD modified to consider aspects particular to the disorder including grief at losses, problems with insight and

cognitive difficulties (Hibbard, Grober, Gordon, & Aletta, 1990a). The treatment took place over a considerable period and involved over 52 sessions plus some separate contacts with the client's spouse. A social skills component was also included in this treatment. While not incorporating desirable single case design practice (e.g. an ABAB design), evaluation was comprehensive. It included both the participant and spouse completing psychometric rating scales and the therapist administering formal clinical assessment interviews. Diagnosis after 6 months of treatment and a 1 year follow-up was as 'not depressed'.

Uncontrolled studies

Lincoln *et al.* (1997) describe a CBT intervention for PSD in a case design series (AB, non-randomized, uncontrolled). Nineteen participants received on average 8.4 sessions of treatment by a community psychiatric nurse (CPN) or a psychology assistant. Treatment included distracting activities, behavioural tests, graded task assignments, activity scheduling as well as identifying/challenging negative thoughts. Effectiveness was principally assessed by considering Beck Depression Inventory (BDI) scores on the basis of visual inspection, comparison of post-treatment with pre-treatment and the proportion of scores below lowest baselines. Overall it was considered that four patients consistently showed benefit, six some benefit and nine no benefit from the treatment. A statistically significant decrease in BDI scores across all the participants was also noted.

While the Lincoln *et al.* (1997) study is an important initiative in evaluating the use of CBT with a relatively large number of individuals suffering PSD, it is only a preliminary study. Apart from the lack of a control group, the method of obtaining a sample of persons with PSD for intervention also raises questions. The experimenters identified 155 persons with depression from a stroke register of 626 patients. Of these, 136 were visited but only 19 agreed to participate. This seems a startling lack of willingness to take part among those interviewed and raises the question of whether a representative sample was obtained. It also demonstrates the need for treatments to identify possible barriers to participation, such as lack of awareness or caregiver support, and overcome them. The Lincoln *et al.* (1997) study also failed to follow-up its participants.

A number of reservations about the standard of the treatment in the Lincoln *et al.* (1997) study can also be raised. While the therapists are described as having 'training and experience' in CBT (Lincoln *et al.*, 1997, p. 166), it is generally considered that an assistant psychologist should not undertake duties involving direct clinical contact that demands 'reactive' clinical decision making (Wilson, 1990). One must ask whether the psychology assistant was therefore sufficiently experienced in therapy to provide a true test of the treatment modality. Treatment adequacy is also questionable given the acknowledgement that substantial modifications to CBT are required for those with stroke (Hibbard *et al.*, 1990a) and that CBT treatment for older adults as a standard is given in research trials for consistently longer than the average 8.4 sessions in the Lincoln *et al.* (1997) trial, usually 20 sessions (Thompson, 1998).

No studies have investigated group therapy interventions specifically for persons with PSD, although one study (Kemp *et al.*, 1991/92) has compared CBT for depression in a group of non-disabled older adults with a group of older adults with disabling illness including some persons (numbers not given) who had suffered a stroke. In the absence of a no treatment control it was concluded that the psychotherapy was equally as effective initially in the presence of disability as for non-disabled older adults. At follow-ups (6 and 12 months) it was noted that the non-disabled group continued to improve post-treatment while improvement levelled off in the group containing persons with disabilities. The researchers suggest longer treatment or booster sessions may be useful for older adults with disability who are possibly more at risk of developing new health problems or face the exacerbation of old ones as time progresses.

Controlled studies

Towle *et al.* (1989) conducted a randomized and controlled (no treatment) study of social work intervention amongst 44 individuals on average 12 months post stroke and who were experiencing significant depression. Their intervention included counselling participants as well as contacting day centres and advising on services and benefits. Contacts were twice a week for 16 weeks. They found no significant differences between the treatment and control groups. Similarly, Forster and Young (1996) found no significant effect on the percentage of participants with depressed mood in a controlled trial assessing the benefits of specialist nurse support for 120 patients with stroke in the community. Support in this instance included counselling, goal setting, problem solving and advice on specific issues over 12 months post stroke, with an average of eight visits in the first 6 months and an average of four in the second. Unfortunately the training to prepare the nurses in this study for their counselling role was just 2 days long.

The possibility that non-specific counselling and support may have a negative influence on depression after stroke is raised by the findings of Dennis *et al.* (1997). They conducted a randomized controlled trial comparing the benefits of such an intervention alongside facilitation of access to health, social and voluntary services to standard care. They had a total sample of 417 patients with the number of contacts varying widely, based on the intervening worker's assessment of need. A difference on the depression subscale of the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) that approached significance was identified for controls. The researchers suggest that provision of a stroke family care worker may have induced a passive response to illness in their treatment group with greater depression as a result.

Drummond and Walker (1996) investigated the benefits of leisure rehabilitation to patients allocated to a specialist stroke unit. The leisure rehabilitation involved giving advice and equipment to enable patients access to leisure pursuits as well as liaison with specialist agencies. The effect of this intervention was compared with conventional occupational therapy and a no treatment control condition. From a behavioural perspective the leisure rehabilitation can be perceived as aimed at increasing pleasant events, a fundamental aspect of this psychological model's

treatment for depression (Lewisohn, Antonuccio, Steinmetz, & Teri, 1984). In the Drummond and Walker (1996) study the interventions were not directed specifically at treating depression but at preventing its development post stroke. The study failed to find an impact on their main measure of depression, the Wakefield Depression Inventory (Snaith, Ahmed, Mehta, & Hamilton, 1971), but noted fewer 'diagnosable cases of depression' for the condition of interest post-treatment as well as a positive effect on mood.

Conclusions

The literature reviewed above demonstrates that research into psychological interventions for PSD remains unsophisticated and none meets the standards outlined by Chambless and Hollon (1998). Only four randomized controlled intervention studies were identified. Three undefined counselling interventions in conjunction with miscellaneous problem solving and service assistance appeared to be of no benefit or indeed detrimental to participants. One study did suggest that 'leisure rehabilitation' may be of benefit but is complicated by the fact that treatment included depressed and non-depressed individuals. Replication of the latter findings is required.

Unfortunately none of the interventions described in the literature have developed a complete treatment manual to which reference can be made to demonstrate the efficacy as is required in at least 'two independent research settings' (Chambless & Hollon, 1998). There is no evidence that any treatments have been subject to quality monitoring procedures, nor have any of the case studies been of empirically acceptable design. The research undertaken has also largely failed to take into account the specific nature of PSD and the implications of this for intervention research. Only one anecdotal case study has used caregiver assessment to control for lack of awareness (Hibbard *et al.*, 1992b) and no study used assessment instruments or criteria designed specifically for use with PSD. Also no appreciation has been given to the subtypes of PSD (early versus late onset, catastrophizers, the labile PSD) in order to assess whether therapies might be differentially effective for them.

Large groups of people with PSD have also been neglected in the few treatment investigations which have been undertaken. No research has been reported on persons who have had strokes and have substantial cognitive or communication disabilities. Treatment strategies specific to the needs of younger, as opposed to older, adults with depression post stroke have also been left unconsidered. Only anecdotal single case studies have addressed intervention with persons in residential institutions (Hatcher *et al.*, 1985) or hospital (Jain, 1982).

The opportunities indicated in case studies considering hypnosis and family therapy have thus far failed to be subject to any empirical investigation. This leaves a chasm of opportunity for further research. The situation with CBT is more promising, with case studies added to by a case series (Lincoln *et al.*, 1997). Unfortunately in the latter its AB design is substandard in demonstrating treatment efficacy.

Further evaluation of CBT as a treatment for PSD is warranted not only on the basis of the research reviewed, but also given that it has been identified as efficacious in treating those with depression in the general population (Scott, 1996) as well as

older adults (the bulk of those who suffer stroke) in a modified format (Thompson, Gallagher, & Breckenridge, 1987) and its utility has been demonstrated with others suffering neurological conditions (e.g. Larcombe & Wilson, 1984). CBT also integrates the behavioural strategies which have found support in an occupational therapy study of 'leisure rehabilitation' as well as when administered by caregivers to persons with dementia who are depressed (Teri, Logsdon, Uomoto, & McCurry, 1997). Persons with PSD and cognitive disability share some commonality with those having dementia. There is some evidence that PSD is more a 'depression of dementia' than a 'dementia of depression', that is depression develops as a result of cognitive impairment, rather than is caused by it post stroke (Andersen, Vestergaard, Riis, & Ingeman-Nielsen, 1996).

Support for the further evaluation of CBT in the treatment of PSD is also found in the evidence one of its components, problem solving, contributes to improved family function post stroke (Evans, Matlock, Bishop, Stranahan, & Pederson, 1988). Problem solving has also been used to reduce depression in older adults in institutions (Hussian, 1987; Hussian & Lawrence, 1981).

A further advantage of CBT is that it lends itself to the development of treatment manuals, a significant aid to replication studies. Table 3 lists currently available

Table 3. Treatment descriptions which could form the basis for a comprehensive cognitive-behavioural post-stroke depression treatment manual

Reference	Treatment description
Dempster, Knapp, & House (1998)	Identifying carer types and modifying treatment accordingly
Dick, Gallagher-Thompson, Coon, Powers, & Thompson (1995)	Cognitive-behaviour therapy for late-life depression: A client manual
Hibbard <i>et al.</i> (1990a, 1990b)	Modification of cognitive psychotherapy for the treatment of post-stroke depression
Teri (1994)	Behavioural treatment of depression in patients with dementia
Thompson, Gallagher-Thompson, & Dick (1995)	Cognitive-behaviour therapy for late life-depression: A therapist manual

treatment descriptions that could form the basis of a comprehensive CBT manual for treatment of PSD. Treatment developed for older adults (e.g. Dick *et al.* 1995; Thompson *et al.*, 1995) could be integrated with guidelines for stroke depression CBT treatment (Hibbard *et al.*, 1990a, 1990b) and the development of behavioural treatments of depression in dementia outlined by Teri (1994). A section considering how/if to include caregivers given a typology established at initial assessment (Dempster *et al.*, 1998) might also be a component.

The above proposition does not rule out consideration of research into the utility

of other psychological therapies in the treatment of PSD. In particular, given the losses to which a person with stroke may have to adjust, different styles of therapy may be useful at different stages post stroke. For instance, research with depressed older caregivers of persons with dementia has identified interpersonal psychotherapy as more useful early in the process, CBT later (Gallagher-Thompson & Steffen, 1994).

Given the relative heterogeneity of stroke there also remains an opportunity for more powerful exploitation of single case study design methodology in assessing utility of treatments for PSD. This could prove more cost effective than group studies and allow valid research in environments in which it is difficult to gain large numbers of participants (e.g. hospitals, institutions).

Overall the information reviewed relating to psychological interventions for PSD indicates that while the research to date is very preliminary, the basis for investigations that could identify empirically valid treatments exists. A number of studies suggest the type of therapy worthy of trial (CBT), there is an understanding of subtypes within PSD that should be considered and a knowledge of the particular nature of the disorder and the specialist assessment techniques appropriate to use on this basis. At this point it remains for researchers and funding bodies to take up the gauntlet.

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References

- Andersen, G. (1997). Post-stroke depression: Diagnosis and incidence. *European Psychiatry*, 12 (Supplement 3), 255s-260s.
- Andersen, G., Vestergard, K., & Ingeman-Neilsen, M. (1995). Post-stroke pathological crying: Frequency and correlation to depression. *European Journal of Neurology*, 2, 45-50.
- Andersen, G., Vestergard, K., & Lauritzen, L. (1994). Effective treatment of post-stroke depression with a selective serotonin reuptake inhibitor, citalopram. *Stroke*, 25, 1099-1104.
- Andersen, G., Vestergard, K., Riis, J., & Ingeman-Neilsen, M. (1996). Dementia of depression or depression of dementia in stroke. *Acta Psychiatrica Scandinavica*, 94, 272-278.
- Burvill, P., Johnson, G., Jamrozik, K., Anderson, C., & Stewart-Wynne, E. (1997). Risk features for post-stroke depression. *International Journal of Geriatric Psychiatry*, 12, 219-226.
- Chambless, D. H., & Hollon, S. D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*, 66, 7-18.
- Crasilneck, H. B., & Hall, J. A. (1970). The use of hypnosis in the rehabilitation of complicated vascular and post-traumatic neurological patients. *International Journal of Clinical and Experimental Hypnosis*, 18, 145-159.
- Cunningham, L. A. (1994). Depression in the medically ill: Choosing an anti-depressant. *Journal of Clinical Psychiatry*, Supplement A, 90-97.
- Dempster, C., Knapp, P., & House, A. (1998). The collaboration of carers during psychological therapy. *Mental Health Nursing*, 18, 24-27.
- Dennis, M., O'Rourke, S., Slattery, J., Staniforth, T., & Warlow, C. (1997). Evaluation of a stroke family care worker: Results of a randomised controlled trial. *British Medical Journal*, 314, 1071-1077.
- Dick, L. P., Gallagher-Thompson, D., Coon, D. W., Powers, D. V., & Thompson, L. W. (1995). *Cognitive-behavioural therapy for late life depression: A client manual*. Palo Alto, CA: Older Adult and Family Center, Veterans Affairs, Palo Alto Health Care System.
- Diller, L., & Bishop, D. S. (1995). Depression and stroke. *Topics in Stroke Rehabilitation*, 2, 44-45.

- Drummond, A. E. R., & Walker, M. F. (1996). Generalisation of the effects of leisure rehabilitation for stroke patients. *British Journal of Occupational Therapy*, 59, 330-334.
- Evans, R., Matlock, A., Bishop, D. S., Stranahan, S., & Pederson, C. (1988). Family intervention after stroke: Does counselling or education help? *Stroke*, 19, 1243-1249.
- Forster, A., & Young, J. (1996). Specialist nurse support for patients with stroke in the community: A randomised controlled trial. *British Medical Journal*, 312, 1642-1646.
- Gainotti, G., Azzoni, A., Razzano, C., Lanzillota, M., Marra, C., & Gasparini, F. (1997). The Post-Stroke Depression Rating Scale: A test specifically devised to investigate affective disorders of stroke patients. *Journal of Clinical and Experimental Neuropsychology*, 19, 340-356.
- Gallagher-Thompson, D., & Steffen, A. M. (1994). Comparative effects of cognitive behavioral and brief psychodynamic psychotherapies for depressed family caregivers. *Journal of Consulting and Clinical Psychology*, 62, 543-549.
- Gordon, W. A., & Hibbard, M. R. (1997). Post-stroke depression: An examination of the literature. *Archives of Physical Medicine and Rehabilitation*, 78, 658-663.
- Gordon, W. A., Hibbard, M. R., Egelko, S., Riley, F., Simon, D., Diller, L., Ross, E. D., & Lieberman, A. N. (1991). Issues in the diagnosis of post-stroke depression. *Rehabilitation Psychology*, 36, 71-87.
- Greveson, G. C., Gray, C. S., French, J. M., & James, D. F. W. (1991). Long-term outcome for patients and carers following hospital admission for stroke. *Age and Ageing*, 20, 337-344.
- Hatcher, B. J., Durham, J. D., & Richey, M. (1985). Overcoming stroke-related depression. *Journal of Gerontological Nursing*, 11, 35-39.
- Hibbard, M. R., Gordon, W. A., Stein, P. N., Grober, S., & Sliwinski, M. (1992a). Awareness of disability in patients following stroke. *Rehabilitation Psychology*, 37, 103-120.
- Hibbard, M. R., Grober, S. E., Gordon, W. A., & Aletta, E. G. (1990a). Modification of cognitive psychotherapy for the treatment of post-stroke depression. *The Behaviour Therapist*, 13, 15-17.
- Hibbard, M. R., Grober, S. E., Gordon, W. A., Aletta, E. G., & Freeman, A. (1990b). Cognitive therapy and treatment of post-stroke depression. *Topics in Geriatric Rehabilitation*, 5, 43-55.
- Hibbard, M. R., Grober, S. E., Stein, P. N., & Gordon, W. A. (1992b). Post-stroke depression. In A. Freeman, & F. M. Dattilio, (Eds.), *Comprehensive casebook of cognitive therapy* (pp. 303-310). New York: Plenum.
- Hussian, R. A. (1987). Problem solving training and institutionalized elderly patients. In A. Freeman & V. B. Greenwood (Eds.), *Cognitive therapy: Applications in psychiatric and medical settings* (pp. 199-212). New York: Human Sciences Press.
- Hussian, R. A., & Lawrence, P. S. (1981). Social reinforcement of activity and problem solving training in the treatment of depressed institutionalised elderly patients. *Cognitive Therapy and Research*, 5, 57-69.
- Indredavic, B., Bakke, F., Slodahl, S. A., Rosketh, R., & Haheim, L. L. (1999). Treatment in a combined acute and rehabilitation stroke unit: Which aspects are most important. *Stroke*, 30, 917-923.
- Jain, S. (1982). Operant conditioning for management of a non compliant rehabilitation case after stroke. *Archives of Physical and Medical Rehabilitation*, 63, 374-376.
- Juby, L. C., Lincoln, N. B., & Berman, P. (1996). The effect of stroke rehabilitation on functional and psychological outcome: A randomised controlled trial. *Cerebrovascular Diseases*, 6, 106-110.
- Kaplan, E. M. (1997). Antidepressant non-compliance as a factor in discontinuation syndrome. *Journal of Clinical Psychiatry*, 58 (Suppl. 7), 31-35.
- Kemp, B. J., Corgiat, M., & Gill, C. (1991/92). Effects of brief cognitive-behavioural group psychotherapy with and without disabling illness. *Behaviour, Health and Aging*, 2, 21-27.
- Larcombe, N. A., & Wilson, P. H. (1984). Evaluation of cognitive behaviour therapy for depression in patients with multiple sclerosis. *British Journal of Psychiatry*, 145, 366-371.
- Lejoyeux, M., & Ades, J. (1997). Antidepressant discontinuation: A review of the literature. *Journal of Clinical Psychiatry*, 58 (Supplement 7), 11-15.
- Lewisohn, P. M., Antonuccio, D. O., Steinmetz, J., & Teri, L. (1984). *The coping with depression course*. Eugene, OR: Castalia.
- Lincoln, N. B., Flannaghan, T., Sutcliffe, L., & Rother, L. (1997). Evaluation of cognitive behavioural treatment for depression after stroke: A pilot study. *Clinical Rehabilitation*, 11, 114-122.
- Lipsey, J. R., Robinson, R. G., Pearlson, G. D., Rao, L., & Price, T. R. (1984). Nortriptyline treatment of post stroke depression: A double-blind study. *Lancet*, 1, 297-300.

- Morris, P. L. P., Raphael, B., & Robinson, R. F. (1992). Clinical depression is associated with impaired recovery from stroke. *Medical Journal of Australia*, 157, 239-242.
- Morris, P. L. P., Robinson, R. G., Raphael, B., & Bishop, D. (1991). The relationship between perception of social support and post-stroke depression in hospitalized patients. *Psychiatry*, 54, 306-315.
- Parikh, R., Robinson, R., Lipsey, J., Starkstein, S., Federoff, J., & Price, T. (1990). The impact of post-stroke depression on recovery in activities of daily living. *Archives of Neurology*, 47, 785-789.
- Robinson, R. G. (1997). Neuropsychiatric consequences of stroke. *Annual Review of Medicine*, 48, 217-229.
- Robinson, R. G., Bolduc, P., & Price, T. R. (1987). A two year longitudinal study of post-stroke depression: Diagnosis and outcome at one and two year following. *Stroke*, 18, 837-843.
- Robinson, R. G., Starr, L. B., Kubos, K. L., & Price, T. R. (1983). A two year longitudinal study of mood disorder following stroke: Findings during the initial evaluation. *Stroke*, 14, 736-744.
- Scott, J. (1996). Cognitive therapy of affective disorders. *Journal of Affective Disorders*, 37, 1-11.
- Snaith, R. P., Ahmed, S. N., Mehta, S., & Hamilton, M. (1971). Assessment of the severity of primary depressive illness: Wakefield Self Assessment Depression Inventory. *Psychological Medicine*, 1, 143-149.
- Starkstein, S. E., Federoff, J. P., Price, T. R., Leigurda, R. S., & Robinson, R. G. (1993). Catastrophic reactions after cerebrovascular lesions: Frequency, correlates and validation of a scale. *Journal of Neuropsychiatry and Clinical Neuroscience*, 5, 189-194.
- Stone, S. (1999). Stroke units: More trials needed. *Age and Ageing*, 28, 95-97.
- Stroke Association (1996). *Reducing the risk of stroke*. Stroke series 3. London: Author.
- Sutcliffe, L. M., & Lincoln, N. B. (1998). The assessment of depression in aphasic stroke patients: The development of the Stroke Aphasic Depression Questionnaire. *Clinical Rehabilitation*, 12, 506-513.
- Teri, L. (1994). Behavioural treatment of depression in patients with dementia. *Alzheimers Disease and Related Disorders*, 8, 66-74.
- Teri, L., Logsdon, R. G., Uomoto, J., & McCurry, S. M. (1997). Behavioural treatment of depression in dementia patients: A controlled clinical trial. *Journals of Gerontology, Psychological Sciences, Social Sciences*, Series B, 52, 159-166.
- Thompson, L. W. (1998, July). *Cognitive therapy with older adults*. Paper presented at the Annual Conference of Psychologists Special Interest Group in the Elderly, British Psychological Society, Edinburgh, UK.
- Thompson, L. W., Gallagher, D., & Breckenridge, J. S. (1987). Comparative effectiveness of psychotherapies for depressed elders. *Journal of Consulting and Clinical Psychology*, 53, 385-390.
- Thompson, L. W., Gallagher-Thompson, D., & Dick, L. P. (1995). *Cognitive-behavioral therapy for late life depression: A therapist manual*. Palo Alto, CA: Older Adult and Family Center, Veterans Affairs, Palo Alto Health Care System.
- Towle, D., Lincoln, N. B., & Mayfield, L. M. (1989). Evaluation of social work on depression after stroke. *Clinical Rehabilitation*, 3, 89-96.
- Watzlawick, P., & Coyne, J. C. (1980). Depression following stroke: Brief, problem-focused family treatment. *Family Process*, 19, 13-18.
- Wilson, L. (1990). Psychological technicians: Guidance on employment. *Clinical Psychology Forum*, 25, 41-42.
- Zigmond, A. S., & Snaith, R. P. (1983). The Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica*, 67, 361-370.

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RESEARCH DOSSIER

I. 'Partner involvement in the treatment of chronic headaches'

MATERIAL REDACTED AT REQUEST OF UNIVERSITY

RESEARCH DOSSIER

II. Attributional Style and Symptoms of Depression in Persons with Multiple Sclerosis

Abstract

Objectives.

The study was designed to assess hypotheses derived from the reformulated model of learned helplessness/hopelessness (Abramson, Metalsky & Alloy, 1989), that negative attributional style would be associated with depressive symptoms, and that negative life events would interact with negative attributional style, to explain depressive symptoms, in a sample of persons with multiple sclerosis (MS).

Design and Method.

The research was cross-sectional in design. Data was collected via survey from 495 persons with MS. Scores on a measure of depressive symptoms were then used to allocate participants into three groups; low depression, moderate depression and high depression. These groups were then compared on the basis of their level of negative attributional style. Subsequently, the association between negative attributional style and depressive symptoms across the whole sample was considered. The proposition negative life events would interact with negative attributional style to explain significant variance in depressive symptoms, over and above each of these variables independently, was also investigated.

Results.

Three groups of persons with MS determined on the basis of their level of depressive symptoms were also differentiated by their level of negative attributional style. Negative attributional style was also positively associated with depressive symptoms across the whole sample. Partial support was found for the proposition that negative life events would interact with negative attributional style to explain depressive symptoms. A significant interaction was found when negative life events (time since last symptom relapse and a general measure of life stressors) were considered across the whole sample, though not for subsample persons with the relapsing remitting

variant of MS (those considered to be particularly at risk on account of their likely experience of discrete relapse episodes).

Conclusions.

Consistent with the reformulated model of learned helplessness/hopelessness there was substantial support for both the role of negative attributional style and negative life events in interaction with negative attributional style, in explaining depressive symptoms in a sample of persons with MS. Follow up of the participants from this initial cross-sectional study will allow inclusion of a temporal dimension in our understanding of this model in persons with MS and allow stronger statements to be made about causal connections. It is appropriate that clinicians consider attributional style in persons with MS whom they are treating for depression.

1. Introduction

1.1 Overview

Multiple Sclerosis (MS) is a chronic, usually deteriorative illness, in which depression is common. While there is some evidence that the disease process and its treatments may be directly responsible for depression, other research suggests psycho-social factors are also important. Accordingly psychological models may contribute to our understanding, treatment and prevention of depression in persons with MS. One psychological model of depression which has empirical support in explaining depression in other groups and seems likely to be applicable to persons with MS is the reformulated model of learned helplessness (Abramson, Seligman & Teasdale, 1978), recently updated as the hopelessness theory of depression (Abramson, Metalsky & Alloy, 1989). A central tenet of this model is that depression is a result of exposure to negative life events and the view individuals take of these. By virtue of their illness persons with MS are particularly likely to experience negative events as they face substantial lifestyle, social, vocational and family role changes as their illness proceeds. Despite this, to date only one study has tested the hopelessness theory of depression in a sample of persons with MS, without finding any support for it (Barrett, 1992). However given substantial methodological concerns about this study (small sample, the measures used to assess stressors and depression, failure to consider medication usage or MS type diagnosis) and in light of the strength of the evidence in support the model in other areas, it was considered appropriate a further evaluation take place. Such research has the potential to inform both prevention and intervention for depression in persons with MS and to identify a measure with the potential to identify those at risk of depression.

1.2 Multiple Sclerosis

Multiple Sclerosis (MS) is a neurological condition involving selective destruction of the myelin sheath, which insulates the nerve fibres of the human body. The destruction of the myelin sheath disrupts neural transmission and can lead to symptoms including

fatigue, loss of limb control, dysarthria, eye problems, incontinence and cognitive impairment (Matthews, Compston, Allen, & Martyn, 1991). Onset of the disease is typically between the ages of 20 and 40 years, and a ratio of 2: 3, male: female, is reported (Matthews, 1993). The disease has a much higher incidence in temperate than tropical climates. The UK lifetime prevalence of MS is 2 per 1,000 (MacDonald, Cockerell, Sander & Shorvon, 2000).

Virtually all those affected by MS will ultimately encounter progressive disability, though the rate of deterioration remains largely unpredictable. Two main forms of MS have been described; relapsing remitting MS and chronic progressive MS. The former typically involves the disease progressing with periods of stability interspersed with exacerbations lasting up to two to three weeks. Remissions may be full or partial. The chronic progressive type of MS is considered to occur for approximately ten per cent of those affected (Lishman, 1998). Those having this form of MS encounter a condition which deteriorates progressively without the periods of remission that characterise the relapsing remitting form of the disease. There is a third sub type of MS, so called secondary progressive MS. Here an initial relapsing-remitting course changes to become a progressive variant of the disease (Vleugels et al., 1998). Currently there is no cure for MS and medical treatment involves interventions to provide symptomatic relief. Recently, the drug Beta-interferon has been demonstrated to significantly reduce the rate of relapse in the relapsing-remitting form of the disease (The IFN Multiple Sclerosis Study Group, 1993).

1.3 MS and Depression

1.3.1 Demographics

Depression is one of the mental health problems most commonly associated with MS. It is a disorder most often characterised by dysphoric mood. Other symptoms may include loss of interest or pleasure in activities, changes in appetite or sleep, suicidal ideation, feelings of guilt or worthlessness, decreased energy and difficulty in thinking and concentrating (American Psychiatric Association, 1994). While emotional changes

in persons experiencing MS have been noted for over seventy years (Lishman, 1998), the earliest research to consider depression and employ a scientific method was probably that of Surridge (1969). He found the prevalence of depression in persons with MS to be almost double that of a control group of persons with muscular dystrophy (26.8% as opposed to 12.9%), though the difference was not statistically significant, probably because of the small size of the control group. Since this study numerous others have established elevated prevalence rates of depression in MS samples relative to population norms, those with other progressive neurological symptoms and those with rheumatological conditions (Patten & Metz, 1997; Schubert & Foliat, 1993). Recent estimates suggest a lifetime prevalence rate for depression meeting DSM III-R criteria (American Psychiatric Association, 1987) to be 50.3% among persons with MS (Sadovnick et al., 1996).

A sobering finding in some studies of persons with MS is the high rate of suicide among those who are depressed (Kahana, Leibowitz & Alter, 1971; Sadovnick, Eisen, Ebers, & Paty, 1991; Stenager et al., 1992). For instance in a six year follow up of 295 persons with MS in Israel, 3 per cent of the original sample were found to have committed suicide, 14 times the rate for the general Israeli population (Kahana et al., 1971). Apart from suicide and the general distress caused by depression, this disorder has also been linked to decreased social function in persons with MS (Gilchrist & Creed, 1994) poorer quality of life (Jonsson & Ravnborg, 1996), reduced medication adherence (Mohr et al., 1996) and less effective immune system function (Foley, Traugott, Larocca, Caruso & Scheinburg, 1999). Of note, in contrast to depression in the general population, depression in persons having MS also seems more likely to get worse in the absence of treatment, rather than remain stable or remit (Mohr, Likosky, Dwyer & Van der Wende, 1999).

Considerable effort has been made to identify contributors to the high rate of depression seen in persons with MS. It seems understandable that the considerable psycho-social adjustment required of those with MS would explain the increased rate of depression with this illness. However the fact that MS is a neurological disease with demonstrable cerebral changes has led researchers to consider whether the depression

is a result of the disease itself or even of a genetic factor common to both MS and depression. In addition the drugs used in the treatment of MS symptoms have been considered as aetiological factors in the development of affective problems in this population. Some may have depression as a side effect.

1.3.2 Disease Factors and Depression in MS.

A variety of studies have investigated correlates of the structural lesions in the brain encountered in MS and their relation to depression. MRI studies for instance, have reported greater periventricular pathology with depressive symptoms (e.g., Reischies, Baum, Brau, Hedde, & Schwindt, 1988). Others have found depression to be associated with left hemisphere white matter lesions (George, Kellner & Gaust, 1994; Pujol, Bella, Deus, Marti-Vilalta & Capdevila, 1997). Fassbender et al. (1998) have also described an association between mood disorder and dysfunction of the hypothalamic-pituitary-adrenal axis, specifically inflammation, in persons with MS. Sabatini et al. (1996) suggest a disconnection between sub cortical and cortical areas identified by measures of cerebral blood flow, may be responsible for depression in MS. However other studies, have not found a connection between specific neurological sub traits and depression (Anzola et al., 1989; Millefiorini et al., 1992; Ron & Logsdail, 1989).

Further support for an organic basis to depressive symptoms in persons having MS has been taken from the fact depression appears to be more closely linked to occasions of illness exacerbation than to level of disability (e.g. Dalos, Robins, Brooks & Odonnell, 1983; Devins & Seland, 1987; Huber, Rammohan, Bornstein & Christy, 1993; Noy et al., 1995). That is depression occurs when the disease is more active. Similarly the association between cognitive change and depression in persons with MS has been used to support an organic aetiology (Arnett et al., 1999; Filippi et al., 1994). Cognitive change is considered to also reflect disease activity. Unfortunately concluding that organic change is the a major contributor to affective disorder in MS on such evidence is flawed. The adjustment required of an individual, either to exacerbation of symptoms or cognitive changes may still be the major precipitant to the

problem (Gilchrist & Creed, 1994). Neuropathological changes may impact on the individual in such a way as to require psychological adjustment, rather than directly leading to depression.

It has also been speculated that MS and depression may be determined by a common genetic mechanism (Livneh & Antonak, 1997). Numerous anecdotal studies report the first MS symptoms for some individuals as being frank depression (e.g. Goodstein & Ferrell, 1977; Clarke, Wadhwa & Leroi, 1998) and people with MS have reported high levels of depression prior to disease onset (Sullivan, Weinshenker, Mikail & Edgley, 1995). However evidence in support of the genetic theory, as it relates to family history and risk however, is not strong (Sadnovick et al., 1996) and the significance of these anecdotal studies have been dismissed by some commentators (e.g., Feinstein, 1995).

A further “organic” hypothesis to explain increased depression in persons with MS considers the potential role of treatment agents. Cortico-steroids have been used in the treatment of MS and have been associated with depression (Minden, Orav & Reich, 1987). More recently concerns have been raised about depression as a side effect of the use of Interferon Beta-1b therapy for MS (Neille, Gookin, Goodkin & Hauser, 1996). In this instance treatment of the depression has been considered beneficial in order to improve adherence to the drug regime (Mohr, Goodkin, Likosky & Gatto, 1997). Anxiolytics, such as benzodiazepines, are also often prescribed to persons with MS. These have also been considered capable of producing depression as a side effect (e.g. Hall & Zisook, 1981; Patten, Williams & Love, 1996) though a specific role in depression in persons with MS has not yet been investigated (Patten & Metz, 1997). Muscle relaxants such as tizanidine (zanaflex®) and dantrolene (dantrium®) are medications that are prescribed for people with MS and may give rise to depression as a side effect (Elan, 1999; Joint Formulary Committee, 2000; Nab & Hommes, 1987; Proctor & Gamble Pharmaceuticals, 1999).

Finally, while depression does not appear to be more prevalent in relapsing remitting

than primary progressive MS, it may be more common in those with the secondary progressive form of the disease (Vleguets et al., 1998) potentially indicating that disease sub-type may relate to the likelihood of depression.

1.3.3 Psycho-Social Factors and Depression in Persons with MS.

A large number of variables have been investigated in the attempt to understand the contribution of psycho-social factors to depression in persons with MS. These variables include life event stress, social stress, social support, illness intrusiveness, self esteem, coping strategies and cognitive (thinking style) factors. Together studies in this area support the importance of psycho-social factors in the development of depression in this population.

The association between life events and depression is well established in other populations (Mazure, 1998) and has also been identified in samples of persons with MS (Aikens, Fischer, Namey & Rudick, 1997; Patten, Metz & Reiner, 2000). Gilchrist and Creed (1994) found a connection between depressive symptoms and ratings of social stress (ratings for stress across six domains; occupation, money, housing, social life, marriage and family). Wineman (1990) identified the importance of perceived social support in militating against depression in persons having MS. Devins, Seland, Klein, Edworthy and Saary (1993) used a longitudinal design to demonstrate how illness induced lifestyle disruption (illness intrusiveness), compromised psycho-social adjustment in MS, where psycho-social adjustment included two measures of depression. Cross-sectional data for the same sample demonstrated an effect specific to depression (Devins, Edworthy et al., 1993). Barnwell and Kavanagh (1997) detected a relationship between depression and change in self esteem over a 2-month time period in persons with MS.

Research considering the coping strategies used by persons with MS and depression has produced mixed results. Coping strategies were not found to be related to mood in

a study by Wineman, Durand and Steiner (1994). However, Aikens et al. (1997) findings suggest emotion focused coping (strategies to manage feelings) specifically escape-avoidance coping may be related to increased depression. The connection between emotion focused coping in the face of illness exacerbation/relapse may well explain the depression reported at these times by persons with MS; emotion focused coping has been associated with illness exacerbation/relapse (Warren, Warren & Cockerill, 1991). Pertinent to the interest of the current study, Mohr, Goodkin, Gatto & Van der Wende (1997), found the coping strategy 'cognitive reframing' was negatively related to depression in persons with MS.

A range of cognitive variables have been considered in relation to depression in persons with MS. Shnek, Foley, LaRocca, Smith and Halper (1995) tested the hypothesis that learned helplessness, cognitive distortions (errors in thinking) and self-efficacy in regard to MS, would predict depression. The hypothesis was tested in a cross-sectional study with 80 persons with MS attending a care centre. Using multiple regression, only helplessness was found to be independently related depression, accounting for over twenty five per cent of the variance on the Centre for Epidemiological Depression Scale (CES-D) (Radloff, 1977). A further study (Shnek et al., 1997) compared persons with spinal cord injury, with persons having MS. Those with MS demonstrated significantly greater levels of depression, associated with higher levels of helplessness and lower levels of self-efficacy than the persons with spinal injury. In this study both cognitive variables were independently associated with depression, in both of the comparison groups, and helplessness was found to be responsible for some thirty six per cent of the variance in depression for the MS group.

1.3.4 Cognitive Therapy and Depression in Persons with MS.

The importance of cognitive variables in depression in persons with MS is suggested by intervention studies. Therapies which directly address the role of negative thoughts attitudes and beliefs are commonly referred to as cognitive therapy. Often cognitive therapy includes adjunctive behavioural strategies, both to challenge negative thinking

and to increase the experience of pleasant events. Four scientifically rigorous studies of cognitive behavioural therapy (CBT) for depression in MS have been reported.

Larcome and Wilson (1984) used a small sample of 20 persons with MS, to test the efficacy of CBT for depression in this client group. Participants were randomly allocated to CBT treatment (6 x 1½ hr sessions), or a wait list control condition. Clinical and statistically significant improvement was found on most measures of depression in this study. Foley, Bedell, LaRocca, Scheinburg & Reznikoff (1987) randomly assigned patients with MS to a 'stress inoculation' or 'current available care' condition. Stress inoculation is a recognized short term cognitive behavioural intervention. The six-session treatment used in the study included the evaluation of cognitive self-statements and the 'in vivo' use of cognitive reinterpretations. Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock & Erbaugh, 1966) scores were significantly reduced in the stress inoculation group, but not the control. Finally, an 8-week cognitive behavioural therapy treatment for depression, administered by telephone, proved efficacious relative to a 'usual care' control condition (Mohr et al., 2000). An additional benefit was noted for those who received treatment in this study as they also demonstrated better adherence to disease modifying medication at four-month follow-up.

Further support for the usefulness of interventions designed to change cognitions to treat depression in persons with MS is found in a recent meta-analytic study. Mohr and Goodkin, (1999) concluded that treatments for depression in MS, such as CBT which focus on the development of coping skills, are significantly more effective than those taking an insight orientated approach. It also worth noting that this analysis suggested there was no apparent advantage in the use of anti-depressant medication for depression in MS, as compared to psychotherapy. However, research has yet to consider the new generation SSRI (Selective Serotonin Reuptake Inhibitors) medications for use with this client group.

1.4 The Reformulated Theory of Helplessness and the Hopelessness Theory of Depression

1.4.1 The Theory and its Development

While a large array of psychological theories and associated research have been presented in an attempt to improve our understanding of depression (Street, Sheeran & Orbell, 1999), among the most prominent in recent times are those giving primacy of attention to the cognitive (thoughts, attitudes, beliefs) factors, in the development, maintenance and clinical treatment of this problem. One of the major cognitive theories of depression is the reformulated theory of learned helplessness (Abramson et al., 1978).

The reformulated theory of learned helplessness proposes that depression is a result of the attributions people make regarding events which affect them, specifically that an internal, stable and global attributional style for negative events makes individuals vulnerable to the development of depression. Persons who view a negative event as caused by something to do with themselves (internal), as opposed to something unconnected to themselves (external), that is due to something that affects a broad range of situations (global), rather than being confined to a narrow range of circumstances (specific) and due to factors which are long lived or recurrent (stable), rather than those that are short lived or intermittent (unstable), are considered more likely to become depressed. For instance a student who has failed a mathematics exam and concludes this was due to their lack of mathematical ability (internal), that this inability reflects their low intelligence which also affects many other areas of their life (global) and is likely to continue to do so (stable), is more likely to develop a depression than is a student who considers their failure to reflect the fact the examination board set an exam that was too hard for everyone (external) on this occasion (specific) and they are unlikely to face this situation again (unstable). The model stipulates that the precipitant of depression is the perceived occurrence of a negative life event (or indeed the non-occurrence of positive life events) in conjunction with a negative attributional style.

Ideas about the role of attributional style in the development of depression have their roots in animal studies. Investigations of the 'learned helplessness phenomenon' demonstrated that an animal exposed to a noxious stimuli, over which it has no control, exhibits 'helplessness', that is does not act to avoid the stimuli when an opportunity arises subsequently when it can be controlled (Overmeir & Seligman, 1967; Seligman & Maier, 1967). Attributional theory emerged as a way of appreciating individual differences in responses to uncontrollable events that were identified in human studies (Peterson, Buchanan & Seligman, 1995).

Recently there have been two main developments to the reformulated learned helplessness theory. Firstly, concerns have arisen over the coherence of the internal-external dimension of attributional style. Specifically this relates to the view that the dimension relates to self-esteem rather than directly to depressive symptoms, as is the case for stability and globality (Robins & Hayes, 1995), and difficulties in achieving a consistent measure of the dimension (Peterson, 1991a,b). Accordingly this variable may not be included in studies of attributional style and depression or is considered separately. In the current study the variable is omitted, thereby putting aside concerns about the dimension, with the added advantage of keeping the measure of attributional style as simple as possible given its administration via a survey method. It follows for the current study therefore that a negative attributional style, a style vulnerable to depression, is considered to be characterised as a tendency to interpret negative events as being due to global and stable factors.

The second main development of the reformulated learned helplessness theory relates to its being placed in a broader context and re-labelled the 'hopelessness theory of depression' (Abramson et al., 1989). As suggested by its terminology this theoretical development has given a major focus to 'hopelessness' 'the expectation that highly desired outcomes will not occur or that aversive ones will occur (negative outcome expectancy) and nothing is going to change things for the better (helplessness expectancy)' (Joiner & Wagner, 1995, p. 778). Figure 1 displays the central features of

Figure 1. Major elements of the causal chain specified in the hopelessness theory of depression (modified from Abramson et al., 1995)

the hopelessness theory (for a full description see Abramson, Alloy & Metalsky, 1995; Alloy et al., 1989). Hopelessness under this model revision is considered to be the result of a negative attributional style in the context of negative life events or the perception of negative life events and to be a proximal sufficient cause of a particular 'hopelessness' sub-type of depression. This is a depression characterised by particular symptoms the most prominent of which are retarded initiation of voluntary responses (due to helplessness) and sad affect (following from the expectation of a bleak future) (Abramson et al., 1995). The specification of a 'hopelessness' sub-type of depression allows for factors other than those included in the theory (e.g., genetics, neurotransmitter changes, loss of interest in reinforcers) to be implicated in other 'depressions', though it suggests these depressions will likely be of a somewhat different character.

1.4.2 Assessing Attributional Style

A wide range of methods have been proposed and developed to measure attributional style as articulated in the reformulated learned helplessness and hopelessness depression models. Some researchers have asked participants to provide an explanation for their performance on a particular task (Elig & Frieze, 1979). Responses are then classified under some scheme associated with the theoretical model. For example, explanations such as "luck" can be equated to the dimensions of "external/unstable" and "ability" to "internal/stable" dimensions (Weiners, 1985). The CAVE (Content Analysis of Verbatim Explanations) (Peterson, Luborsky & Seligman, 1983) codes casual explanations in naturally occurring speech or from written material, for internality, stability and globality. Such assessment is considered to reduce the demand characteristics present in more formal assessment methods and allow assessment of attributional style in almost anyone for whom there is a verbal record in which the individual being considered has made causal attributions (Reveich, 1996).

By far and away the type of measure most frequently used to assess attributional style are pencil and paper questionnaires. Usually these questionnaires present hypothetical events that respondents are asked to imagine have occurred to them. The respondent

then provides what they think might be one major cause of the event and then rates this along the relevant attributional dimensions (Likert-type scales) that relate to the reformulated learned helplessness model (e.g., ASQ (Attributional Style Questionnaire) (Peterson, Semmel, VonBaeyer, Abramson, Metalsky & Seligman, 1982). Numerous variants of the questionnaires to measure attributional style have been developed including some which request attributions about positive as well as negative events (Seligman, Abramson, Semmel & Von Baeyer, 1979), and that have expanded the number of questions in efforts to improve reliability of the individual attributional dimensions (Peterson & Villanova, 1988). A version for use with children has also been produced (Kaslow, Tannenbaum & Seligman, 1978).

The current study proposes to take advantage of the development of an attributional style measure for use in survey studies (Dykema, Bergbower, Doctora & Peterson, 1996). While virtually all previous questionnaires required close supervision to ensure satisfactory completion, this is not considered the case for the newly developed tool. To achieve this the ASQ-S (Attributional Style Questionnaire - Survey) is significantly shorter than the expanded versions of attributional style questionnaires and the language used has been made simpler and more direct. Also to maintain brevity and theoretical integrity no positive events are listed in the ASQ-S and the dimension of internality has not been included. Finally to make clear the bi-polar nature of the attributional ratings, the ASQ-S asks respondents to rate the dimensions on a '-3' to '+3' scale, rather than traditionally used '1' through '7' scale, though the latter is used when calculating scores. The ASQ-S has been tested by via survey method and appears appropriate for use with adult samples (Dykema et al., 1996).

1.4.3 Support for the Association Between Negative Attributional Style and Depression

1.4.3.1 Depression in Uncomplicated Populations

Evidence to support a relationship between causal attributions and depression in persons without physical and or mental health problems other than depression comes

from investigations using a variety of methodologies. These include simple concurrent/cross-sectional designs, longitudinal (prospective) designs and studies using these approaches which have taken into account the occurrence of uncontrollable negative events for participants, an important linchpin in the reformulated learned helplessness/hopelessness model. On account of weight of numbers it is not possible to review all these studies here, however a selection are considered below to provide an example of the type of work that has been carried out.

Concurrent studies have included research with college students, children, mixed samples of adults as well as those with depressive disorders. Fazio and Palm (1998) for instance, reported a significant association between attributional style and depression in a sample of 91 'upper-level undergraduates'. Kaslow, Rehm & Seigal (1984) reported a significant correlation between attributional style for negative events and depression in a sample of 108 school children. They also classified their sample as 'depressed' or 'non-depressed' based on scores on a depression inventory for children. Those in the 'depressed' group reported a significantly greater negative attributional style. Feather (1983) identified a significant association between internality, stability and globality for hypothetical negative events and depressive symptoms in a mixed sample (employed, unemployed, student) of 248 persons. A number of studies have supported the hypothesis that adults with a diagnosis of depression will have a significantly higher negative attributional style than non-depressed controls. Gladstone, Kaslow, Seeley and Lewisohn (1997) for instance, identified a significant correlation between negative attributional style and depression in high school students, and that those study participants who met the criteria for current depressive disorder evidenced more depressogenic attributions than psychiatric controls or participants who were not currently depressed.

Prospective studies have also provided evidence supporting the association between negative attributional style and depression. One study assessed university students at two points in time, one month apart and identified that stable and global attributions were related to depressed mood one month later (Golin, Sweeny & Schaeffer, 1981). Despite this it is worthy of note a number of similar studies of college students have

failed to find such an association. (e.g., Hammen & Cochran, 1987; Peterson, Schwartz & Seligman, 1981). Eaves and Rush (1984) examined attributional style and maladaptive thinking in 11 'endogenous' and 13 'non-endogenous' uni-polar non-psychotic patients with depression and compared them to controls at two points in time, one when they were symptomatic and subsequently when remitted. A negative attributional style was significantly more evident in the persons with depression (both groups) at both points in time (as opposed to other measures of dysfunctional attitudes, which were significantly different in the predicted direction only when participants with depression were symptomatic). This supports the view that a negative attributional style is likely a latent factor which puts persons at risk of developing depressive symptomatology. It is fair to note however, that a similar, earlier study, did not find the difference found by Eaves and Rush (Hamilton & Abramson, 1983). Among children, Seligman et al. (1984) reported a significant relationship between negative attributional style and depression 6 months later, when initial levels of depression were controlled for statistically.

Perhaps the best test of the reformulated model of learned helplessness occurs when negative life events are considered in any analysis. After all negative event(s) are considered a fundamental precipitant to depression in an individual with the requisite negative attributional style under the learned helplessness/hopelessness paradigm. Robins and Block (1989) identified that depressive symptoms in a college sample were predicted via the interaction of negative life events and negative attributional style, though it should be noted attributions for actual events were not related to the level of negative attributional style as assessed by the questionnaire used in the study. In a large sample ($N = 356$ year 4, 6 and 8 children) Cole and Turner (1993) found support for a model in which attributional style mediated the relationship between competence (peer assessed) and depression but not between life events and depression. Persons and Rao (1985) measured relevant variables in psychiatric inpatients when they were admitted to hospital and when they were discharged and 7 months later. The hypothesised relationship between negative attributional style and depressive symptoms was found though they failed to find negative life events and negative attributional style interacted to predict depressive symptoms.

A number of college student studies have tested the reformulated learned helplessness model by considering the interaction of negative attributional style and stressful life events occurring between baseline and follow-up. Metalsky, Abramson, Seligman, Semmel and Peterson (1982) found students who displayed a negative attributional style in the face of a significant stressor (exam failure) were subsequently more likely to experience low mood. In a further study incorporating a similar prospective design the same research group (Metalsky, Halberstadt & Abramson, 1987) identified that 2 days after an examination, mood levels of students were significantly related to exam scores and attributions for achievement events. The study also found the relationship between students' specific attributions regarding exams were consistent with their negative attributional style as measured with a traditional attributional style questionnaire.

Reviews which have systematically considered information across the broad range of research into attributional style in uncomplicated populations have found there is fairly strong evidence for a concurrent relationship between depression and causal attributions for negative events among some populations (college students, adults with depressive disorders and children (clinical and non-clinical samples) and that prospective studies considering negative events that occur during the course of the study are somewhat supportive of the model (Joiner & Wagner, 1995; Robins, 1988; Robins & Hayes, 1996; Sweeney, Anderson & Bailey, 1986). These reviews further conclude however that the inability of research to detect effects for attributional style may in many cases is likely due to the limited number of participants studied (Robins 1988; Robins & Hayes, 1995).

1.4.3.2 Depression and Other Psychological Disorders

Researchers have also considered attributional style and its role in less usual types of depression and other psychological disorders in which depressions may be secondary. Alloy, Reilly-Harrington, Fresco, Whitehouse and Zechmeister (1999) for instance extended interest in the connection between attributional style and depressive symptoms, to consider its applicability to persons having sub-syndromal bi-polar disorder (psychlothymia, hypomania). They examined forty-three undergraduate

students meeting the criteria for the disorders (hypomania, $n = 10$, psychlothymia, $n = 13$) alongside those meeting the criteria for dysthymia ($n = 8$) and normal controls ($n = 12$). The individuals were considered at three points in time, designed to allow consideration of their different mood states as determined by intervening phone calls (average time between assessments was 4.7 weeks). The study confirmed that a combined negative attributional style score was able to prospectively predict depressive mood shift in individuals with sub-syndromal mood disorders. Interestingly, attributions for positive events, under circumstances of low stress, were found to contribute to the experience of an increase in hypomanic symptoms over time. The authors of the study acknowledge its sample size is a major limiting factor on drawing conclusions from their results.

A negative attributional style has also been related to 'maternity blues' and prospectively to depression in those with post-partum syndrome (Cutrona, 1983), though this has not been found in some other studies (Manly, McMahon, Bradley, & Davidson, 1982; O'Hara, Neunaber & Zekoski, 1984). Recently, Wagner, Berenson, Harding & Joiner (1998), determined that in the context of the demands of motherhood, a negative attributional style may lead to higher levels of depression in teenage mothers. Heimburg, Vermilyea, Dodge, Becker and Barlow (1987) considered attributional style in five groups of people; a group with anxiety, a group who had moderate depression and anxiety, a group who were moderately depressed in the context of dysthymic disorder, a group who were considered highly depressed in the context of dysthymic disorder and normal controls. They found the attributional styles expressed by moderately depressed, anxiety patients, were the same as those in the depressed groups. Michelson, Bellinti, Testa and Marchione (1997) determined depression in persons with agoraphobia also appears to be at least partly related to a negative attributional style, though the association was only evident when two additional attributional dimensions (measuring the significance of an event to participants and the events likelihood) were included in data analyses.

Other disorders in which the relationship between attributional style and depression has been considered include people with eating disorders, children with attention deficit-

hyperactivity disorder (ADHD) and those with schizophrenia. Metalsky et al. (1997) identified how depressive symptoms identified in persons with bulimia were predicted to the same degree by negative attributional style as persons with clinical depression. Attributional style also appears associated with low mood in children with ADHD (Schmidt, Stark, Anthony, & Carlson, 1998) and to contribute to low mood in persons with schizophrenia (Addington, Addington & Robinson, 1999).

1.4.3.3 Attributional Style and Depression in Persons with Physical Conditions

The contribution of a negative attributional style to depression in those with physical illness is less well investigated than in general populations and persons with significant mental health problems. Some work has been undertaken however fuelled by the consideration that chronic illnesses are likely to have a considerable impact on an individuals adjustment and that the identification of factors such as cognitive variables that may be subject to intervention could contribute to strategies to reduce illness related distress (Malcarne, 1999).

Chalder, Power & Wessely (1996) conducted a cross-sectional study, which considered the attributional style of thirty-eight persons who considered their high levels of fatigue a result of myalgic encephalomyelitis (chronic fatigue syndrome) to two groups who considered their fatigue the result of psychological or social factors. Subjects were obtained via a population based sampling strategy. A modified attributional style questionnaire was used which asked individuals to consider causation in relation to three illness situations, an interpersonal and an achievement situation. On a two dimensional (stable and global) measure they identified significant association with depression in both the myalgic encephalomyelitis and the social fatigue groups. Chubb et al. (1999) also found negative attributional style related to depression in persons with chronic fatigue syndrome in a manner similar to that evident in a comparison group consisting of persons with depression who did not have any significant physical illness.

Rheumatoid arthritis (RA) is an autoimmune disease in which those who suffer experience significant pain and disability on account of joint inflammation. Not surprisingly the illness been associated with increased levels of depression (e.g., Frank, Chaney, Clay & Kay, 1991. Chaney et al. (1996) conducted a cross sectional study with fifty-eight persons diagnosed with RA, who were being seen in an outpatient rheumatology clinic. They found a significant association between negative attributional style and depression in their sample. The major concern of the study was to consider the hypothesis that attributional style would interact with perceived control to predict depression. This was accepted, that is a negative attributional style predicted depression under conditions in which control over the illness is perceived as low.

Cheatle, Brady and Ruland (1990) considered the relationship between attributional style and depression in four age, sex and educationally matched groups; persons with chronic back pain, those undergoing renal dialysis, persons with essential hypertension and normal controls. Among these groups only the chronic back pain and renal dialysis group demonstrated elevated depression scale scores. Significant correlations between depression scale scores and composite negative attributional style scores were found for the pain patients and the renal dialysis patients. The failure to find an association in the normal controls and hypertensives was considered likely due to the fact that, unlike the other groups, they were not encountering regular negative events.

The contribution of attributional style to adjustment in persons with cancer has also been subject to investigation. Frank, Blount and Brown (1997) used the CASQ (Childrens Attributional Style Questionnaire) (Kaslow et al., 1978) with eighty-six children being treated for cancer at a university oncology clinic. Negative attributional style accounted for a significant proportion of the variance in depression, the second largest after avoidance coping.

Taken together the literature reviewed provides evidence of the strong link between attributional style for negative events and depression. It suggests it is a key factor in depression across diverse populations of individuals, including those with depression alone or in the context of other psychological or physical problems.

1.4.3.4 Attributional Style and Intervention

A fundamental concern of the current research is to identify whether negative attributional style plays a role in the depression experienced by persons with MS. On such a basis it is considered interventions that address attributional style either post the onset of depression or indeed, preventatively, can be justified. As noted, broad cognitive therapy that addresses the negative beliefs and maladaptive information processing highlighted by cognitive theories of depression has been found effective in treating depression in persons with MS. This effectiveness is by no means confined to interventions for depression in persons with MS however. It has indeed been demonstrated robustly effective in a variety of settings with diverse populations (Scott, 1996). Despite the success of broad cognitive therapy, studies which have specifically monitored changes in attributional style or targeted only this are limited. Attributional style has not been specifically considered in any of the research assessing cognitive therapy interventions for people with MS. Some support for the importance of attributional style and changes in attributional style as a result of cognitive therapy for depression in persons without a physical condition however, is available.

Seligman et al. (1988) reported a high, significant correlation between change in attributional style and depressive symptoms as a result of cognitive therapy treatment ($M = 22.5$ sessions) for depression in 39 persons with uni-polar depression. Hollon et al. (1992) and De Rubeis & Hollon (1995) have reported extensively on a study of one hundred and seven persons with depression who received 12 sessions of cognitive therapy for depression, pharmacotherapy (imipramine) or a combination of these two modalities. The researchers found all the treatments achieved success that could be considered 'clinically effective' with no significant advantage to any particular modality. Attributional style results supported the specificity of its effect in cognitive therapy. There was a significant change in attributional style over the course of treatment in the cognitive therapy groups not found in the pharmacotherapy group. Similar to Seligman et al., (1988), early attributional style change also predicted subsequent depression change in the cognitive therapy groups. On the basis of their follow up data the researchers suggest that the benefit of cognitive therapy in reducing

relapse could be due to its effect on attributional style. Controlling for post treatment depression, attributional style, of a number of measures, was found to be the best predictor of relapse in study participants.

A long-term follow-up study of a cognitive therapy depression prevention programme for children (Gillham & Reivich, 1999; Gillham, Reivich, Jaycox & Seligman, 1995) has also reported on the role of attributional style. It found negative attributional style changed as a result of the intervention, in the predicted direction. At least in part, the findings also suggested that attributional style mediated the programmes effect on depressive symptoms for up to two years afterwards, though subsequently (30 months/36 months), this effect no longer appeared evident.

Taken together the information on attributional style from a limited number of intervention studies is supportive of the role it is hypothesised to play in depression and that it can be altered via cognitive therapy with benefits in relieving both existing depression and preventing its development in the future. This suggests if attributional style can be demonstrated to play a role in depression in persons with MS, cognitive therapy treatment, which addresses it, will likely prove useful in this population.

1.4.3.5 MS, Attributional Style and Depression.

Comprehensive data base (PsychInfo, PsychLit, Medline) searches were able to identify only one study considering the association between attributional style and depression in a population of persons with MS. Barrett (1992) used a repeated measures design to consider whether the interaction of attributional style and stress, (both general and MS related) would predict hopelessness and therefore “hopelessness depression” in a sample of 55 persons with MS. No significant relationship between attributional style and depression was obtained, though the size of the associations were of a level, (.20; cross-sectional, .22; longitudinal) considered acceptable in attribution-depression research (Robins, 1988). Unfortunately Barrett’s (1992) sample size was well below that recommended for such investigations (Buchanan & Seligman, 1995) and meant a sub group with significant depressive symptoms could not be considered. Also none of

the participants in the study reported depressive symptoms near the top of the range of the scale used to measure them, potentially indicating a lack of variance in depression within the sample. The measure of depressive symptoms used was also controversial. There is a debate on whether the BDI is appropriate to use with persons who have MS on account of the potential bias caused by its inclusion of somatic items (Aikens et al., 1999; Mohr, Goodkin, Likosky, Beutler et al., 1997; Randolph, Arnett, Higginson & Voss, 2000). Barrett's (1992) study also considered daily hassles, not major life events or illness exacerbations, over the relatively brief period of two weeks in the attempt to demonstrate an interaction. There was also no consideration of medication that might be treating or causing depression, or any breakdown of the sample between the different types of MS. Overall the limitations of Barrett's (1992) study mean an association between negative attributional style and depressive symptoms in persons with MS, likely given the weight of support in other areas, was missed.

1.5 The Current Study

It is the aim of the present study to undertake a further evaluation of the reformulated model of learned helplessness/hopelessness in persons with MS, with specific focus on the role of attributional style and negative life events. Negative attributional style appears to be consistently associated with depression across diverse populations and its manipulation via cognitive therapy appears to have an impact on symptoms. While organic factors may play a role in the development of depression in MS, research demonstrating the association of psychological variables to depressive symptoms and responses to psychological treatment (notably cognitive therapy) in this population, suggest negative attributional style should also be a factor in this instance. In particular persons with MS having a negative attributional style who have recently experienced a relapse (a negative event) in the commonest form of the disease (relapsing remitting MS), would seem to be the most likely to experience depression.

Specifically the current study will take advantage of a newly developed survey questionnaire, which negates the need for personal interview of participants in order to assess attributional style. This will allow a larger MS sample to be investigated than in

the only previous study, with three advantages. Firstly, greater numbers will contribute to greater statistical power. Secondly, a large sample will allow any relationship to be considered at different levels of depressive symptomatology. Finally, a greater number of participants is likely to provide more variance in depressive symptoms, which should also allow a more sound investigation of the association between attributional style and depressive symptoms in persons with MS.

The current study will also seek to improve on that previously undertaken by considering significant life events and illness exacerbations as negative events rather than 'daily hassles' and also by taking into account medications prescribed to persons with MS that may cause or treat depression. Diagnosis of type of MS will also be another factor considered and a measure of depressive symptoms more appropriate to persons with MS will be utilised.

The focus of this investigation is upon general attributional style, not specific MS attributions (though these will be considered), as its aim is to identify a measure that early in the course of the illness may identify persons with MS at risk of developing depression i.e., that can be used for identification before there is a significant impact of the disease process on the individual. Measures of other cognitive variables will also be included in the study in order to establish their relative potential in explaining depression in persons with MS.

As stated, the attributional dimension internality-externality will not be considered in the research because of concerns about its coherence and relationship to general depressive symptoms versus self esteem, and in order to keep the attributional style measure as simple as possible given it is to be administered by postal survey.

It is hoped the current study will reinforce the utility of cognitive interventions for depression in persons with MS by highlighting the role these factors may play in the development and maintenance of depressive symptoms in this population. It may also guide therapists to address attributional style specifically in their interventions for

depression in persons with MS and may inform upon the usefulness of attributional style measures in detecting those at risk of developing depression.

1.6 Study Hypotheses

1. That persons with MS who report high levels of depressive symptoms will demonstrate a higher stable global attributional style for negative events than persons with MS who report moderate and low levels of depressive symptoms and in turn those who report a moderate level of depressive symptoms will demonstrate a higher stable global attributional style for negative events than those who report low levels of depressive symptoms.
2. That there will be a significant relationship between attributional style for negative events and depressive symptoms in persons with MS such that the more stable and global the attributional style of participants the higher their levels of depressive symptoms.
3. That recent negative events and a negative (stable, global) attributional style will interact to explain significant variance in depressive symptoms in participants with MS, specifically that the more recent an individuals relapse (for participants with relapsing - remitting MS) and the greater the accumulation of recent general life stressors (for participants with any type of MS) and the more negative (stable, global) their attributional style, the higher will be their level of depressive symptoms.

2 Method

2.1 Design

Participants were divided into three groups on the basis of scores on a measure of depression. These groups were, Group 1, Low depression, persons reporting no symptoms or a low level of depressive symptoms on the measure used, Group 2, Moderate depression and Group 3 High depression. The division of the sample into groups allowed testing of hypothesis 1, that participants with different levels of depressive symptoms would have different levels of negative attributional style. The sample was then considered in its entirety to test hypothesis 2, that there would be a significant relationship between negative attributional style and depressive symptoms and hypothesis 3, relating to the proposition that recent negative events would interact with negative attributional style to explain depressive symptoms.

2.2 Participants

2.2.1 Recruitment

Participants were recruited by way of an article with a follow-up address correction (Appendix A) published in MS Matters, a bi-monthly magazine published by the MS Society of Great Britain and Northern Ireland (Multiple Sclerosis Society, 2000a,b). The magazine includes information of interest to persons living with MS and has a circulation in excess of 44,000 copies (including approximately 22,000 persons with MS). Other persons who receive the magazine include family members, health professionals and carers. Six hundred and sixty five people responded to the article, 427 by mail and 238 by phone, and were sent the questionnaires. Five hundred and twenty nine persons returned questionnaires, 80% of those who responded to the article.

2.2.2 Sample

Respondents were included in the study if their responses indicated they were between the age of 18 and 65 years. They were also required to have enclosed a completed study consent form. The final study sample consisted of 495 (401 women and 94 men) persons with MS. Seven persons were excluded because they failed to give a date of birth from which age could be calculated, twenty -seven because they were aged over 65 years. It is planned to consider the latter group in a further study as the nature and prevalence of depression may be different in older people (Jorm, 2000; Katona, 1994) and inclusion in the current research could have introduced a confounding variable.

Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977) scores were used as the basis for a split into 3 groups having different levels of depressive symptoms. The split used the score of 16/17 on the CES-D as the basis for allocation. Scores above 16 are considered high by the scale's authors (Johnston, Wright & Weinman, 1995), and are associated with significant clinical depression in non-medical populations (Radloff, 1977; Weissman, Sholomskas, Pottenger, Prosoff & Locke, 1977). 'Moderate' and 'High' depressive symptom groups were established via a mean split of participants scoring 17 or over on the CES-D. The 'Low' group was made up of the remaining participants, that is those scoring 16 or less on the CES-D. As the group split was required to investigate hypothesis 1, which relates to differences in negative attributional style, an additional requirement for inclusion was a participant having a score available for this variable. The number of participants placed in each group on this basis was as follows; Low depression, $n = 124$, Moderate depression, $n = 108$, High depression, $n = 80$.

2.3 Measures

2.3.1 Major Measures

Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977)

The CES-D (Appendix B) is a 20 item self report measure which obtains information on symptoms of depression experienced over the past week. Symptoms are rated on a scale from '0' to '3', with higher ratings indicating higher frequency of symptoms. A single depression score is calculated from responses to the questionnaire, range 0 to 60. The CES-D was developed to assess symptoms in non-psychiatric populations. It was used in the current study because it appears to be relatively unaffected by somatic or illness variables (Devins et al., 1988) that have led to the questions regarding the validity of using measures like the BDI in MS samples (Mohr, Goodkin, Likosky, Beutler et al., 1997). The CES-D has also been used previously with persons who have MS (e.g., Shnek et al., 1995).

The CES-D is psychometrically sound. Internal consistency is high, range .85 (general population) to .90 (persons with psychiatric illness). In persons with physical illness the internal consistency of the scale ranges from .63 to .93 (Devins et al., 1988). In persons with MS it has achieved a credible .90 (Shnek et al., 1995). Three-month test-retest reliability is moderate (.61) (Devins et al., 1988) but acceptable given the measure is designed to assess current state and a degree of variation demonstrates sensitivity. The scale has been shown to discriminate between persons in receipt of psychiatric care and the general population (Johnston et al., 1995) as well as predict future diagnosis of depression (Lewisohn, Hoberman & Rosenbaum, 1988; Roberts & Vernon, 1983; Rohde, Lewisohn, Tilson & Seeley, 1990; Schulberg et al., 1985). Respondents who report negative life events have been shown to have higher scores on the CES-D and test-retest correlations have been best when no life events have been reported on either of the test occasions (Johnston et al., 1995).

Internal consistency achieved for the CES-D in the current sample was high, $\alpha = .92$.

Attributional Style Questionnaire-Survey (ASQ-S) (Dykema et al., 1996)

The ASQ-S (Appendix C) gives participants descriptions of 12 negative events (e.g., 'you don't help a friend who has a problem', 'you are guilty of breaking the law') and asks them to write down one principal cause for each, then rate each cause on a seven point scale (-3 to +3) for its degree of 'stability' ('How likely is it the cause will continue to affect you?') and 'globality' ('Is the cause something that just affects ...*negative event* ..., or does it affect other areas of your life?'). Ratings are converted to a '1' to '7' scale for scoring. Scores for stability of attributional style for negative events (STAB) are calculated by summing the stability ratings and dividing by 12. Scores for globality of attributional style for negative events (GLOB) are calculated in a similar manner. A single composite score for negative outcomes, negative attributional style (COMP) is achieved by summing the scores for both stability and globality and dividing by 24. This allows a score range '1' to '7' for each attributional measure. The scale is considered to be an improvement over earlier versions because its simpler, clearer format can be used in survey research and it has removed the least coherent attributional dimension of internality / externality. The ASQ-S has been found to be internally consistent and valid in a college sample. Subscale reliabilities are satisfactory (Cronbachs $\alpha > .70$) and it correlates with reported depressive symptoms at a level similar to other attributional style questionnaires. While test-re-test reliability has not been investigated for the ASQ-S similar measures have proved stable over a number of months (Peterson et al., 1982; Seligman et al., 1984).

In addition to obtaining attributional style scores from the ASQ-S, the principal causes for negative events given by participants were coded as to whether they related to MS. The coding system was derived with the assistance of a Consultant Physician in Rehabilitation Medicine on the basis of causes listed on the first 50 surveys returned (Appendix D). Each participant received a score representing the percentage of negative events where the cause was related to MS (MSPER).

Internal consistencies achieved for the ASQ-S in the current study were acceptable; COMP score, $\alpha = .87$, STAB score, $\alpha = .80$ and GLOB score, $\alpha = .76$.

MS Attribution Question (MSAQ)

A single question with three sections, MSAQ (Appendix E), was developed in order to briefly assess participants' attributions regarding their MS symptoms. The format of the question was the same as for that of the ASQ-S. Participants were required to list one cause to explain their MS symptoms worsening, and then rate the cause for stability and globality. The MSAQ yields a single (combined stability and globality) score. The MSAQ was included to explore the role of specific MS attributions in depression and the relationship of attributions for MS to general attributional style. For the MSAQ (intercorrelation between stability and globality items) was low ($\alpha = .62$) in the current sample.

Time Since MS Relapse (TSR)

The amount of time since participants last significant experience of MS activity was measured via a single question (Q.15) on the General Information Questionnaire MS (GIMS) (Appendix F). Participants were asked to indicate how long since they had their 'last symptom flare up' by choosing from a number of alternatives, (range '1 week' to 'over 12 months'). The measure is considered most relevant to participants with relapsing remitting MS, those subject to discrete exacerbations in their condition. This measure was included to investigate the hypothesis that depressive symptoms will be positively related to the recency of relapse (independently and in interaction with negative attributional style (COMP)).

Recent Life Changes Questionnaire (RLCQ) (Miller & Rahe, 1997)

The RLCQ (Appendix G) is an extended and updated version of the Social Readjustment Rating Scale (SRRS) (Holmes & Rahe, 1967). It lists 74 events (e.g.,

'sexual difficulties', 'troubles at work: demotion') each of which has a weighting for degree of stress devised on the basis proportionate scaling. Reliability of rankings based on divisions into age, gender, marital status and education categories is between .84 and .96 (Spearman Rho) (Miller & Rahe, 1997). Earlier versions of the RLCQ have established this type of scales' ability to predict a variety of illnesses (note Rahe, 1975) including depression (Billings, Cronkite & Moos, 1983; Paykel et al., 1969). The current scale is also proving valid in this endeavour (R. H. Rahe, personal communication, June 26, 1999). The RLCQ was used to investigate the contribution to depressive symptoms of life events and life events in interaction with attributional style.

2.3.2 Additional Measures

Further information was collected from study participants in order to 1) be able to describe the nature of the sample obtained in the study and 2) to enable a better understanding of the contribution of attributional style to depression relative to other factors.

General Information MS Questionnaire (GIMS)

A range of general information was collected from participants via a General Information Questionnaire MS (GIMS) (Appendix F). This included age, sex, marital status, living circumstances, years of education, employment, other major physical/medical conditions, mental health history, diagnosis and use of selected medications. Employment was coded for socio-economic grouping into a 6-category schema (e.g., 'professional', 'unskilled manual') (Appendix H) based on the Registrar General for the United Kingdom's system (Office of Population Censuses and Surveys, 1973). Other major physical/medical conditions were coded according to a system (Appendix I) derived from the major categories of disease classification of the International classification of diseases and related health problems 10th Revision (ICD-10) (World Health Organisation, 1992) (e.g., 'musculo-skeletal system', 'digestive system'). Conditions listed as commonly associated with, or symptomatic of MS were not included in this coding. Nervous or emotional problems were classified in terms of a

system (Appendix J) derived from the major categories of disorder listed in the Diagnostic and statistical manual of mental disorders, 4th Edition (DSM-IV) (American Psychiatric Association, 1994) (e.g., 'anxiety disorder', 'substance related disorder'). Medications recorded included anti-depressants (to identify depression that was being pharmacologically managed) as well as those drugs often used in the treatment of MS that may have depression as a side effect (anxiolytics, beta-interferon, cortico-steroids and muscle relaxants) (Appendix K).

The association between age, gender, education, socio-economic status (as estimated by occupational classification), marital status, employment status, and disease related variables including medication use and depressive symptoms will be considered in the study. Other information obtained from the GIMS will be used for descriptive purposes.

Disability

Two measures of disability were used in the study. The Barthel Index (BI) (Mahoney & Barthel, 1965) (Appendix L) and the Functional Assessment Screening Questionnaire (FASQ) (Seltzer, Granger & Wineberg, 1982) (Appendix M). The BI is a 10-item assessment of independence in daily activities (e.g., 'bowel control', 'bathing'). The scale is one of the most widely used measures of serious disability and activities of daily living. Internal consistency has been established via factor analysis (communality does not fall below .65 for any item), it correlates well with other measures of disability, has a clear hierarchy and has been shown to credibly map recovery from stroke (Wade & Langton-Hewer, 1987). Less severe disability was assessed using the FASQ. This instrument was designed for use with medical patients having moderate disability. Its items assess function in 5 domains in terms of ease or difficulty in performing specified tasks. The domains are; personal care (e.g., 'cutting toenails'), occupational (e.g., 'concentrating for 15 minutes'), leisure (e.g., 'doing social activities with others'), transport (e.g., 'driving') and instrumental (e.g., 'grocery shopping'). Internal consistency for the domains ranges from .40 to .89 (average .67) and discriminant validity has been established for the original 21-item version of the

instrument (Seltzer et al., 1982). The current study used the revised 15-item version of the FASQ (Millard, 1989). Split half (.84) and alternate form (spouse rating) (.71) reliability has been established for the short form. The short form is also able to discriminate employed from unemployed respondents. A moderate level of agreement has been found between the brief FASQ and three other disability measures and of the measures it was considered the least affected by negative mood (Millard & Jones, 1991).

Together the BI and the FASQ will provide two separate measures of disability. These measures were included to allow the association between disability and depressive symptoms to be considered, as well as for descriptive purposes.

Internal consistencies for both measures of disability used in the study proved credible (α 's = .88 and .91 respectively).

MS Attitudes Index (MSAI) (Shnek et al., 1995)

The MSAI (Appendix N) is a specific measure of helplessness in relation to MS. It consists of five statements (e.g., 'MS is controlling my life') which can be rated '1', (strongly disagree) to '4', (strongly agree) on likert-type scales. The index aims to evaluate patients' perceptions of helplessness in coping with MS. A single "helplessness" score is available from the MSAI via summation of ratings, range '5' to '20'. Higher scores indicate greater helplessness. Unfortunately the psychometric development of this instrument is somewhat limited and internal consistency is low (from .65 to .77). The questionnaire has previously been used in studies investigating the role of cognitive factors in depression in persons with MS (Shnek et al., 1995; Shnek et al., 1997). It is based on an instrument developed to measure helplessness in persons with arthritis (Nicassio, Wallston, Callahan, Herbert & Pincus, 1985). The MSAI was included to establish any association between MS specific helplessness and reported symptoms of depression. Internal consistency for the measure in the study sample was low but acceptable, $\alpha = .75$.

Perceived MS Control (MS Control)

MS Control (Appendix O) aims to assess how much control MS sufferers perceive themselves having over the day to day symptoms of their illness. Respondents are required to rate their view of their control on a 4-point scale, range '1' (no control) to '4' (almost complete control). Similar questions have been found to predict negative mood in people with arthritis (Affleck, Tennen, Pfeifer & Fifield, 1987).

Psychological Vulnerability Scale (PVS) (Sinclair & Wallston, 1999)

The PVS (Appendix P) consists of 6 items measuring cognitions that are considered to promote harmful reactions to stress. The scale requires various statements (e.g., 'If I don't achieve my goals, I feel like a failure as a person') to be rated from '1', (does not describe me at all) to '5', (describes me very well). Scores can range from 6 to 30, with higher scores considered to indicate greater psychological vulnerability. The PVS was developed in samples of persons with physical illness. A number of its psychometric properties have been established; internal consistency has been assessed as between .70 and .86 (Cronbach's α), test-retest reliability between .80 and .83, and concurrent and construct validity is evident with measures of personal coping resources, psychological well being, social support and pain coping (Sinclair & Wallston, 1999). The PVS has also been found sensitive to cognitive behavioural intervention.

The PVS was included in the current study to establish its ability, relative to attributional style, to predict depressive symptoms in an MS sample. The scale proved to have an acceptable level of internal consistency ($\alpha = .82$) with the sample considered in this research.

2.4 Procedure

Ethical approval for the study was obtained from The University of Surrey Advisory Committee on Ethics (Appendix Q).

All those who responded to the articles in MS Matters were sent an envelope containing a cover letter (Appendix R), an information sheet (Appendix S), a consent form (Appendix T), the study questionnaires and a freepost envelope for return of the relevant materials.

All participants were asked if they wished their GP to be advised of their participation in the research and had the opportunity to provide the relevant information and consent for this to occur. Three hundred and forty six participants elected for their GP's to be informed. The letter sent to GP's is available in Appendix U. The MS Society wished to be kept apprised of which of their members took part in the study in order to prevent over researching. Participants were therefore asked to consent for their name and address to be passed on to the society. Four hundred and ten participants elected for this to occur.

Respondents who returned the questionnaire but who failed to sign the consent form were sent this back along with their questionnaire with a cover letter indicating we could not use the information they had provided without their signature. A stamped addressed envelope for the return of the material was once more enclosed. Five forms were returned for signatures, four of which were posted back. Any respondent who returned a questionnaire and achieved a score of 17 or above on the CES-D received a letter (Appendix V) advising them they 'may be experiencing significant depression' and to contact their GP or the principal investigator, a qualified clinical psychologist, if they were concerned by this. This letter was sent to 280 participants. Eight 'phone calls and three letters were received in response to the letter.

2.5 Statistics

2.5.1 Power and Practical Significance

In anticipation of the statistics likely to be performed, requirements for statistical power were initially considered as were levels of practical significance, a concern particularly with correlation coefficients in large samples. A power of .80 (allowing for

the detection of a true effect 80% of the time) and maximum significance level of .05 has been suggested as appropriate in the behavioural sciences (Cohen, 1977). These conventions were accepted for the current study. It was also decided to adopt a conservative, non-directional (2-tailed) critical region. For the oneway ANOVA with planned comparisons anticipated, for the level of power set to be achieved, this meant a minimum group size for each of the 3 groups split on the basis of depressive symptoms scores was estimated to be 53. This allowed for the detection of a medium size effect based on convention (Effect size $f = .25$) (Faul & Erdfelder, 1992). Should participants report significant depressive symptoms (a score of 17 or over on the CES-D) at the same rate (around 50%) as in the only previous sample with MS in which this figure has been published for this instrument (Shnek et al., 1995), a sample of 212 was considered to be required (50% (106) no or low depression, the further 50% (106) split into two groups, moderate and high depressive symptoms, $n = 53$ for each of the groups). For bivariate correlations, for the same level of power to be achieved, this meant a minimum sample of 195 participants was required for detection of a small-medium population effect ($r = .20$) (Cohen, 1977), which is seen as acceptable and relevant in attribution-depression research (Robins, 1988). For the multiple regression analyses a sample of 250 was estimated to be required if fairly small R^2 's (around 8%) were to be detected allowing for up to 20 variables to be included in the analyses (Hair, Anderson, Tatham & Black, 1998). Overall, on the basis of the planned statistical analyses, the minimum total number of participants required for the study to be of sufficient power, at the standard set, was 250. As noted above, sufficient numbers of participants were recruited, with sufficient levels of depressive symptoms, for all the power requirements set for the study to be met.

As a large sample was successfully recruited, this raised the problem of statistical analyses being over sensitive, with the potential for relatively small relationships to be statistically significant. Accordingly, in line with the levels recommended for attribution-depression research as noted above (Robins, 1988), a level of relationship of .20 in the initial correlational analyses was used as a cut off for identifying variables associated with depressive symptoms that were considered of practical significance.

2.5.2 Missing Values

The survey method of the study and the fact all questions were optional for participants meant there were significant numbers of missing values in the questionnaires returned. For the variables of principal interest, attributional style (ASQ-S) and depressive symptoms (CES-D) a prorating (mean substitution) system was used for calculation of missing values. However for both these measures any questionnaire with more than one item missing was excluded from analyses. While considered major measures, the nature of the RLCQ and the TSR meant they were not suitable for the form of pro-rating adopted for the ASQ-S and the CES-D. Accordingly for these and all other measures, any missing item meant exclusion of that participants data for the relevant variable(s).

2.5.3 Analyses

Initially the characteristics of the sample were investigated using descriptive statistics for all the variables assessed in the study. This established frequencies for categorical variables and means, standard deviations and ranges for the others. Prior to testing hypothesis 1, negative attributional style scores (COMP) were assessed for normality. Subsequently, this hypothesis, which relates the nature of differences in negative attributional style (COMP) between three groups of participants, divided on the basis of their level of depressive symptoms (CES-D), was tested via a oneway ANOVA with planned comparisons (t-tests), as determined by the hypothesis. An ANCOVA was also run to ascertain whether the results obtained continued to be evident when analyses controlled for the contribution to depressive symptoms of a disease characteristic that initial group comparisons found also discriminated between groups. Oneway ANOVAs with planned comparisons were also conducted on the ASQ-S subscales, STAB and GLOB

Bivariate (Pearsons Product Moment) correlations between the dependent and independent variables were then calculated. Inspection of scatter plots identified whether the assumption of linearity between associated variables was met. Normality of

distribution was not further assessed at this point, linearity being the principal concern of this correlational statistic (Runyon & Haber, 1976). The calculation of correlation coefficients allowed testing of hypothesis 2, establishing any relationship between negative attributional style (COMP) and depressive symptoms (CES-D). Further exploratory statistical analyses were conducted to improve understanding of the relationship between negative attributional style and depressive symptoms in MS. Specifically these considered whether or not the relationship was significant for specific sub groups within the sample, including those with a diagnosis of relapsing remitting MS, those with a diagnosis of primary progressive MS, those with a diagnosis of secondary progressive MS, those taking medication which may have depression as a side effect and participants taking anti-depressants (that may mask symptoms and therefore interfere with establishing the hypothesised relationship). These explorations were undertaken via further Pearson Product Moment correlational analyses.

Hypothesis 3 which proposes that the time since last relapse (TSR) and negative attributional style (COMP) will interact to predict depressive symptoms (CES-D) in those with relapsing remitting MS and recent life stressors (RLCQ) and negative attributional style (COMP) will interact to predict depressive symptoms (CES-D) across the total sample of participants with MS, was then considered via two multiple regressions. An additional (unplanned) multiple regression was also conducted to consider the first interaction of interest across the whole sample as opposed to only those with relapsing-remitting MS.

Finally the ability of negative attributional style to explain depressive symptoms, relative to the other measures utilised in the study, was considered via a stepwise multiple regression procedure. All variables identified as correlating significantly with depressive symptoms above the practical significance level of .20 adopted for the study were included.

3. Results

3.1 Characteristics of Sample

3.1.1 Whole Sample

Demographic characteristics for the sample are summarised in Table 1. Age range was from 22 to 65 years with a mean of 45.8 years. As expected on the basis of MS prevalence the majority of responses ($n = 401$) were from women (81%). Only 5 (1%) respondents were in some sort of supportive accommodation. Thirty two percent of the sample were working. Most (72%) had worked or continued to work in professional, managerial or non-manual occupations. The mean number of years formal education was 14 and the sample was almost exclusively white.

Table 2 summarises disease related characteristics for the sample. Two hundred and twenty three of the participants (45%) specified their diagnosis as relapsing remitting MS, 158 (32.5%) as chronic progressive MS. Of this latter group, 49 (10%) were able to report a diagnosis of primary progressive MS. A sizeable minority of participants, 90 (18%) did not know their MS type diagnosis. The mean number of years since first symptoms of the disease were recorded was 15, with mean number of years since diagnosis being 7 years.

Almost a quarter (23%) of participants had other physical conditions they perceived as “major”. Most of these were diseases of the musculo-skeletal system and connective tissue, digestive problems, circulatory problems or respiratory problems. Over half of the sample reported having had a nervous or emotional problem that required treatment, perhaps unsurprisingly most of these (72%) said this was mood disorder. Thirty two percent of the sample were taking anti-depressants, 20% relaxants, approximately 5% anxiolytics and 1% cortico-steroids. The mean disability score of the Barthel Index suggested that overall the sample were mildly disabled; a ceiling effect was evident on this measure of severe disability. A better distribution of scores was evident on the FASQ.

Table 1
Demographic Characteristics of the Sample

Sex	<u>n</u>	%	Living arrangements	<u>n</u>	%
Male	94	19	Own home	425	86
Female	401	81	Flat	52	11
			Warden assisted	3	1
Age (yrs)	<u>M</u>	<u>SD</u>	Nursing home	2	<1
	45.77	9.25	Missing values	13	3
Ethnic group ^a	<u>n</u>	%	Working	<u>n</u>	%
White	479	97	Yes	161	33
Indian	3	1	No	334	68
Other	10	2			
Missing values	3	1	Occupation	<u>n</u>	%
			Professional	164	33
			Employer/manager	42	8
			Intermediate/junior/ non junior/non manual	149	30
			Skilled manual	23	5
			Semi-skilled & personal service	41	8
			Unskilled manual	47	10
			Missing values	29	6
Marital status	<u>n</u>	%			
Married	301	61			
Never married	87	18			
Divorced	76	15			
Separated	16	3			
Widowed	12	2			
Missing values	3	1			
Education (yrs) ^a	<u>M</u>	<u>SD</u>			
	14.25	3.07			

Note. N = 495 unless otherwise specified.

a N = 421

Table 2
Disease Related Characteristics

MS Diagnosis ^a	n	%
Relapsing remitting	223	45
Primary progressive	49	10
Secondary progressive	99	20
Don't know	90	18
Time since first symptoms (yrs) ^b	M	SD
	15.24	9.14
Time since diagnosis (yrs):	M	SD
	8.86	7.24
Time since relapse ^c	n	%
1 week	90	18
1 month	91	18
3 months	61	12
6 months	57	12
12 months	24	5
Over 12 months	87	18
Disability	M	SD
Barthele	82.05	20.27
FASQ ^d	36.60	12.26
Other major physical/medical condition ^e	n	%
	114	23
Type of condition	n	%
Endocrine, nutritional and metabolic disease	10	2
Diseases of the circulatory system	15	3
Diseases of the respiratory system	12	2
Diseases of the digestive system	16	3
Diseases of the musculoskeletal system	21	4
Nervous or emotional problem	n	%
	275	56
Type of condition		
Mood disorder	199	40
Anxiety disorder	21	4
Bereavement	11	2
Adjustment disorder	32	7
Medication	n	%
Anxiolytic	23	5
Beta - interferon	40	8
Cortico - steroids	6	1
Muscle relaxants	100	20
Anti - depressant	160	32

Note. FASQ = Functional Assessment Screening Questionnaire, N = 495 unless otherwise specified. ^aN = 471, ^bN = 481, ^cN = 487, ^dN = 410, ^eN = 441, ^fN = 394, ^gN = 490. Type of condition categories included only if >2% reported.

Means and standard deviations for the psychological variables assessed in the study are summarised in Table 3. Well over half of the sample scored over 16 on the CES-D, the suggested cut off for significant depressive symptoms. This is well in excess of the 20% found in general community samples (Johnston et al., 1995), but comparable to numbers found over the cut off in other research with persons who have MS (Shnek et al., 1995). Despite this comparability it is to be noted the mean CES-D score obtained for the sample ($\underline{M} = 22.1$, $\underline{SD} = 12.56$) was considerably higher than in other studies (e.g., Shnek et al., 1995; $\underline{M} = 17.0$, $\underline{SD} = 11.2$, Shnek et al., 1997; $\underline{M} = 15.6$, $\underline{SD} = 12.8$) where participants were not recruited with a specific mention of research investigating 'MS and mood'. Depression scores, relative to cut offs for significant symptoms on the different instruments used, were also somewhat higher for this sample than in the only previous study (Barrett, 1992) of attributional style and depression in persons with MS. Proportionately more scores at the upper limits of the measuring instrument were also obtained (range 0 - 59). Negative attributional style (COMP) scores were also somewhat higher than those found in the earlier study. Levels of helplessness in relation to MS as measured by the MSAI were similar to those previously found (Shnek et al., 1995, 1997). Unfortunately no data is available to allow comparison between the scores obtained in the current study for the PVS, MSAQ, MS Control or the RLCQ and other samples of persons with MS.

3.1.2 Groups

Table 4 lists demographic and disease related variables for the 3 groups with different levels of depressive symptoms. Also presented in the table are the results of group comparisons conducted on these variables. Given the nature of the groups it is not surprising they were differentiated on the basis of the use of anti-depressant medication and whether participants had or had had a nervous or emotional problem requiring treatment. The effect for TSR (time since symptom relapse) is also unsurprising, as depression has been related to symptom exacerbation in previous research (Devins & Seland, 1987). The finding of significant differences in FASQ scores requires explanation however. Levels of disability were not expected to discriminate between groups split on the basis of levels of depressive symptoms. Overall however

Table 3

Psychological variables

Variable	<u>M</u>	<u>SD</u>	<u>N</u>
CES(D)	22.05	12.56	475
COMP	5.22	0.88	321
STAB	5.37	0.92	325
GLOB	5.07	1.00	323
PVS	17.11	6.13	479
MSAI	13.34	3.06	473
MS Control	2.35	0.94	480
MSAQ	5.93	1.29	454
MSPER	27.90	19.61	264
RLCQ	373.23	238.92	477

Note. CES(D) = Centre for Epidemiological Studies of Depression Scale, COMP = Negative Attributional Style (Composite), GLOB = Globality of Attribution for Negative Events, STAB = Stability of Attributions for Negative Events, PVS = Psychological Vulnerability Scale, MSAI = MS Attitudes Index, MS Control = Perceived MS Control, MSAQ = MS Attributional Question, MSPER = Percentage of Negative Events Attributed to MS or an MS Related Cause, RLCQ = Recent Life Changes Questionnaire.

Table 4
Demographic and disease related characteristics of participants divided on the basis of level of depressive symptoms.

Variable	Low depression	Moderate depression	High depression	N	Statistic
<u>Sex n (%)</u>					
Male	27 (44)	21 (34)	14 (23)	312	$\chi^2 (2) = .58$
Female	97 (39)	87 (35)	66 (26)		
<u>Age (yrs) M (SD)</u>	45.98 (8.82)	45.95 (9.86)	43.73 (9.44)	312	$F (2, 309) = 1.67$
<u>Ethnic group n (%)</u>					
White	122 (40)	105 (35)	77 (25)	312	--
Other	1 (17)	3 (50)	2 (33)		
<u>Marital status n (%)</u>					
Married	77 (41)	68 (36)	42 (23)	312	$\chi^2 (2) = 2.50$
Not married	47 (38)	40 (32)	38 (30)		
<u>Education yrs M (SD)</u>	14.84 (3.00)	14.45 (2.98)	14.05 (3.16)	277	$F (2, 274) = 1.45$
<u>Living arrangements n (%)</u>					
Own home	106 (39)	96 (36)	67 (25)	302	--
Flat	13 (43)	7 (23)	10 (33)		
Warden assisted	1 (33)	1 (33)	1 (33)		
<u>Working n (%)</u>					
Yes	50 (45)	36 (32)	26 (23)	312	$\chi^2 (2) = 1.77$
No	74 (37)	72 (36)	54 (27)		
<u>MS diagnosis n (%)</u>					
Relapsing - remitting	58 (39)	50 (34)	40 (27)	302	$\chi^2 (4) = .85$
Chronic progressive	37 (40)	35 (38)	21 (23)		
Don't know	23 (38)	21 (34)	17 (28)		
Primary progressive	10 (31)	12 (38)	10 (31)	274	$\chi^2 (6) = 4.96$
Secondary progressive	27 (49)	19 (35)	9 (16)		
Don't know	16 (38)	13 (31)	42 (31)		
Not applicable	55 (57)	52 (36)	38 (26)		
<u>Time since first symptoms (yrs) M (SD)</u>	15.51 (8.70)	16.11 (8.88)	13.49 (8.01)	308	$F (2, 305) = 2.24$
<u>Time since diagnosis (yrs) M (SD)</u>	8.93 (7.48)	8.97 (7.36)	7.67 (6.36)	309	$F (2, 306) = 0.93$
<u>Last symptom flare up M (SD)</u>	3.57 (1.81)	3.42 (1.88)	2.55 (1.65)	262	$F (2, 265) = 7.68^{***}$
<u>Disability</u>					
Barthel M (SD)	86.04 (18.92)	82.84 (19.91)	80.81 (19.78)	286	$F (2, 283) = 1.74$
FASQ M (SD)	41.8 (12.59)	37.5 (10.63)	33.7 (11.17)	262	$F (2, 259) = 9.94^{***}$
<u>Other major physical/medical condition n (%)</u>					
Yes	22 (31)	25 (35)	24 (34)	309	$\chi^2 (2) = 4.26$
No	101 (42)	82 (35)	55 (23)		
<u>Nervous/emotional problem n (%)</u>					
Yes	59 (33)	69 (39)	49 (28)	311	$\chi^2 (2) = 6.77^*$
No	64 (48)	39 (29)	31 (23)		
<u>Medications n (%)</u>					
Anxiolytic					
Yes	1 (10)	3 (30)	6 (60)	312	--
No	123 (41)	105 (35)	74 (25)		
Beta - interferon					
Yes	10 (33)	9 (30)	11 (37)	312	$\chi^2 (2) = 2.12$
No	114 (40)	99 (35)	69 (25)		
Cortico - steroid					
Yes	0 (0)	3 (60)	2 (40)	312	--
No	124 (40)	105 (34)	78 (25)		
Anti - depressant					
Yes	28 (29)	39 (40)	31 (32)	312	$\chi^2 (2) = 7.60^*$
No	96 (45)	69 (32)	49 (23)		
Muscle - relaxant					
Yes	25 (44)	16 (28)	16 (28)	312	$\chi^2 (2) = 1.32$
No	99 (39)	92 (36)	64 (25)		

Note. FASQ = Functional Assessment Screening Questionnaire. Dashes indicate χ^2 not conducted as expected cell frequencies < 5.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 5
Mean and Standard Deviations for Attributional Style Scores by Group Determined on the Basis of Level of Depressive Symptoms

Group	<u>n</u>	Attributional Style Scale Score		
		COMP	STAB	GLOB
Low depression	124			
<u>M</u>		4.82	5.02	4.61
<u>SD</u>		0.86	0.93	0.97
Moderate depression	108			
<u>M</u>		5.31	5.48	5.13
<u>SD</u>		0.76	0.87	0.88
High depression	80			
<u>M</u>		5.72	5.79	5.66
<u>SD</u>		0.75	0.75	0.83

Note. COMP = Negative Attributional Style (Composite)
 STAB = Stability of Attributions For Negative Events
 GLOB = Globality of Attributions for Negative Events
 ANOVAs' with planned comparisons for each Attributional Style Scale Score
 X Group; all Fs, significant ps < .001 with all possible contrasts ps < .05 or
 better.

Table 6
Analysis of Variance for Negative Attributional Style (COMP) by Group

Source	Sum of squares	<u>df</u>	Mean square	<u>F</u>
Between groups	41.33	2	20.67	32.54***
Within groups	196.25	309	0.64	
Total	237.58	311		

Note. *** $p < .001$

demographic and disease related variables largely failed to distinguish the groups divided on the basis of depression scores, strengthening the case for considering psychological factors.

3.2 Hypothesis Testing

3.2.1 Hypothesis 1; There will be differences in attributional style between groups determined on the basis of level of depressive symptoms.

Prior to testing hypothesis 1, negative attributional style scores (COMP) were assessed for normality. Though somewhat negatively skewed, normality proved acceptable according to the Kolmogorov-Smirnov test (Norusis, 1999). Subsequently, the three groups representing participants having different levels of depressive symptoms were determined; Group 1, Low (scores <17 on the CES-D), Group 2, Moderate (Scores 17 - 30 on the CES-D) and Group 3, High (scores 31 - 60 on the CES-D). Table 5 summarises the findings for attributional style scores by the groups determined on the basis of level of depressive symptoms. Inspection of the table indicates that, consistent with the hypothesis, both negative attributional style composite (COMP) and stability (STAB) and globality (GLOB) subscale scores were higher in groups reporting higher levels of depressive symptoms. To test these differences were statistically significant attributional style scores were compared for the High, Moderate and Low depression groups using oneway ANOVAs'. Planned comparisons tested the hypothesis with regard to specific differences between the groups. As displayed in Table 6, the ANOVA on negative attributional style (COMP) determined this measure increased significantly across the groups from Low to High symptoms, $F(2, 309) = 32.54, p < .001$. The planned comparisons revealed differences between the groups were all in the predicted direction, that is negative attributional style (COMP) was significantly higher in the Moderate and High groups than in the Low group ($t(309) = -4.68, p < .001$; $t(309) = -7.94, p < .001$) and significantly higher in the High group than in the Moderate group ($t(309) = -3.54, p < .001$). This finding remained even when an additional analysis (ANCOVA) (Appendix W) was run, controlling for the contribution

to depressive symptoms of the measure of disability (the FASQ), $F(2, 258) = 21.03$, $p < .001$, that initial group comparisons had found also distinguished significantly between the groups.

Analyses conducted on the stability (STAB) and globality (GLOB) subscales of the ASQ-S repeated the findings for the composite measure, $F(2, 313) = 20.92$, $p < .001$ and $F(2, 311) = 32.73$, $p < .001$ (Appendix X) respectively. It should be noted that these sub scale findings need to be interpreted cautiously; the ASQ-S subscale scores did not meet the criteria for normality according to the Kolmogorov-Smirnov test (Norusis, 1999). The analyses were conducted despite this as graphical representations (histograms, stem and leaf, boxplots, normal probability plots and detrended normal plots) suggested the departure from normality was not severe and as attempts at transformation (log, squareroot and inverse) did not improve normality.

3.2.2 Hypothesis 2: A relationship between attributional style and depression will be evident across the whole sample

As group categorisation can result in some miscategorisation, the relationship between attributional style and depressive symptoms was investigated further via correlational analyses. Table 7 presents the correlational matrix generated from the variables assessed in this study which achieved practical significance in the level of their association with depressive symptoms (CES-D). A correlational matrix of all the variables assessed in the study is available in Appendix Y. As can be seen in the table, the measure of depressive symptoms, CES-D, was significantly correlated, $r = .44$, $p < .001$, with negative attributional style (COMP). Higher depressive symptoms were associated with higher levels of negative attributional style. The level of association achieved is similar that found in other populations (note Joiner & Wagner, 1995) and refutes the previous failure to find a significant association using a small sample in the only previous study (Barrett, 1992). It is also noted that the sub scales used to determine the negative attributional style score were also both positively and significantly correlated with the measure of depressive symptoms.

Table 7

Correlational Matrix for Independent Variables Where Practical Significance ($> .20$) was Achieved for Association with Depressive Symptoms (CES(D))

Variable	1	2	3	4	5	6	7	8	9	10
1. CES(D)	--	.44***	.37***	.44***	.60***	.51***	-.31***	.29***	-.22***	-.27***
2. COMP		--	.91***	.92***	.40***	.33***	-.15	-.03	-.03	-.25***
3. STAB			--	.68***	.33***	.33***	-.17	-.08	.01	-.23***
4. GLOB				--	.41***	.27***	-.11	.01	-.05	-.21***
5. PVS					--	.30***	-.19	-.32***	-.04	-.05
6. MSAI						--	-.53***	.01	-.19	-.52***
7. MS							--	.01	.20***	.31***
Control										
8. RLCQ								--	-.10	.07
9. TSR									--	.21***
10. FASQ										--

Note. CES(D) = Centre for Epidemiological Studies of Depression Scale, COMP = Negative Attributional Style (Composite), STAB = Stability of Attributions for Negative Events, GLOB = Globality of Attributions for Negative Events, PVS = Psychological Vulnerability Scale, MSAI = MS Attitudes Index, MS Control = Perceived MS Control, RLCQ = Recent Life Changes Questionnaire, TSR = Time Since Relapse, FASQ = Functional Assessment Questionnaire.

*** $p < .001$.

As diagnosis and medication usage have the potential to make a difference to any association between attributional style and depressive symptoms, this association was considered in a number of relevant population sub-samples. Table 8 presents the Pearson Product Moment Correlations for depressive symptoms (CES-D) and negative attributional style (COMP) for five sub populations of the sample. These were participants reporting 1) a diagnosis of relapsing remitting MS, 2) a diagnosis of primary progressive MS, 3) a diagnosis of secondary progressive MS 4) taking a medication that may cause depression as a side effect and 5) taking anti-depressant medication. As can be seen the relationship identified between negative attributional style (COMP) and depressive symptoms (CES-D) holds up in these sub populations with the exception of those in the sample reporting a diagnosis of primary progressive MS. This observation needs to be tempered by the fact only 32 participants were able to be included in this analysis.

3.2.3 Hypothesis 3: Stressful (negative) life events and attributional style will interact to predict depressive symptoms

The hopelessness/helplessness theory of depression proposes that the interaction between experiencing a negative life event and an individual's attributional style is more important in explaining variance in depressive symptoms than the experience of negative life events or having a negative attributional style on their own. Two measures of negative life events were used in the study to assess this; TSR, the time passed since the last relapse (last MS symptom flare up) and the experience of stressful life events generally (measured with the RLCQ). The former measure was considered to most likely to demonstrate an effect with persons likely to experience regular identifiable relapses, that is, those diagnosed with relapsing remitting MS.

To determine whether time since last symptom relapse (TSR) and negative attributional style (COMP) interacted to determine CES-D depressive symptom scores over and above the contribution of each variable independently in participants with relapsing remitting MS, a standard multiple regression was performed. Both variables and their

Table 8

Correlations Between Negative Attributional Style (COMP) and Depressive Symptoms (CES(D)) by Sub - Sample

Sample	<u>n</u>	<u>r</u>
Relapsing-remitting MS	147	.48***
Primary-progressive MS	32	.14
Secondary-progressive MS	55	.50***
Taking anti-depressants	98	.47***
Taking side-effect medication	95	.36***

Note. *** $p < .001$.

interaction term (TSR X COMP) were entered together. The results of the regression are presented in Table 9. Both negative attributional style and time since relapse contributed significantly to depressive symptoms but not their interaction, $\beta = -.09$, $p > .10$. The multiple regression identified no challenges to assumptions of normality, linearity, homoscedascity or independence of residuals.

As participants who did not indicate they had a diagnosis of relapsing remitting MS also completed the question assessing TSR it was decided to conduct a further multiple regression considering the interaction of TSR and negative attributional style (COMP) across the whole sample. As can be seen in Table 10, in contrast to the analysis with only those individuals specifying a diagnosis of relapsing remitting MS, a significant interaction (TSR X COMP) was obtained $\beta = -.13$, $p < .05$. For the sample as a whole therefore, the more recent the relapse (TSR) and the more negative the attributional style (COMP) of the participants, the higher was their level of depressive symptoms over and above the contribution individually of TSR and COMP. This multiple regression also proved acceptable in terms of assumptions of normality, linearity, homoscedascity and independence of residuals.

A multiple regression analysis was also conducted for the whole sample of participants with MS to determine whether recent life stressors (RLCQ) interacted with negative attributional style (COMP) to explain CES-D depressive symptom scores over and above the contribution of each variable separately. Once again a standard multiple regression was performed entering both variables and their interaction term, recent life stressors (RLCQ) x negative attributional style (COMP), (RLCQ X COMP) together. The results of the regression are presented in Table 11. This shows a significant interaction, $\beta = .104$, $p < .05$, demonstrating that, as for TSR and COMP, when the whole sample was considered in terms of RLCQ and COMP, the interaction term explained a further significant amount of depressive symptoms over and above the contribution of each variable independently. The higher the amount of recent life stress (negative events)(RLCQ) and the higher the negative attributional style (COMP) of the participants, the higher was their level of depressive symptoms. This multiple regression also proved acceptable in terms of assumptions of normality, linearity,

Table 9
Summary of a Simultaneous Regression Analysis of Time Since Relapse, Negative Attributional Style and their Interaction on Depressive Symptoms for Participants with Relapsing-Remitting MS

Variable	<u>B</u>	β	<u>t</u>
Time since relapse (TSR)	- 1.52	- 0.23**	- 0.31
Negative attributional style (COMP)	5.85	- 0.43***	5.65
TSR x COMP	- 0.74	- .09	-1.13

Note. Adjusted $R^2 = .27$, $F(3, 136) = 18.37$, $p < .001$.

** $p < .01$, *** $p < .001$.

Table 10

Summary of a Simultaneous Regression Analysis of Time Since Relapse, Negative Attributional Style and their Interaction on Depressive Symptoms for all Participants

Variable	<u>B</u>	β	<u>t</u>
Time since relapse (TSR)	- 1.34	- 0.21***	- 3.90
Negative attributional style (COMP)	5.90	0.43***	8.08
TSR x COMP	- 1.11	- 0.13*	- 2.48

Note. Adjusted $R^2 = .29$, $F(3, 263) = 35.60$, $p < .001$.

* $p < .05$, *** $p < .001$.

Table 11
Summary of a Simultaneous Regression Analysis of Recent Life Change Scores,
Negative Attributional Style and their Interaction on Depressive Symptoms for all
Participants

Variable	<u>B</u>	β	<u>t</u>
Recent Life Change Questionnaire (RLCQ)	1.228 E-02	.255***	5.112
Negative attributional style (COMP)	5.762	.432***	8.609
RLCQ x COMP	5.363 E-03	.104*	2.078

Note. Adjusted $R^2 = .26$, $F(3, 296) = 35.5$, $p < .001$.

* $p < .05$, *** $p < .001$.

homoscedascity and independence of residuals.

Together the results of the multiple regressions provide substantial support for the hypothesis stressful (negative) life events and negative attributional style interact in persons with MS to determine depressive symptoms though, not as specifically hypothesised in a reduced sample of only those reporting relapsing remitting MS as their diagnosis and where the stressful event measure is time since last symptom relapse (TSR).

3.3 Exploratory Analyses

In addition to testing the hopelessness/helplessness model of depression in persons with MS, the current study was also concerned to consider other variables found to be important in explaining depression in other studies of persons with MS or variables where the potential to explain depression was evident. It was considered this would allow some perspective on the relative importance of attributional style in explaining depression in persons with MS but also help identify instruments which might prove useful in screening individuals for risk.

As is evident from Table 7, using the cut off of .20 for practical significance, none of the demographic variables assessed in the study were considered to be associated with depressive symptoms. A number of other variables were found to be practically ($r \geq .20$) and significantly (all at $p < .001$) associated with depressive symptoms in persons with MS however. These included the PVS scores (.60), the MSAI (.51), MS Control (-.31), the RLCQ (.29), the FASQ (-.27) and TSR (-.22).

A further multiple regression was conducted to determine which variables, of those having significant associations with depressive symptoms, included in the study, best explained the variance in depression scores in this sample of persons with MS. Those variables included were all those assessed in the study who achieved a level of association with depressive symptoms at or above the level of practical significance determined prior to data analyses. Table 12 summarises the results of the regression.

Table 12

Summary of Step-wise Regression Analysis for Variables Achieving Practically Significant Associations with Depressive Symptoms

Variable	Adjusted R^2	β	F-ratio	df
PVS	.32	.57	98.57***	1, 205
PVS	.47	.48	90.95***	2, 204
MSAI		.39		
PVS	.49	.49	67.50***	3, 203
MSAI		.36		
TSR		.17		
PVS	.51	.43	54.40***	4, 202
MSAI		.32		
TSR		-.17		
COMP		.16		
PVS	.52	.39	45.97***	5, 201
MSAI		.33		
TSR		-.16		
COMP		.17		
RLCQ		.13		

Note. PVS = Psychological Vulnerability Scale, MSAI = MS Attitudes Index, TSR = Time Since Relapse, COMP = Negative Attributional Style (Composite), RLCQ = Recent Life Changes Questionnaire.

*** $p < .001$.

The stepwise procedure suggested the most important variables for predicting depressive symptoms in order were the PVS scores, MSAI (MS helplessness) scores, Time since relapse (TSR), negative attributional style (COMP) and recent life stressors (RLCQ). Table 10 reports on the R^2 s obtained after each entry of the independent variables considered. The PVS score was responsible for 32% of the variance in depressive symptoms the MSAI added approximately 15%. Though still significant, less than a further 3% of variance was explained by Time Since Relapse (TSR), 2% by negative attributional style (COMP) and 1% by recent life stressors (RLCQ). MS Control and disability (FASQ) were removed by the regression procedure.

The multiple regression indicates that from a purely statistical point of view, MS Control and disability (as measured by the FASQ), though practically and significantly associated with depressive symptoms, add nothing further to explanation of its variance, over the variables listed above, in the sample under study. Time since relapse (TSR), negative attributional style (COMP) and recent life stressors (RLCQ) add little to the prediction. Psychological vulnerability (PVS) and the MSAI were the best predictors of depressive symptoms (CES-D). The multiple regression identified no challenge to assumptions of normality, linearity, homoscedascity or independence of residuals.

3.4 Results Summary

The main results of the study were as follows:

- I. Significant differences in attributional style were found between groups determined on the basis of level of depressive symptoms such that the higher the level of depressive symptoms the higher the level of attributional style (COMP, STAB and GLOB).
- II. Across the sample of persons with MS, attributional style (COMP, STAB and GLOB) correlated significantly with depressive symptoms, such that the higher the attributional style score, the higher the depressive symptoms.

- III. Substantial support was found to indicate that negative events interact with negative attributional style to explain significant variance in depressive symptoms in persons with MS, over and above the contribution of these variables alone.

Other results of interest were:

- I. The FASQ, a measure of disability, also discriminated between groups determined on the basis of level of depressive symptoms and was associated with level of depressive symptoms.
- II. Of all the variables assessed in the study, the PVS and the MSAI explained the most substantial amounts of variance in depressive symptoms.

4 Discussion

4.1 Attributional Style and Depressive Symptoms in Persons with MS

The current study supported numerous others (e.g., Fazio & Palm, 1998; Gladstone et al., 1997; Kaslow et al., 1984) which have found a relationship between attributional style and depressive symptoms. When participants with MS were split into 3 groups on the basis of levels of depressive symptoms, these participants could also be distinguished on the basis of level of attributional style. The higher the depression level group the higher the negative attributional style. Consistent with this, when the whole sample was considered, a significant association between negative attributional style and depressive symptoms was identified. The association ($r = .44$, $p < .001$) was at a level of a medium to large population effect (Cohen, 1977) and above that considered acceptable in terms of practical significance in attribution-depression research (Peterson, 1991a,b; Robins, 1988). Overall as hypothesised, participants who viewed hypothetical negative events as due to something that effects a broad range of situations (global) rather than being confined to a narrower range of circumstances (specific) and as due to factors that are long lived or recurrent (stable), described higher levels of depressive symptoms. Alongside the weight of evidence from other studies of persons with and without disabling illness, the results of the current investigation supports the importance of considering attributional style when attempting to understand the cognitive factors involved in depression in persons with MS.

The only previous research to consider the relationship between negative attributional style and depressive symptoms specifically in persons with MS failed to find a significant relationship (Barrett, 19992) most probably on account of its small sample size. A moderate, significant correlation was obtained in the current study, when a much larger sample was used. The previous research found a lower correlation, .20 cross-sectional / .22 longitudinal, (though of acceptable size), but which with small numbers proved non significant. Consideration of the means and range of scores for depression between the two studies indicates that higher levels of depression were

evident in the current study, indicating a further reason for the success of this investigation may be the greater variance in depressive symptoms in the larger sample obtained. Barrett (1992) may simply not have obtained enough persons with MS, with enough depression to allow a sound test of his hypotheses. The failure to distinguish between diagnostic types in persons with MS may also have played a role in the previous studies inability to find a stronger effect. If the previous sample had included a significant number of persons with primary progressive MS results may have been harder to identify; no significant association was found in the current study between negative attributional style and depressive symptoms for those diagnosed (by self report) with primary progressive MS. Unfortunately Barrett (1992) did not report MS type diagnosis, so it is difficult to assess any contribution of this factor to the results obtained in that study. It appears unlikely that failure to take into account medications that may have depressive symptoms as a side effect or indeed symptom masking by the use of anti-depressants led to the inability of the previous study to identify the association between negative attributional style and depressive symptoms. These factors made no difference when considered in the current sample.

4.2 Negative Events, Attributional Style and Depressive Symptoms

Helplessness/hopelessness theory maintains that negative attributional style is most likely to lead to depression once a negative life event has occurred (more specifically that it is negative attributions for actual negative life events that precipitate depression). In the absence of negative life events this suggests that negative attributional style may have a relatively small association with depressive symptoms and in the absence of negative attributional style, negative life events may have a relatively small association with depressive symptoms. A fundamental test of the theory therefore involves a consideration of whether negative events interact with negative attributional style to explain variance in depressive symptoms over and above that explained by each variable independently. Consistent with the findings of other studies with different populations (e.g., Metalsky et al., 1982; 1987; Robins & Block, 1989) the current study provides partial support for this aspect of the theory. The effect was evident for major life stressors as measured by the RLCQ and for an MS related stress

(time since relapse) for the whole sample, but not when analyses of the MS related stress were confined to those considered most vulnerable to the relapse stress, participants with relapsing remitting MS. The findings suggest that negative events do interact with negative attributional style to explain additional amounts of variance in depressive symptoms in persons with MS but the size of the effect is such that a large sample is required for it to be detected. Alternatively, it may be that the measurement of stress in the study was such that it made identifying the effect more difficult.

The significant interactions identified between negative events and attributional style in the current study to explain depressive symptoms provides considerable support for this principal tenet of helplessness/hopelessness theory of depression, and indicate the value of this theoretical perspective in understanding depression in yet another population sample. The fact prior negative events (though measured retrospectively) were those found to interact with negative attributional style to predict depressive symptoms, to some extent also addresses the limitations of a cross-sectional study by allowing some appreciation of the temporal dimension in the emergence of symptoms. Participants reported on past stressful events. However, despite these findings there remains a question as to why this interaction was not found, as hypothesised, for a sub sample considered at high risk for negative events. The question used in the current study that attempted to capture MS specific stress was a simple categorical measure of time since last symptom relapse. This measure was used in recognition of the established association between such relapses and depression in persons with MS (e.g., Devins & Seland, 1987). However, such a measure could be considered somewhat crude, and while it was associated at a significant level with depressive symptoms ($r = .22, p < .001$) it may also have failed to identify the more important specific stresses associated with MS relapse that might interact with negative attributional style to influence depressive symptoms. It should be recognised however there is some evidence to the contrary. In the only previous study Barrett, (1992) incorporated an MS Stress Scale, incorporating 17 items covering limitations and changes associated with MS. While this stress scale did correlate moderately and significantly (.49) with depressive symptom scores, similar to findings in the current study for persons with

relapsing remitting MS, no interaction was found with attributional style to predict hopelessness (a significant predictor for depression in Barrett's study).

4.3 Screening for those Vulnerable to Depression in MS Samples

The results from the current study suggest that of the variables considered, those best at explaining variance in depression were the PVS and the MSAI. The PVS explained some 32% of the variance in depressive symptoms in the study and correlated with depressive symptoms at .60. The MSAI explained a further 15% of the variance in depressive symptoms with a correlation of .51.

The ability of the PVS to explain depressive symptoms exceeds any previously established for this measure with other samples, including others using the CES-D as a measure of adjustment. Along with its established reliability and validity this suggests the PVS is promising as a screening instrument to identify persons with MS at risk of developing depression. Further it may have potential to be used in monitoring progress in cognitive behavioural interventions as it has in other samples (Sinclair and Wallston, 1999). It allows for assessment of change in dysfunctional attitudes considered to contribute to depression. Though brief, there is also some potential for the instrument to be used to target particular attitudes in therapy. As the PVS items are not specific to MS, it could also be evaluated to establish its usefulness in identifying those early in the disease process who may be at risk of depressive symptoms in the future, that is identifying individuals at risk when they are less likely to be dealing with any major challenges directly from the disease process.

The findings with regard to the MSAI replicate those previously obtained with an MS sample (Shnek et al., 1995, 1997). As a screening instrument to detect those with MS at risk of depression however, it is somewhat more limited than the PVS. Its items are specific to MS and therefore it may be less relevant to those with limited symptoms. It has also encountered problems with reliability. Further development of the instrument may however lead it to be useful with those with more advanced disease.

The fact negative attributional style was not a major contributor to depressive symptoms over and above the PVS and MSAI in the final multiple regression comes as no surprise. There was a significant degree of association among the variables included from the analysis, as evidenced by the initial correlation matrix (for instance negative attributional style (COMP) correlated with the PVS ($r = .40$, $p < .001$), and the MSAI, ($r = .33$ $p < .001$). It must be said that this may not negate the theoretical or clinical implications of the associations found between negative attributional style and depressive symptoms in the study. The PVS and the MSAI can be viewed as measures which to some extent also tap negative attributional style.

It is interesting to note that the measure of moderate disability in the study, the FASQ, was found to be associated with depressive symptoms ($r = .27$, $p < .001$). At face value this seems to conflict with evidence level of disability is not associated with depression in persons with MS (e.g., Harper, Harper, Chambers, Cano & Singer, 1986; Maybury & Brewin, 1984). However, in the current study participants themselves assessed disability. This allows for psychological variables to influence the evaluation. Depression for instance is known to adversely affect persons with MS perception of their disability (Smith & Young, 2000). Further support for the hypothesis psychological factors explain the association between FASQ and depressive symptoms comes from the finding that the FASQ failed to explain any unique variance in depressive symptoms over and above that of the psychological variables assessed in the current study.

4.4 Limitations of the Study

The cross-sectional nature of the current study, despite the interaction found between recent negative life events and negative attributional style, means there remains the possibility that attributional style may simply reflect negative thinking occurring in a depressed state, rather than it being a salient explanatory style that plays a causal role in the development of depressive symptoms.

One of the major strengths points of the current research was its ability to have met basic assumptions of power that were considered a problem in the only previous study of attributional style and symptoms of depression in persons with MS (Barrett, 1992) and also more broadly in attributional - depression research (Robins & Hayes, 1995). This was achieved despite significant amounts of missing data. For instance, even though negative attributional style measure could only be considered in respect to the measure of depressive symptoms in 65% of the participants, this still amounted to a sample of 321 persons with MS. Notwithstanding this, some reservations regarding the results can be held on account of this missing data. Why were so many of the ASQ-S questionnaires returned incomplete?

It is notable that while the survey method of this investigation allowed access to a large number of participants, it disallowed easy communication between participants and the researchers on how to complete the questionnaires. In a population known to have physical and cognitive disability, persevering with a questionnaire like the ASQ-S, originally designed for interview administration, may have proved too much for some individuals. It is to be noted that acceptable levels of completion and return for this instrument have so far only been demonstrated in a (presumably) healthy group of individuals of sufficient cognitive skill to be undertaking undergraduate tertiary education (Dykema et al., 1996).

More broadly the survey strategy may also have precluded persons with MS having major disability from participation. Scores on the measure of moderate-severe disability, the Barthel Index, indicated that the few participants had severe levels of disability. Further, the 'pencil and paper' requirements of the survey may have meant those of lower levels of education and therefore of less familiarity with such tasks were less likely to apply to participate or to complete forms they were sent. This possibility was supported by the finding those who did participate in the study had a relatively large amount ($M = 14.25$ years) of formal education and the majority were or had been professional or non-manual workers.

The balance of the sexes in the study, while being in the predicted direction (more females than males), was also not at the level that found in the wider community. The general distribution of MS the UK population is 64%: 36%, female: male (MacDonald et al., 2000). The current study obtained a sample with proportions of 81%: 19%, female: male. However, this is not particularly unusual, both the studies of cognitive factors and depressive symptoms conducted by Barrett (1992) and Shnek et al (1997) achieved a higher proportion of females to males compared to the MS population at large. Several explanations can be hypothesized for this. Females are more likely to be depressed in general samples (American Psychiatric Association, 1994)) or perhaps females are more likely to be attracted to registering interest in a study considering MS and mood. Possibly females with MS may have more time to be involved in such research, should there be a difference, for instance, in them being less likely to be employed than males with MS. Peculiar to the method of obtaining participants in the study, perhaps women are more likely to be members of the MS Society, over and above the epidemiological sex distribution of the disease itself. It may be one or a number of these factors which explain the greater participation by females than males in the current study.

A further difficulty with the studies survey method may have been that it meant persons with MS with severe levels of depressive symptoms were not included. Persons with more severe levels of symptomatology may have been less likely to respond, complete and return questionnaires by virtue of the lethargy and loss of interest that can be part of depression. However this appears unlikely, the depression scores obtained were higher or comparable to clinic-based studies (e.g., Devins et al., 1993; Shnek et al., 1995, 1997) that have also used the CES-D in persons with MS.

Finally, it is possible that some of the participants in the sample obtained may not even have had MS. Participants did not receive any diagnostic evaluation, either for MS or MS sub type. Diagnosis of neurological disorders is a complex and demanding task and there is no definitive test for MS. It is possible some responders may have been diagnosed via different criteria, mis-diagnosed or had even misunderstood their diagnosis.

Overall, while the size of the sample obtained in this study increases the likelihood of it being representative, some restrictions on generalisation should be held on the basis of the amount of missing data, the level of disability in the sample obtained, educational levels and socio-economic balance. Sex distribution, the possibility the survey method may have excluded persons with more severe depressive symptoms and the lack of formal diagnosis of MS are also factors which potentially limit generalisation of the findings from the research.

4.5 Future Research and Clinical Implications

The most obvious recommendation for future research is that the current sample be followed up over time. Extension of the current study from a cross-sectional to a prospective design would allow an examination of the dynamic process fundamental to helplessness/hopelessness theory, namely that attributional style interacts with negative events over time to predict depressive symptoms. Follow up could consider whether attributional style at initial assessment predicts later development of depressive symptoms in the face of negative life events. Statistical analyses in such a design could control for initial levels of depressive symptomatology. The sample size obtained in the current study is also sufficient to allow the inclusion of other variables in follow-up considered important in the hopelessness theory of depression, specifically hopelessness and social support.

A more powerful test of the major tenants of hopelessness theory of depression in persons with MS could involve assessing the manipulation of attributional style through cognitive therapy. This could be achieved in a number of ways. Firstly, future trials of cognitive therapy for depression in persons with MS could monitor attributional style for change through the therapy, and any contribution of this change to changes in depressive symptoms. Attributional style at the end of treatment could also be assessed in terms of it's ability to predict relapse in those treated by cognitive therapy. Secondly, a more fully experimental trial could be conducted in which only attributional style is targeted by therapy. This would allow more specific statements about the

importance of attributional style in the depression of persons having MS. Findings supportive of the role in change in attributional style in benefitting those with depression are already available in other samples (e.g., DeRubeis & Hollon, 1996; Gillham & Reivich, 1999; Hollon et al., 1992). Innovations in treatment such as telephone-based procedures (e.g., Mohr et al., 2000) and even the Internet, may allow economical access to intervention for large samples such as that of the current study that were spread throughout the UK. Use of such technologies would counter not only the problem of distance but also limited mobility that may affect opportunities for participation of persons with MS.

While our principal interest in the current research was attributional style, within the hopelessness theory of depression, both the PVS and the MSAI could be subject to similar investigations to better establish the role of the dimensions they assess in depression in persons with MS. It certainly appears worthwhile to assess their utility in screening for those at risk of depression.

In line with reservations made about the means of assessing MS related negative events in the current study, future research may consider more comprehensive means of identifying MS related stresses. Perhaps qualitative interviews could confirm the challenges, and determine a questionnaire able to be used with a large sample. Direct interviews of persons with MS might also facilitate the inclusion of individuals with more severe levels of disability, with lower levels of education and familiarity with pencil and paper tasks, as well as those who may be more depressed. It would likely also mean less missing data and allow checks to establish MS diagnosis to specified criteria. The latter is potentially important given the finding of the current study that attributional style may not be important in the depression of those with primary progressive MS. Interviews by trained clinicians could also identify persons meeting the criteria for particular mood disorders so the applicability of the reformulated model of learned helplessness/hopelessness could be considered in a clinical sample.

On the basis of the current research, regardless of how empirical work proceeds, it does appear relevant for clinicians assessing and treating persons with MS for

depressed to consider whether or not the individual consulting them possesses a negative attributional style and intervening accordingly.

4.6 Conclusions

Overall the current study provides significant support for the continued investigation of the helplessness/hopelessness model of depression in persons with MS. The association of negative attributional style and depressive symptoms was demonstrated and its salience in the face of negative life events partially supported. Follow-up of the current sample, investigation of the role of attributional style in clinical interventions and in studies incorporating different methodologies offers the opportunity to firmly establish the importance of this model in understanding and ameliorating the adjustment difficulties of those challenged by a significant neurological illness.

References

Abramson, L. Y., Alloy, L. B. & Metalsky, G. I. (1995). Hopelessness depression. In G. M. Buchanan & M. E. P. Seligman (Eds.) Explanatory style (pp. 113-134). New Jersey: Lawrence Erlbaum.

Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. (1978). Learned helplessness in humans. Journal of Abnormal Psychology, 87, 49-74.

Abramson, L. Y., Metalsky, G. I., & Alloy, L. B., (1989). Hopelessness depression: A theory based sub-type of depression. Psychological Review, 96, 358-372.

Addington, D., Addington, J., & Robinson, G. (1999). Attributional style and depression in schizophrenia. Canadian Journal of Psychiatry, 44, 697-700.

Affleck, G., Tennen, H., Pfeiffer, C., & Fifield, J. (1987). Appraisals of control and predictability in adapting to chronic disease. Journal of Personality and Social Psychology, 53, 273-279.

Aikens, J. E., Fischer, J. S., Namey, M., & Rudick, R. A. (1997). A replicated prospective investigation of life stress coping and depressive symptoms in multiple sclerosis. Journal of Behavioural Medicine, 20, 433-445.

Aikens, J. E., Reinecke, M. A., Pliskin, N. H., Fischer, J. S., Wiebe, L. M., & Taylor, J. L. (1999). Assessing depressive symptoms in multiple sclerosis: Is it necessary to omit items from the original Beck Depression Inventory? Journal Behavioural Medicine, 22, 127-142.

Alloy, L. B., Reilly-Harrington, N., Fresco, D. M., Whitehouse, W. G., & Zechmeister, J. S. (1999). Cognitive styles and life events in subsyndromal uni-polar and bi-polar disorders: Stability and prospective prediction of depressive and hypomanic mood swings. Journal of Cognitive Psychotherapy: An International Quarterly, 13, 21-40.

American Psychiatric Association (1987). Diagnostic and statistical manual of mental disorders (3rd Rev. ed.). Washington DC : Author.

American Psychiatric Association (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington DC: Author.

Anzola, G. P., Bevilacqua, L., Cappa, S. F., Capra, R., Faglia, L., Farina, E., Frisoni, G., Mariani, C., Pasolini, M. P., Vigrolo, L. A. (1989). Neuropsychological assessment in patients with relapsing-remitting multiple sclerosis and mild functional impairment: Correlation with magnetic resonance imaging. Journal of Neurology, Neurosurgery and Psychiatry, 53, 142-145.

Arnett, P. A., Higginson, C. I., Voss, W. D., Bender, W. I., Wurst, J. M., & Tippin, J. M. (1999). Depression in multiple sclerosis: Relationship to working memory capacity. Neuropsychology, 13, 546-556.

Barnwell, A. M., & Kavanagh, D. J. (1997). Prediction of psychological adjustment to multiple sclerosis. Social Science & Medicine, 45, 411-418.

Barrett, L., (1992). The hopelessness theory of depression: A test of the diathesis-stress component in a multiple sclerosis sample. Dissertation Abstracts International, 53, (5 - B), 2535B.

Beck, A., Ward, C., Mendelson, M., Mock, T., & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Billings, A. G., Cronkite, R. C., & Moos, R. M. (1983). Social environmental factors in unipolar depression: Comparisons of depressed patients and non-depressed controls. Journal of Abnormal Psychology, 92, 119-133.

Buchanan G. M., & Seligman M. E. P. (Eds.). (1995). Explanatory style. New Jersey: Lawrence Erlbaum.

Chalder, T., Power, M. J., & Wessely, S. (1996). Chronic fatigue in the community: 'A question of attribution'. Psychological Medicine, 26, 791-800.

Chaney, J. M., Mullins, L. L., Vretsky, D. L., Doppler, M. J., Palmer, W. R., Wees, S. J., Klein, H. S., Doud, D. K., & Reiss, M. J. (1996). Attributional style and depression in rheumatoid arthritis: The moderating role of perceived illness control. Rehabilitation Psychology, 41, 205-223.

Cheatle, M. D., Brady, J. P., & Ruland, T. (1990). Chronic low back pain, depression and attributional style. The Clinical Journal of Pain, 6, 114-117.

Chubb, H. L., Jones, I., Hillier, J., Moyle, C., Sadler, S., Cole, T., Redman, K., & Farmer, A. (1999). Chronic fatigue syndrome: Personality and attributional style of patients in comparison to healthy controls and depressed individuals. Journal of Mental Health, 8, 351-359.

Clarke, T., Wadhawa, U., & Leroi, I. (1998). Psychotic depression: An atypical initial presentation of multiple sclerosis. Psychosomatics, 39, 72-75.

Cochran, S. D., & Hammen, C. L. (1985). Perceptions of stressful life events and depression: A test of attributional models. Journal of Personality and Social Psychology, 48, 1562-1571.

Cohen, J. (1977). Statistical power analysis for the behavioural sciences. (Rev. ed.) New York: Academic Press.

Cole, D., & Turner, J. E. (1993). Models of cognitive mediation and moderation in child depression. Journal of Abnormal Psychology, 102, 271-281.

Cutrona, C. E. (1983). Causal attributions and peri-natal depression. Journal of Abnormal Psychology, 92, 161-172.

Cutrona, C. E., Russel, D., & Jones, R. D. (1984). Cross-situational consistency in casual attributions: Does attributional style exist? Journal of Personality and Social Psychology, 47, 1043-1058.

Dalos, N. P., Rabins, P. V., Brooks, B. R., & Odonnell, P. (1983). Disease activity and emotional state in multiple sclerosis. Annals of Neurology, 13, 573-577.

De Rubeis, R. J., & Hollon, S. D. (1995). Explanatory style in the treatment of depression. In G. M. Buchanan, M. E. P. Seligman (Eds.). Explanatory style (pp. 99-111). Philadelphia: Lawrence Erlbaum.

Devins, G. M., Edworthy, S. M., Paul, L., & Mandin, H., Seland, T. P., & Klein, G. (1993). Illness intrusiveness and depressive symptoms over the adult years: Is there a differential impact across chronic conditions? Canadian Journal of Behavioural Science, 25, 400-413.

Devins, G. M., & Seland, T. P. (1987). Emotional impact of multiple sclerosis: Recent findings and suggestions for future research. Psychological Bulletin, 101, 363-375.

Devins, G. M., Seland, T. P., Klein, G. M., Edworthy, S. M., & Saary, M. (1993). Stability and determinant of psychosocial well being in multiple sclerosis. Rehabilitation Psychology, 38, 11-26.

Devins, G. M., Orme, C. M., Costello, C. G., Binik, Y. M., Frizzell, B., Stam, H. J., & Pullin, W. M. (1988). Measuring depressive symptoms in illness populations: Psychometric properties of the Center for Epidemiological Studies Depression (CES-D) Scale. Psychology and Health, 2, 139-156.

Dykema, J., Bergbower, K., Doctora, J. D., & Peterson, C. (1996). An Attribution Style Questionnaire for general use. Journal of Psychoeducational Assessment, 14, 100-108.

Elan (1999). Product information zanaflex®. Author.

Eaves, G., & Rush, A. J. (1984). Cognitive patterns in symptomatic and remitted uni-polar major depressives. Journal of Abnormal Psychology, 93, 31-40.

Elig, T. W., & Frieze, I. H. (1979). Measuring causal attributions for success and failure. Journal of Personality and Social Psychology, 37, 621 - 634.

Fassbender, K., Schmidt, R., Moessner, R., Kischka, U., Kuhnen, J., Schwartz, A., & Hennerici, M. (1998). Mood disorders and dysfunction of the hypothalamic-pituitary-adrenal axis in multiple sclerosis: Association with inflammation. Archives of Neurology, 55, 66-72.

Faul, F., & Erdfelder, E. (1992). G Power: A priori, post hoc and compromise power analysis for MS Dos [Computer Program] Bonn FRG: Bonn University, Department of Psychology.

Fazio, N. M., & Palm, L. J. (1998). Attributional style, depression and grade point averages of college students. Psychological Reports, 83, 159-162.

Feather, N. T. (1983). Some correlates of attributional style: Depressive symptoms, self-esteem and Protestant ethic values. Personality and Social Psychology Bulletin, 9, 125-135.

Feinstein, A. (1995). Depression associated with multiple sclerosis: An etiological conundrum. Canadian Journal of Psychiatry, 40, 573-576.

Fillipi, M., Alberon, M., Montinelli, V., Sirabian, G., Bressi, S., Canal, N., & Comi, G. (1995). Influence of clinical variables on neuropsychological variables in multiple sclerosis. European Neurology, 34, 324-328.

Foley, F. W., Bedell, J. R., LaRocca, N. G., Scheinburg, L. C., & Reznkoff, M. (1987). Efficacy of stress inoculation training in coping with multiple sclerosis. Journal of Consulting and Clinical Psychology, 55, 919-922.

Foley, F. W., Traugott, U., LaRocca, N. G., Caruso, L. S., & Scheinburg, L. C. (1992). A prospective study of depression and immune dysregulation in multiple sclerosis. Archives of Neurology, 49, 238-244.

Frank, N. C., Blount, R. L., & Brown, R. T. (1997). Attributions, coping and adjustment in children with cancer. Journal of Paediatric Psychology, 22, 563-576.

Frank, R. G., Chaney, J. M., Clay, D. L., & Kay, D. R. (1991). Depression in rheumatoid arthritis: A re-evaluation. Rehabilitation Psychology, 36, 219-230.

George, M. S., Kellner, C. H., & Goust, J. M. (1994). A magnetic resonance imaging investigation into mood disorders in multiple sclerosis: A pilot study. Journal of Nervous and Mental Diseases, 182, 410-412.

Gilchrist, A. C., & Creed, F. H. (1994). Depression, cognitive impairment and social stress in multiple sclerosis. Journal of Psychosomatic Research, 38, 193-201.

Gillham, J. E., & Reivich, K. J. (1999). Prevention of depressive symptoms in school children: A research update. Psychological Sciences, 10, 461-462.

Gillham, J. E., Reivich, K. J., Jaycox, L. H., & Seligman, M. E. P. (1995). Prevention of depressive symptoms in schoolchildren. Psychological Science, 6, 343-351.

Gladstone, T. R. G., Kaslow, N. J., Seeley, J. R. & Lewinsohn, P. M. (1997). Sex differences, attributional style and depressive symptoms among adolescents. Journal of Abnormal Child Psychology, 25, 297-305.

Golin, S., Sweeney, P. D., & Schaeffer, D. E. (1981). The causality of casual attributions in depression. A cross-lagged panel correlational analysis. Journal of Abnormal Psychology, 90, 14-22.

Goodstein, R., & Ferrell, R. B. (1977). Multiple sclerosis presenting as depressive illness. Diseases of the Nervous System, 38, 127-131.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). Multivariate data analysis (5th ed). London: Prentice Hall.

Hall, R. C. W., & Zisook, S. (1981). Paradoxical reactions to benzodiazepines. British Journal of Clinical Pharmacology, 11, 995-1045.

Hamilton, E. W., & Abramson, L. Y. (1983). Cognitive patterns and major depressive disorder: A longitudinal study in a hospital setting. Journal of Abnormal Psychology, 92, 173-184.

Harper, A. C., Harper, D. A., Chambers, L. W. Cino L. W., & Singer, J. (1986). An epidemiological description of Physical, social and psychological problems in multiple sclerosis. Journal of Chronic Disability, 39, 305-310.

Heimburg, R. G., Vermilyea, J. A., Dodge, C. S., Becker, R. E., & Barlow, D. H. (1987). Attributional style depression and anxiety: An evaluation of the specificity of depressive attributions. Cognitive Therapy and Research, 11, 537-550

Hollon, S., DeRubeis, R. J., Evans, M. D., Huiemer, M. J., Garvey, M. J., Grave, W. M., & Tuasion, V. B. (1992). Cognitive and pharmacotherapy for depression: Singly and in combination. Archives of General Psychiatry, 49, 774-781.

Holmes, T. H., & Rahe, R. H. (1967). The Social Readjustment Rating Scale. Journal of Psychosomatic Research, 11, 213-218.

Huber, S. J., Rammohan, K. W., Burnstein, R. A., & Christy, J. A. (1993). Depressive symptoms are not influenced by severity of multiple sclerosis. Neuropsychiatry, Neuropsychology and Behavioural Neurology, 6, 177-180.

Johnston, M., Wright, S., & Weinman, J. (1995). Measures in health psychology: A user's portfolio. Windsor U.K: Nfer-Nelson.

Joiner, T. E., & Wagner, K. D. (1995). Attributional style and depression in children and adolescents: A meta-analytic review. Clinical Psychology Review, 15, 777-798.

Joint Formulary Committee (2000). British National Formulary, 40. Wallingford UK: British Medical Association and Royal Pharmaceutical Society of Great Britain.

Jonsson, A., & Ravnburg, D. J. (1996). Effects of neuropsychological treatment in patients with multiple sclerosis. Acta Neurologica Scandinavica, 88, 394-400.

Jorm, A. F. (2000). Does old age reduce the risk of anxiety and depression? A review of epidemiological studies across the adult life span. Psychological Medicine, 30, 11-22.

Kahana, E., Leibowitz, U., & Alter, M. (1971). Cerebral multiple sclerosis. Neurology, 21, 1179-1185.

Kaslow, N. J., Rehm, L. P., & Siegal, A. W. (1984). Social-cognitive and cognitive correlates of depression in children. Journal of Abnormal Child Psychology, 12, 605-620.

Kaslow, N. J., Tannenbaum, R. L., & Seligman, M. E. P. (1978). The KASTAN: A children's attributional style questionnaire. Unpublished manuscript, University of Pennsylvania, Philadelphia.

Katona, C. (1994). Depression in old age. Chichester: Wiley

Larcombe, N. A., & Wilson, P. H. (1984). Evaluation of cognitive behaviour therapy for depression in patients with multiple sclerosis. British Journal of Psychiatry, 145, 366-371.

Lewisohn, P. M., Hoberman, H. M., & Rosenbaum, M. (1988). A prospective study of risk factors for uni-polar depression. Journal of Abnormal Psychology, 97, 251-264.

Lishman, W. A. (1998). Organic psychiatry: The psychological consequences of cerebral disorder. (3rd ed.) Oxford: Blackwell Science.

Livneh, H., & Antonak, R. F. (1997). Psycho-social adaptations to chronic illness. Gaithersburg: M. P. Aspen.

MacDonald, B. K., Cockerill, J. W. A., Sarder, W. A. S., & Shorvon, S. D. (2000). The incidence and prevalence of neurological disorders in a prospective community based study in the UK. Brain, 123, 665-676.

Mahoney, F. I., & Barthel, D. W. (1965). Functional evaluation: The Barthel Index. Maryland State Medical Journal, 14, 61-65.

Manly, P. C., McMahon, R. J., Bradley, C. F., & Davidson, P. O. (1982). Depressive attributional style and depression following childbirth. Journal of Abnormal Psychology, 91, 245-254.

Malcarne, V. L. (1999). Cognitive factors in chronic illness: Empirical approaches. Cognitive Therapy and Research, 23, 115-117.

Matthews, S. (1993). Multiple sclerosis: The facts. (3rd ed.). New York: Oxford University Press.

Matthews, W. B., Compston, A., Allen, I. V., & Martyn, C. N. (1991). McAlpines multiple sclerosis. Edinburgh: Churchill Livingstone.

Maybury, C. P., & Brewin, C. R. (1984). Social relationships, knowledge and adjustment to multiple sclerosis. Journal of Neurology, Neurosurgery and Psychiatry, 47, 372-376.

Mazure, C. M. (1998). Life stressors as risk factors in depression. Clinical Psychology: Science and Practice, 5, 291-313.

Metalsky, G. I., Abramson, L. Y., Seligman, M. E. P., Semmel, A., & Peterson, C. R. (1982). Attributional styles and life events in the classroom: Vulnerability and invulnerability to depressive mood reactions. Journal of Personality and Social Psychology, 43, 612-617.

Metalsky, G. I., Halberstadt, L. J., & Abramson, L. Y. (1987). Vulnerability to depressive mood reactions: Towards a more powerful test of the diathesis-stress and casual mediation components of the reformulated theory of depression. Journal of Personality and Social Psychology, 52, 386-393.

Metalsky, G. I., Joiner, T. E., Wonderlich, S. A., Beatty, W. W., Staton, R. D., & Blalock, J. A. (1997). When will bulimics be depressed and when not? The moderating role of attributional style. Cognitive Therapy and Research, 21, 61-72.

Michelson, L. K., Bellatini, C. J., Testa, S. M., & Marchione, N. (1997). The relationship of attributional style to agoraphobia severity, depression and treatment outcome. Behaviour, Research & Therapy, 35, 1061-1073.

Millard, R. W. (1989). The Functional Assessment Screening Questionnaire: Application for evaluating pain related disability. Archives of Physical Medicine and Rehabilitation, 70, 303-307.

Millard, R. W., & Jones, R. H. (1991). Consistent validity for assessing pain related disability. Spine, 16, 835-838.

Millefiorini, E., Padovani, A., Puzzilli, C., Loredi, C., Bastianello, S., Buttinelli, C., Di Piero, V., & Fiesch, C. (1992). Depression in the early phase of MS: Influence of functional disability, cognitive impairment and brain abnormalities. Acta Neurologica Scandinavica, 86, 354-358.

Miller, M. A., & Rahe, R. A. (1997). Life changes scaling for the 1990's. Journal of Psychosomatic Research, 43, 279-292.

Minden, S. L., Orav, J., & Reich, P. (1987). Depression in multiple sclerosis. General Hospital Psychiatry, 9, 426-434.

Mohr, D. C., & Goodkin, D. E. (1999). Treatment of depression in multiple sclerosis: Review and meta-analysis. Clinical Psychology: Science and Practice, 6, 1-9.

Mohr, D. C., Goodkin, D. E., Gatto, N., Van der Wende, J. (1997). Depression, coping and level of neurological impairment in multiple sclerosis. Multiple Sclerosis, 3, 254-258.

Mohr, D. C., Goodkin, D. E., Likosky, W., Beutler, L., Gatto, N., & Langan, M. K. (1997). Identification of Beck Depression Inventory items related to multiple sclerosis. Journal of Behavioural Medicine, 20, 407-414.

Mohr, D. C., Goodkin, D. E., Likosky, W., & Gatto, N. (1997). Treatment of depression improves adherence to interferon beta-1b therapy for multiple sclerosis. Archives of Neurology, 54, 531-533.

Mohr, D. C., Goodkin, D. E., Likosky, W., Gatto, N., Neilly, L. K., Griffen, C., & Stiebling, B. (1996). Therapeutic expectations of patients with multiple sclerosis upon initiating interferon beta 1-b: Relationship to adherence to treatment. Multiple Sclerosis, 2, 222-226.

Mohr, D. C., Likosky, W., Bertagrolli, A., Goodkin, D. E., Van Der Wende, J., Dwyer, P., & Dick, L. P. (2000). Telephone-administered cognitive-behavioural therapy for the treatment of depressive symptoms in multiple sclerosis. Journal of Consulting and Clinical Psychology, 68, 356 - 361.

Mohr, D. C., Likosky, W., Dwyer, P., & Van Der Wende, J. (1999). Course of depression during initiation of interferon beta-1a treatment for multiple sclerosis. Archives of Neurology, 56, 1263-1265.

Multiple Sclerosis Society (2000a). Calling you. MS Matters, 30, 20.

Multiple Sclerosis Society (2000b). MS and Mood: Address correction. MS Matters, 31, 7.

Nab, H. W., & Hommes, O. R. (1987). Depression associated with tizanadine. British Medical Journal, 295, 612.

Neilly, L. K., Goodkin, D. S., Goodkin, D. E., & Hauser, S. L. (1996). The side effects of interferon beta - 1b in MS: Results of an open label trial. Neurology, 46, 552-554.

Nicassio, P. M., Wallston, K. A., Callahan, L. F., Herbert, M., & Pincus, T. (1985). The measurement of helplessness in rheumatoid arthritis: The development of the arthritis helplessness index. Journal of Rheumatology, *12*, 462-467.

Norusis, M. J. (1999). SPSS® 9.0 Guide to data analysis. Upper Saddle River N. J.: Prentice Hall.

Noy, S., Achiron, A., Gabbay, U., Barak, Y., Rotstein, Z., Laor, N., & Sarova-Pinhas, I. (1995). A new approach to affective symptoms in relapsing-remitting multiple sclerosis. Comprehensive Psychiatry, *36*, 390-395.

Office of Population Censuses and Surveys (1973). The general household survey. London: Her Majesty's Stationery Office.

O'Hara, M. W., Neunaber D. J., & Zekoski, E. M. (1984). Prospective study of post-partum depression: Prevalence, course and predictive factors. Journal of Abnormal Psychology, *93*, 158-171.

Overmier, J. B., & Seligman, M. E. P. (1967). Effects of inescapable shock upon subsequent escape and avoidance learning. Journal of Comparative and Physiological Psychology, *63*, 23-33.

Patten, S. B., & Metz, L. M. (1997). Depression in multiple sclerosis. Psychotherapy and Psychosomatics, *66*, 286-292.

Patten, S. B., Metz, L. M., & Reimer, M. A. (2000). Biopsychosocial correlates of lifetime major depression in a multiple sclerosis population. Multiple Sclerosis, *6*, 115-120.

Patten, S. B., Williams, J. V. A., & Love, E. J. (1996). Self-reported depressive symptoms following treatment with cortico-steroids and sedative hypnotics. International Journal of Psychiatric Medicine, *26*, 15-24.

Paykel, E. S., Myers, J. K., Dienelt, M. N., Klerman, G. L., Lindenthal, J. J., & Peppes, M. P. (1969). Life events and depression: A controlled study. Archives of General Psychiatry, *21*, 753-760.

Persons, J. B., & Rao, P. A. (1985). Longitudinal study of cognitions, life events, and depression in psychiatric inpatients. Journal of Abnormal Psychology, *94*, 51-63.

Peterson, C. (1991a). The meaning and measurement of explanatory style. Psychological Inquiry, *2*, 1-10.

Peterson, C. (1991b). Further thoughts on explanatory style. Psychological Inquiry, 2, 50-57.

Peterson, C., Buchanan, G. M., & Seligman, M. E. P. (1995). Explanatory style: History and evolution of the field. In G. M. Buchanan & M. E. P. Seligman (Eds.). Explanatory style. (pp. 1-20). Hillsdale NJ: Lawrence Erlbaum.

Peterson, C., Luborsky, L., Seligman, M. E. P. (1983). Attributions and depressive mood shifts: A case study using the symptom-context method. Journal of Abnormal Psychology, 92, 96-103.

Peterson, C., Schwartz, S. M., & Seligman, M. E. P. (1981). Self-blame and depressive symptoms. Journal of Personality and Social Psychology, 41, 253-259.

Peterson, C. R., Semmel, A., Von Baeyer, C. Abramson, L. Y., Metalsky, G. I., & Seligman, M. E. P. (1982). The Attributional Style Questionnaire. Cognitive Therapy and Research, 6, 287-299.

Peterson, C., & Villanova, P.M. (1988). An Expanded Attributional Style Questionnaire. Journal of Abnormal Psychology, 97, 87-89.

Power, P. W. (1985). Family coping behaviour in chronic illness: A rehabilitation perspective. Rehabilitation Literature, 46, 78-83.

Proctor & Gamble Pharmaceuticals (1999). Product information dantrium®. Author.

Pujol, J., Bello, J., Deus, J., Marti-Vilalta, J. L. & Capdevila, A. (1997). Lesions in the left arcuate fasciculus region and depressive symptoms in multiple sclerosis. Neurology, 49, 1105-1110.

Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 3, 385-401.

Rahe, R. H. (1975). Epidemiological studies of life change and illness. International Journal of Psychiatric Medicine, 6, 133-146.

Randolph, J. J., Arnett, P. A., Higginson, C. I., & Voss, W. D. (2000). Neurovegetative symptoms in multiple sclerosis: Relationship to depressed mood, fatigue and physical disability. Archives of Clinical Neuropsychology, 15, 387 - 398.

Reisches, F. M., Baum, K., Brau, H., Hedde, J. P., & Schwindt, G. (1988). Cerebral magnetic resonance imaging findings in multiple sclerosis: Relations to disturbance of affect, drive and cognition. Archives of Neurology, 45, 1114-1116.

Reivich, K. (1996). The measurement of explanatory style. In G. M. Buchanan & M. E. P. Seligman, (Eds). Explanatory style (pp. 21-48). New Jersey: Lawrence Erlbaum.

Roberts, R. E., & Vernon, S. W. (1983). The Center For Epidemiologic Studies Depression Scale: It's use in a community sample. American Journal of Psychiatry, 140, 41-46.

Robins, C. J. (1988). Attributions and depression: Why is the literature so inconsistent? Journal of Personality and Social Psychology, 54, 880-889.

Robins, C. J., & Block, P. (1989). Cognitive theories of depression viewed from a diathesis-stress perspective: Evaluations of the models of Beck and of Abramson, Seligman and Teasdale. Cognitive Therapy and Research, 13, 297-313.

Robins, C. J., & Hayes, A. M. (1995). The role of casual attributions in the prediction of depression. In G. M. Buchanan & M. E. P. Seligman (Eds.). Explanatory style (pp.21 - 48). New Jersey: Lawrence Erlbaum.

Rohde, P., Lewinsohn, P. M., Tilson, M., & Seeley, J. R. (1990). Dimensionality of coping and it's relation to depression. Journal of Personality and Social Psychology, 58, 499 - 511.

Ron, M. A., & Logsdail, S. J. (1989). Psychiatric morbidity in multiple sclerosis: A clinical and MRI study. Psychological Medicine, 19, 887-895.

Runyon, R. P., & Haber, A. (1976). Fundamentals of behavioural statistics (3rd ed). Reading Mass: Addison-Wesley.

Sabatini, U., Pozzilli, C., Pantano, P., Koudriavtseva, T., Padovani, A., Millefiorini, E., Di Biasi, C., Gualdi, G. F., Salvetti, M., & Lenzi, G. L. (1996). Involvement of the limbic system in multiple sclerosis patients with depressive disorders. Biological Psychiatry, 39, 970-975.

Sadovnick, A. D., Eisen, K., Ebers, G. C., & Paty, D. W. (1991). Cause of death in patients attending MS clinics. Neurology, 41, 1193-1196.

Sadovnick, A. D., Remick, R. A., Allen, J., Swartz, E., Yee, I. M., Eisen, K., Furquhar, R., Hushimoto, S. A., Hooge, J., Kustrulcoft, L. F., Morrison, W., Nelson, J., Oger, J., Paty, D. W. (1996). Depression in multiple sclerosis. Neurology, 46, 628-632.

Schmidt, K. L., Stark, K. D., Anthony, B. J., & Carlson, C. L. (1998). Cognitive factors differentiating attention deficit-hyperactivity disorders with and without co-morbid mood disorders. Journal of Consulting and Clinical Psychology, 66, 673-679.

Schubert, D. S., & Foliart, R. H. (1993). Increased depression in multiple sclerosis patients: A meta-analysis. Psychosomatics, 34, 124-130.

Schulberg, H. C., Saul, M., McClelland, M., Gangulli, M., Christy, W. & Frank, R. (1985). Assessing depression in primary medical and psychiatric practice. Archives of General Psychiatry, 42, 1164-1170.

Scott, S. (1999) Cognitive therapy of affective disorders. Journal of Affective Disorders, 37, 1-11

Seligman, M. E. P., Abramson, L. Y., Semmel, A., Von Baeyer, C. (1979). Depressive attributional style. Journal of Abnormal Psychology, 88, 242-247.

Seligman, M. E. P., Castellon, C., Schulmen, P., Luborsky, L., Ollove, M., & Downing, R. (1988). Explanatory style change during cognitive therapy for uni-polar depression. Journal of Abnormal Psychology, 97, 13-18.

Seligman, M. E. P., & Maier, S. F. (1967). Failure to escape traumatic shock. Journal of Experimental Psychology, 74, 1-9.

Seligman, M. E. P., Peterson, C., Kaslow, N. J., Tannenbaum, R. L., Alloy, L. B., & Abramson, L. Y. (1984). Attributional style and depressive symptoms in children. Journal of Abnormal Psychology, 93, 235-238.

Seltzer, G. B., Granger, C. V., & Wineberg, D. E. (1982). Functional assessment: Bridge between family and rehabilitation medicine within an ambulatory practice. Archives of Physical and Rehabilitation Medicine, 63, 453-457.

Shnek, Z. M., Foley, F. W., La Rocca, N. G., Gordon, W. A., De Luca, J., Schwartzman, H. G., Halper, J., Lenrox, S., & Irvine, J. (1997). Helplessness, self-efficacy, cognitive distortions and depression in multiple sclerosis and spinal cord injury. Annals of Behavioural Medicine, 19, 288 -294.

Shnek, Z. M., Foley, F. W., La Rocca, N. G., Smith, C. R., & Halper, J. (1995). Psychological predictors of depression in multiple sclerosis. Journal of Neurologic Rehabilitation, 9, 15-23.

Sinclair, V. G., & Wallston, K. A. (1999). The development and validation of a psychological vulnerability scale. Cognitive Therapy and Research, 23, 119 - 129.

Smith, S. J., & Young, C. A. (2000). The role of affect on the perception of disability in multiple sclerosis. Clinical Rehabilitation, 14, 50-54.

Stenager, E. N., Stenager, E., Koch-Henriksen, N., Bronnum - Hansen, H., Hyllested, K., Jensen, K., & Bille-Brache, U. (1992). Suicide and multiple sclerosis: An epidemiological investigation. Journal of Neurology, Neurosurgery and Psychiatry, 55, 542 - 545.

Street, H., Sheeran, P., & Orbell, S. (1999). Conceptualising depression: An integration of 27 theories. Clinical Psychology and Psychotherapy, 6, 175-193.

Sullivan, M. J., Weinshenker, B., Mikail, S., & Edgley, K. (1995). Depression before and after diagnosis of multiple sclerosis. Multiple Sclerosis, 1, 104-108.

Surridge, D. (1969). An investigation into some psychiatric aspects of multiple sclerosis. British Journal of Psychiatry, 115, 749-764.

Sweeney, P. D., Anderson, K., Bailey, S. (1986). Attributional style in depression. A meta-analytic review. Journal of Personality and Social Psychology, 50, 974-991.

The IFN Multiple Sclerosis Study Group (1993). Interferon 1-b is effective in relapsing-remitting multiple sclerosis. I: Clinical results of a multi-center, randomised, double-blind, placebo-controlled trial. Neurology, 43, 655-661

Vleugels, L., Pfenning, L., Pouwer, F., Cohen, L., Ketelaer, P., Polman, C., Lankhorst, G., & Van der Ploeg, H. (1998). Psychological functioning in primary-progressive versus secondary progressive multiple sclerosis. British Journal of Medical Psychology, 71, 99-106.

Wade, D. T., & Langton-Hewer, R. (1987). Functional abilities after stroke: Measurement, natural history and prognosis. Journal of Neurology, Neurosurgery and Psychiatry, 50, 172-182.

Wagner, K. D., Berenson, A., Harding, O., & Joiner, T. (1998). Attributional style and depression in pregnant teenagers. American Journal of Psychiatry, 155, 1227-1233.

Warren, S., Warren, K. G., & Cockerill, R. (1991). Emotional stress coping in multiple sclerosis (MS) exacerbation. Journal of Psychosomatics Research, 35, 37-47.

Weiner, B. (1985). An attributional theory of achievement, motivation and emotion. Psychological Review, 92, 548-573.

Weissman, M. M., Sholomskas, D., Pottenger, M., Prusoff, B. A., & Locke, B. Z. (1977). Assessing depressive symptoms in five psychiatric populations: A validation study. American Journal of Epidemiology, 106, 203-214.

Wineman, N. M. (1990). Adaptation to multiple sclerosis: The role of social support, functional disability and perceived uncertainty. Nursing Research, 39, 294 - 299.

Wineman, N. M., Durand, E. J., & Steiner, R. P. (1994). A comparative analysis of coping behaviours in persons with multiple sclerosis or spinal cord injury. Research in Nursing and Health, 17, 185-194.

World Health Organisation (1992). International statistical classification of diseases and related health problems. (10th rev.). Geneva: Author.

Appendix A

Advertisement and follow up address correction in MS Matters

Calling you

MS and Mood

Clinical psychologists at the University of Surrey are conducting a research study looking at the way people with MS make sense of negative things that happened to them and the

impact of MS on mood.

To conduct this research they need volunteers with MS to fill in questionnaires to be sent via mail for return Freepost. It is hoped that this research will assist in identifying persons with MS at risk of developing depression in the future and help to develop better psychological therapies for this problem.

Anyone with MS is invited to participate in the study. If you

are willing to take part and/or would like further information about the research project, please put your name and address on the back of an envelope and send it to:

Ian I Kneebone,
School of Human Sciences, Freepost
12345, University of Surrey. (No
stamp required.)
Phone contact for the study
is 01483 782 360.
Please respond by 5 May 2000.

20

MS and mood: address correction

Apologies for an incorrect Freepost address given in *MS Matters 30*. 'Calling you' (page 20) invited people with MS to take part in a study looking at the impact of MS on mood.

It is hoped this research will help to develop better psychological therapies for depression. If you would like to take part by completing a questionnaire, please send your name and address by

13 June 2000 to:

FREEPOST,
Ian I Kneebone,
Dept. of Psychology,
University of Surrey,
Guildford, GU2 7XH.

(No stamp required.)

Tel: 01483-782 319

Responses already sent have been forwarded to the correct address.

Appendix B

CES-D, Centre for Epidemiological Studies Depression Scale

(CES-D) SCALE

Circle the number for each statement which best describes how often you felt or behaved this way during the past week.				
	<i>Rarely or none of the time (less than 1 day)</i>	<i>Some or a little of the time (1 to 2 days)</i>	<i>Occasionally or a moderate amount of time (3 to 4 days)</i>	<i>Most or all of the time (5 to 7 days)</i>
During the past week.....				
1. I was bothered by things that don't usually bother me.	0	1	2	3
2. I did not feel like eating: my appetite was poor.	0	1	2	3
3. I felt that I could not shake off the blues even with help from my family or friends.	0	1	2	3
4. I felt that I was just as good as other people.	0	1	2	3
5. I had trouble keeping my mind on what I was doing.	0	1	2	3
6. I felt depressed.	0	1	2	3
7. I felt that everything I did was an effort.	0	1	2	3
8. I felt hopeful about the future.	0	1	2	3
9. I thought my life had been a failure.	0	1	2	3
10. I felt tearful.	0	1	2	3
11. My sleep was restless	0	1	2	3
12. I was happy.	0	1	2	3
13. I talked less than usual.	0	1	2	3
14. I felt lonely.	0	1	2	3
15. People were unfriendly.	0	1	2	3

	<i>Rarely or none of the time (less than 1 day)</i>	<i>Some or a little of the time (1 to 2 days)</i>	<i>Occasionally or a moderate amount of time (3 to 4 days)</i>	<i>Most or all of the time (5 to 7 days)</i>
During the past week.....				
16. I enjoyed life.	0	1	2	3
17. I had crying spells	0	1	2	3
18. I felt sad.	0	1	2	3
19. I felt that people disliked me.	0	1	2	3
20. I could not 'get going'.	0	1	2	3

Appendix C

ASQ-S, Attributional Style Questionnaire - Survey

ASQ(S)

What causes things to happen to YOU?

Please try to imagine yourself in the following situations. If such a situation happened to you, what do you think might have caused it? While situations like these may have many causes, we want you to choose only one - THE MAIN CAUSE, THAT IS, WHAT MADE THIS SITUATION HAPPEN TO YOU.

Please write the main cause in the box after each situation. Next, answer two questions about the cause you provided. First, how likely is it that the main cause you gave will continue to affect you? Second, is the main cause that you gave something that just affects this situation, or does it affect other areas of your life?

To summarise, please:

1. Read each situation and vividly imagine it happening to you.
2. Decide what you feel would be the one main cause for the situation if it happened to you.
3. Write that main cause in the box provided.
4. Answer the two questions about the main cause.

Try to imagine yourself in the following situation...

1.you have problems sleeping.

A. Write the one main cause in the box below:

	1 2
--	--------

B. How likely is it that the cause you gave will continue to affect you? (Circle one number)

C. Is the cause you gave something that just affects sleeping, or does it affect other areas of your life? (Circle One Number)

2. ... you feel sick and tired most of the time.

A. Write the one main cause in the box below:

	1 2
--	--------

B. How likely is it that the cause you gave will continue to affect you? (Circle One Number)

C. Is the cause you gave something that just affects feeling sick and tired, or does it affect other areas of your life? (Circle One Number)

Try to imagine yourself in the following situation...

3. ...you have a serious injury.

A. Write the one main cause in the box below:

	1 2
--	--------

B. How likely is it that the cause you gave will continue to affect you? (Circle one number)

C. Is the cause you gave something that just affects injuries, or does it affect other areas of your life? (Circle One Number)

4. ... you can't find a job.

A. Write the one main cause in the box below:

	1 2
--	--------

B. How likely is it that the cause you gave will continue to affect you? (Circle One Number)

C. Is the cause you gave something that just affects not finding jobs, or does it affect other areas of your life? (Circle One Number)

Try to imagine yourself in the following situation...

5. ...you can't get the work done that others expect of you.

A. Write the one main cause in the box below:

	1
	2

B. How likely is it that the cause you gave will continue to affect you? (Circle one number)

C. Is the cause you gave something that just affects getting work done, or does it affect other areas of your life? (Circle One Number)

6. ... you are fired from your job.

A. Write the one main cause in the box below:

	1
	2

B. How likely is it that the cause you gave will continue to affect you? (Circle One Number)

C. Is the cause you gave something that just affects getting fired, or does it affect other areas of your life? (Circle One Number)

Try to imagine yourself in the following situation...

7. ...you don't help a friend who has a problem.

A. Write the one main cause in the box below:

	1
	2

B. How likely is it that the cause you gave will continue to affect you? (Circle one number)

C. Is the cause you gave something that just affects helping friends, or does it affect other areas of your life? (Circle One Number)

8. ... you have financial problems.

A. Write the one main cause in the box below:

	1
	2

B. How likely is it that the cause you gave will continue to affect you? (Circle One Number)

C. Is the cause you gave something that just affects financial problems, or does it affect other areas of your life? (Circle One Number)

Try to imagine yourself in the following situation...

9. ...you don't understand what your boss wants you to do.

A. Write the one main cause in the box below:

	1
	2

B. How likely is it that the cause you gave will continue to affect you? (Circle one number)

C. Is the cause you gave something that just affects understanding your boss, or does it affect other areas of your life? (Circle One Number)

10. ... a friend is very angry with you.

A. Write the one main cause in the box below:

	1
	2

B. How likely is it that the cause you gave will continue to affect you? (Circle One Number)

C. Is the cause you gave something that just affects friends being angry, or does it affect other areas of your life? (Circle One Number)

Try to imagine yourself in the following situation...

11. ...you are guilty of breaking the law.

A. Write the one main cause in the box below:

	1
	2

B. How likely is it that the cause you gave will continue to affect you? (Circle one number)

C. Is the cause you gave something that just affects breaking the law, or does it affect other areas of your life? (Circle One Number)

12. ... you have a serious argument with someone in your family.

A. Write the one main cause in the box below:

	1
	2

B. How likely is it that the cause you gave will continue to affect you? (Circle One Number)

C. Is the cause you gave something that just affects family arguments, or does it affect other areas of your life? (Circle One Number)

Appendix D

MS as 'cause of negative event coding'

ASQ(S) Coding: 'What Causes Things To Happen To You ?'

- 1 = MS cause
2 = Not MS cause

MS CAUSES:

'MS'

'SPASM'

'PAIN'

also: aching back/shoulders (something similar)

'FATIGUE'

also: lack of energy
 tiredness
 feeling tired
 need to keep resting (something similar)

'ACCIDENT' - falling over

I fell over

a fall

lost balance and fell over (something similar)

'DISABILITY RELATED'

not able to physically work

not able to physically help

cannot walk

wheelchair bound

unable to use hands (or similar statements to these)

Appendix E

MSAQ, MS Attributions Questionnaire

Try to imagine yourself in the following situation...

13. ...your MS symptoms worsen.

A. Write the one main cause in the box below:

	1
	2

B. How likely is it that the cause you gave will continue to affect you? (Circle one number)

C. Is the cause you gave something that just affects your MS symptoms, or does it affect other areas of your life? (Circle One Number)

Appendix F

GIMS, General Information MS Questionnaire

Sub No: _____
(Office use)

MS QUESTIONNAIRE

1. NAME.....
(Please print)

2. ADDRESS.....
.....
.....

3. DO YOU WISH YOUR GP TO BE NOTIFIED OF YOUR INVOLVEMENT IN THIS STUDY ?

YES 1 ☐

NO 2 ☐

(Please tick as appropriate)

IF YES, PLEASE GIVE GP NAME AND ADDRESS:

.....
.....
.....

I give permission for my involvement in the Multiple Sclerosis, Attributional Style and Depression research study to be disclosed to my General Practitioner.

Signed..... Date.....

Sub No: _____
(Office use)

4. DATE OF BIRTH _ _ _ _ _
5. SEX Male 1 ☐ Female 2 ☐
6. LIVING ARRANGEMENTS OWN HOME 1 ☐
FLAT 2 ☐
WARDEN ASSISTED 3 ☐
NURSING HOME 4 ☐
7. FORMAL EDUCATION _ _ YEARS
8. ARE YOU CURRENTLY WORKING? YES 1 ☐ No 2 ☐
9. WHAT IS (HAS BEEN) YOUR MAIN JOB OF WORK? _ _
.....
10. MARITAL STATUS MARRIED 1 ☐ NEVER MARRIED 2 ☐
DIVORCED 3 ☐ SEPARATED 4 ☐
WIDOWED 5 ☐
11. ETHNICITY WHITE 0 ☐ BLACK Caribbean 1 ☐
BLACK African 2 ☐ BLACK Other 3 ☐
INDIAN 4 ☐ PAKISTANI 5 ☐
BANGLADESHI 6 ☐ CHINESE 7 ☐
OTHER Specify 8 ☐
12. MS DIAGNOSIS: RELAPSING-REMITTING COURSE 1 ☐
CHRONIC - PROGRESSIVE 2 ☐
DON'T KNOW 3 ☐
13. IF PROGRESSIVE MS, DO YOU KNOW WHAT TYPE?
PRIMARY PROGRESSIVE 1 ☐
SECONDARY PROGRESSIVE 2 ☐
DON'T KNOW 3 ☐
NOT APPLICABLE 4 ☐
14. FIRST SYMPTOMS: 19__ DIAGNOSED: 19 __

15. LAST SYMPTOM FLARE UP: 1 WEEK 1 ☐ 1 MONTH 2 ☐
3 MONTHS 3 ☐ 6 MONTHS 4 ☐
12 MONTHS 5 ☐ OVER 12 MONTHS 6 ☐

16. DO YOU CURRENTLY HAVE ANY OTHER MAJOR PHYSICAL / MEDICAL CONDITION? YES 1 ☐ NO 2 ☐

IF YES, PLEASE DESCRIBE:
.....

17. HAVE YOU EVER HAD A NERVOUS OR EMOTIONAL PROBLEM THAT REQUIRED TREATMENT? YES 1 ☐ NO 2 ☐

IF YES, WHAT WAS THE PROBLEM ?
.....

18. WHO ARE/DID YOU SEE ABOUT THE PROBLEM? - - - - -

GP 1 ☐ PSYCHOLOGIST 2 ☐ COUNSELLOR 3 ☐
PSYCHIATRIST 4 ☐ COMMUNITY PSYCHIATRIC NURSE (CPN) 4 ☐
DON'T KNOW 5 ☐ OTHER 5 ☐ Please describe...

19. ARE YOU CURRENTLY ON ANY MEDICATION?

CURRENT MEDICATION	DOSAGE

A: Y1 N2 B: Y1 N2 C: Y1 N2 D: Y1 N2 E: Y1 N2

Appendix G

RLCQ, Recent Life Changes Questionnaire
and Life Change Weightings

Recent Life Changes Questionnaire

Please circle number 1 if the event described has happened to you in the last 12 months, 0 if it has not.

Life change event	Yes 1	No 0
Health		
An injury or illness which:		
1. Kept you in bed a week or more, or sent you to the hospital	1	0
2. Was less serious than above	1	0
3. Major dental work	1	0
4. Major change in eating habits	1	0
5. Major change in sleeping habits	1	0
6. Major change in your usual type and/or amount of recreation	1	0
Work		
1. Change to a new type of work	1	0
2. Change in your work hours or conditions	1	0
3. Change in your responsibilities at work:		
more responsibilities	1	0
fewer responsibilities	1	0
promotion	1	0
demotion	1	0
transfer	1	0
4. Troubles at work:		
with your boss	1	0
with co-workers	1	0
with persons under your supervision	1	0
other work troubles	1	0
5. Major business adjustments	1	0
6. Retirement	1	0
7. Loss of job:		
made redundant from work	1	0
fired from work	1	0
8. Correspondence course to help you in your work	1	0
Home and family		
1. Major change in living conditions (home improvements or a decline in your home or neighbourhood)	1	0
2. Change in residence:		
move within the same town or city	1	0
move to a different town, city or county	1	0
3. Change in family get-togethers	1	0
4. Major change in health or behaviour of family member (illness, accidents, drug or disciplinary problems)	1	0
5. Marriage	1	0
6. Pregnancy	1	0
7. Miscarriage or abortion	1	0
8. Gain of a new family member:		
birth of a child	1	0
adoption of a child	1	0
a relative moving in with you	1	0
9. Spouse beginning or ending work outside the home	1	0

Life change event	Yes 1	No 0
10. Child leaving home:		
to attend college / university	1	0
due to marriage	1	0
for other reasons	1	0
11. Change in arguments with spouse	1	0
12. In-law problems	1	0
13. Change in marital status of your parents:		
divorce	1	0
remarriage	1	0
14. Separation from spouse:		
due to work	1	0
due to marital problems	1	0
15. Divorce	1	0
16. Birth of grandchild	1	0
17. Death of spouse	1	0
18. Death of other family member:		
child	1	0
brother or sister	1	0
parent	1	0

Personal and social

1. Change in personal habits (your dress, friends, lifestyle etc.)	1	0
2. Beginning or ending school / college / university	1	0
3. Change of school / college / university	1	0
4. Change in political beliefs	1	0
5. Change in religious beliefs	1	0
6. Change in social activities (clubs, cinema, visiting etc.)	1	0
7. Vacation	1	0
8. New, close, personal relationship	1	0
9. Engagement to marry	1	0
10. Girlfriend or boyfriend problems	1	0
11. Sexual difficulties	1	0
12. "Falling out" of a close personal relationship	1	0
13. An accident	1	0
14. Minor violation of the law (traffic ticket etc)	1	0
15. Being held in jail	1	0
16. Death of a close friend	1	0
17. Major decision regarding your immediate future	1	0
18. Major personal achievement	1	0

Financial

1. Major change in finances:		
increased income	1	0
decreased income	1	0
investment and/or credit difficulties	1	0
2. Loss or damage of personal property	1	0
3. Moderate purchase (such as a car)	1	0
4. Major purchase (such as a home)	1	0
5. Foreclosure on a mortgage or loan	1	0

Recent Life Changes Questionnaire

Life change event	Weighting LCU
Health	
An injury or illness which: kept you in bed a week or more, or sent you to the hospital was less serious than above	74 44
Major dental work	26
Major change in eating habits	27
Major change in sleeping habits	26
Major change in your usual type and/or amount of recreation	28
Work	
Change to a new type of work	51
Change in your work hours or conditions	35
Change in your responsibilities at work:	
more responsibilities	29
fewer responsibilities	21
promotion	31
demotion	42
transfer	32
Troubles at work:	
with your boss	29
with co-workers	35
with persons under your supervision	35
other work troubles	28
Major business adjustment	60
Retirement	52
Loss of job:	
laid off from work	68
fired from work	79
Correspondence course to help you in your work	18
Home and family	
Major change in living conditions	42
Change in residence:	
move within the same town or city	25
move to a different town, city or state	47
Change in family get-togethers	25
Major change in health or behaviour of family member	55
Marriage	50
Pregnancy	67
Miscarriage or abortion	65
Gain of a new family member:	
birth of a child	66
adoption of a child	65
a relative moving in with you	59
Spouse beginning or ending work	46

Life change event	LCU
Child leaving home:	
to attend college	41
due to marriage	41
for other reasons	45
Change in arguments with spouse	50
In-law problems	38
Change in marital status of your parents:	
divorce	59
remarriage	50
Separation from spouse:	
due to work	53
due to marital problems	76
Divorce	96
Birth of grandchild	43
Death of spouse	119
Death of other family member:	
child	123
brother or sister	102
parent	100
Personal and social	
Change in personal habits	26
Beginning or ending school or college	38
Change of school or college	35
Change in political beliefs	24
Change in religious beliefs	29
Change in social activities	27
Vacation	24
New, close, personal relationship	37
Engagement to marry	45
Girlfriend or boyfriend problems	39
Sexual difficulties	44
"Falling out" of a close personal relationship	47
An accident	48
Minor violation of the law	20
Being held in jail	75
Death of a close friend	70
Major decision regarding your immediate future	51
Major personal achievement	36
Financial	
Major change in finances:	
increased income	38
decreased income	60
investment and/or credit difficulties	56
Loss or damage of person property	43
Moderate purchase	20
Major purchase	37
Foreclosure on a mortgage or loan	58

Appendix H

Occupational Coding

Classification of occupation

The most commonly used classification is the Register General's socio-economic grouping (SEG) which is often collapsed into a 6-category schema: -

Collapsed SEG	Descriptive definition	Containing SEG numbers
01	Professional	3, 4
02	Employers and managers	1, 2, 13
03 non-manual	Intermediate and junior non-manual	5, 6
04 manual	Skilled manual (incl. Foremen and supervisors) and own account non-professional	8, 9, 12, 14
05	Semi-skilled manual and personal service	7, 10, 15
06	Unskilled manual	11
09	Uncodable	9

OPCS (1973) The General Household Survey HMSO London

SEG	Code
Employer and managers in central + local government, industry, commerce etc. – large establishments (25 or more employees)	1
Employer and managers in industry, commerce etc. – small establishments (less than 25 employees)	2
Professional workers (self employed)	3
Professional workers (employee)	4
Intermediate non-manual workers	5
Junior non-manual workers	6
Personal service workers	7
Foremen and supervisors - manual	8
Skilled manual workers	9
Semi-skilled manual workers	10
Unskilled manual workers	11
Own account workers (other than professional)	12
Farmer - employers + manager	13
Farmer – own account	14
Agricultural workers	15
*Members of the armed forces	16
*SEG cannot be coded as insufficient information given to classify	17
No answer	9

* Under 6 category scheme members or ex members of the armed forces were coded as follows:

02 - Officers

04 - Non - Commissioned Officers

05 - Ratings

Appendix I

ICD 10, International classification of diseases and related health problems
10th revision based coding of other major physical conditions

Question 16 coding**'Other major physical/medical condition' based on ICD 10 CM (World Health****Organisation, 1992)**

- 01 Certain infectious and parasitic diseases
- 02 Neoplasm's
- 03 Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
- 04 Endocrine, nutritional and metabolic diseases
- 05 Mental and behavioural disorders
- 06 Diseases of the nervous system
- 07 Diseases of the eye and adnexa
- 08 Diseases of the ear and mastoid process
- 99 Diseases of the circulatory system
- 10 Diseases of the respiratory system
- 11 Diseases of the digestive system
- 12 Diseases of the skin and subcutaneous tissue
- 13 Diseases of the musculoskeletal system and connective tissue
- 14 Diseases of the genitourinary system
- 15 Pregnancy, childbirth and the puerperium
- 16 Certain conditions originating in the prenatal period
- 17 Congenital malformations, deformations and chromosomal abnormalities
- 18 Symptoms signs and abnormal clinical and laboratory findings not elsewhere classified
- 19 Injury poisoning and certain other consequences of external causes
- 20 External causes of morbidity and mortality

Appendix J

DSM IV, Diagnostic and statistical manual of mental disorders,
based coding of 'nervous and emotional problems'

Nervous or Emotional Problem Coding

DSM IV

(American Psychiatric Association, 1994) based.

00	No Disorder	
01	Attention - Deficit	Hyperactivity
02	Dementia	Alzheimer's Disease, Vascular Dementia
03	Substance Related Disorder	Alcohol, Cannabis, Hallucinogens, Heroin, Other Drug Dependence
04	Schizophrenia and other Psychotic Disorders	Paranoid, Delusional Disorder, Drug Induced Psychosis
05	Mood Disorders	Depression, Bipolar Disorder (Manic Depression)
06	Anxiety Disorders	Agoraphobia, phobia, obsessive-compulsive disorders, post-traumatic stress disorder
07	Eating Disorder	Anorexia, Bulimia
08	Impulse Control Disorder	Kleptomania, Anger, Trichotillomania Pyromania
10	Bereavement	
11	Adjustment Disorder	Depressed/Anxious after significant event e.g. Marriage Break-Up

Appendix K

Medication coding

Drugs possibly associated with or used to treat depression in persons with MS

CATEGORY	GENERIC NAME	BRAND NAME (if appropriate)
<u>A</u>		
ANXIOLYTICS	Diazepam	Valium
	Alprazolam	Xanax
	Lorazepam	
	Oxazepam	
<u>B</u>		
β - INTERFERONS	β - Interferon 1a	Avonex
		Rebif
	β - Interferon 1b	Betaferon
<u>C</u>		
STEROIDS	Predisolone	Deltacortil
	Dexamethasone	Deldron
<u>D</u>		
ANTI DEPRESSANTS	Amitriptyline	Triptzol
		Lentizol
		(Triptafen-M & Triptafen contains Amitriptyline)
	Clomipramine	Anafril
	Dothiepin	Prothiadine
	Lofepramine	Gamanil
	Trimipramine	Surmontil
	Maprotiline	Ludiomil
	Mianserin	
	Trazodone	Molipaxin
	Viloxazine	Vivalan
	Citalopram	Cipramil
	Fluoxetine	Prozac
	Paroxetine	Seroxat
	Sertraline	Lustral
	Venlafaxine	Efexor
	Mirtazapine	Zispin
	Reboxetine	Edronax
<u>E</u>		
MUSCLE RELAXANTS	Baclofen	Lioresal
	Dantrolene	Dantrium
	Tizandine	Zanaflex

Appendix L

BI, Barthel Index

Barthel Index

Please circle the number which best indicates your current level of function.

Activity	Scoring
1. BOWEL control	10 = continent 5 = occasional accident 0 = incontinent
2. BLADDER control	10 = continent 5 = occasional accident 0 = incontinent/catheterised and unable to manage
3. PERSONAL toilet (wash face, comb hair, shave, clean teeth)	5 = independent 0 = need help
4. FEEDING	10 = independent 5 = need some help (cutting up food, spreading butter etc.) 0 = dependent
5. TOILET (getting on/off, handling clothes, wipe, flush)	10 = independent 5 = need some help 0 = dependent
6. WALKING on level surface	15 = independent (may use aid) 10 = walk with help of another person (verbal/physical) 5 = independent (in wheelchair) 0 = unable
7. TRANSFER (chair to bed and vice versa)	15 = independent 10 = minimal help (verbal or physical) 5 = can sit, major help 0 = unable
8. DRESSING (all fasteners, etc.)	10 = independent (including zips, buttons etc.) 5 = need help but do at least half 0 = dependent
9. STAIRS	10 = independent 5 = need help (verbal/physical) 0 = unable
10. BATHING	5 = independent 0 = dependent

Appendix M

FASQ, Functional Assessment Questionnaire

Functional Assessment Screening Questionnaire

Please circle the number which corresponds with generally how much ease or difficulty you encounter in trying to perform each of the tasks listed:-

0 = Someone else does this for you or you choose not to do it.

1 = Although you attempt to perform the task, it is too difficult to do.

2 = The activity can still be done but there is a lot of difficulty in attempting it.

3 = You have some difficulty performing the task but you can still manage it well enough.

4 = You have no difficulty in performing the task.

Personal Care

1. Cutting your toenails

0 1 2 3 4

2. Getting up from a low seat

0 1 2 3 4

3. Climbing stairs

0 1 2 3 4

Instrumental

4. Washing windows or walls

0 1 2 3 4

5. Doing grocery shopping

0 1 2 3 4

6. Handling your personal finances

0 1 2 3 4

Transportation

7. Driving an automobile

0 1 2 3 4

8. Boarding and exiting from a bus

0 1 2 3 4

Leisure

9. Playing your favourite sports

0 1 2 3 4

10. Carrying on a conversation

0 1 2 3 4

11. Doing social activities with others

0 1 2 3 4

Occupational

12. Concentrating for at least 15 minutes

0 1 2 3 4

13. Sitting for long periods

0 1 2 3 4

14. Standing for long periods

0 1 2 3 4

15. Reaching, grasping, pinching

0 1 2 3 4

Appendix N

MSAI, MS Attitudes Index

MS ATTITUDES INDEX

Please circle the number which indicates how much you agree with the statement.

1. *MS is controlling my life.*

1	2	3	4
Strongly disagree	Disagree	Agree	Strongly agree

2. *I would feel helpless if I couldn't rely on other people for help with my MS.*

1	2	3	4
Strongly disagree	Disagree	Agree	Strongly agree

3. *No matter what I do or how hard I try I just can't seem to get relief from my MS symptoms.*

1	2	3	4
Strongly disagree	Disagree	Agree	Strongly agree

4. *I am coping effectively with my MS.*

1	2	3	4
Strongly disagree	Disagree	Agree	Strongly agree

5. *It seems as though fate and other factors beyond my control affect my MS.*

1	2	3	4
Strongly disagree	Disagree	Agree	Strongly agree

Appendix O

MS Control

MS CONTROL

How much control do you feel you have over the daily symptoms of your illness?

1	2	3	4
No control-			Almost complete control

Appendix P

PVS, Psychological Vulnerability Scale

PVS

Please circle the number which best represents the degree to which you consider a statement describes you:-

1. If I don't achieve my goals, I feel like a failure as a person

1 2 3 4 5

*Does not describe
me at all*

*Describes me
very well*

2. I feel entitled to better treatment from others than I generally receive

1 2 3 4 5

*Does not describe
me at all*

*Describes me
very well*

3. I am frequently aware of feeling inferior to other people

1 2 3 4 5

*Does not describe
me at all*

*Describes me
very well*

3. I need approval from others to feel good about myself

1 2 3 4 5

*Does not describe
me at all*

*Describes me
very well*

5. I tend to set my goals too high and become frustrated trying to reach them

1 2 3 4 5

*Does not describe
me at all*

*Describes me
very well*

6. I often feel resentful when others take advantage of me

1 2 3 4 5

*Does not describe
me at all*

*Describes me
very well*

Appendix Q

University of Surrey, Ethics Committee letter

Uni**S**

14 June 1999

Mr I Kneebone
 Haslemere and District Community Hospital
 (Psychology Dept.)
 Church Lane
 Haslemere
 Surrey
 GU27 2BJ

**University
 of Surrey**

Guildford
 Surrey GU2 5XH, UK
 Telephone
 +44 (0)1483 300800
 Facsimile
 +44 (0)1483 300803

Registry

Dear Mr Kneebone

Attributional style and symptoms of depression in persons with Multiple Sclerosis. (ACE/99/30/Psych)

I am writing to inform you that the Advisory Committee on Ethics has considered the above protocol under its 'fast track' procedure and has approved it on the understanding that the Ethics Guidelines are observed.

The letter of approval relates only to the study specified in your research protocol (ACE/99/30/Psych). The Committee should be notified of any changes to the proposal, any adverse reactions and if the study is terminated earlier than expected (with reasons). I enclose a copy of the Ethics Guidelines for your information.

Yours sincerely

Helen Schuyleman (Mrs)
 Secretary, University Advisory Committee on Ethics

cc: Professor L J King, Chairman, ACE
 Dr Emma Dunmore, Supervisor, Psychology

Enc.

Appendix R

Cover letter for questionnaire pack

Haslemere and District Community Hospital

PSYCHOLOGY DEPARTMENT
Research Line 01483 782319

***MS and Mood Study: A joint project of The University
of Surrey and Surrey Hampshire Borders NHS***

**Surrey
Hampshire
Borders**
NHS Trust

Haslemere and
District Community
Hospital
Church Lane,
Haslemere,
Surrey GU27 2BJ

Tel: 01483 782000
Fax: 01483 782398

Date

Dear

Thank you for your interest in the research study being undertaken through the Surrey Hampshire Borders NHS Trust in conjunction with the Department of Psychology, University of Surrey.

If you still wish to consider participating in the research, please read the attached information sheet. If you decide to participate please sign the consent form, complete the questionnaires and return them in the freepost envelope provided. Please return them by If you do not wish to participate please just dispose of the material.

Thank you for your time.

Yours sincerely

Ian Kneebone
Clinical Psychologist
Principal Investigator

Appendix S

Study information sheet

Haslemere and District Community Hospital

**Psychology Department
Research Line (01483 782319)**

**Surrey
Hampshire
Borders**

NHS Trust

Haslemere and
District Community
Hospital
Church Lane,
Haslemere,
Surrey GU27 2BJ

Tel: 01483 782000
Fax: 01483 782398

INFORMATION SHEET: MS AND MOOD, DEPRESSION AND ATTRIBUTIONAL STYLE STUDY

Thank you for considering participation in this research study.

The study is designed to look at the relationship between attributional style for negative events, (what people consider are responsible for the less good things in their lives) and symptoms of depression/low mood in persons with Multiple Sclerosis (MS). It is hoped the research will assist in identifying persons with MS at risk of developing depression and support the use of certain types of psychological treatment in the management of this problem.

It is important for anyone with MS to participate in the study, even if they have not experienced any significant despondence.

The study involves filling in some questionnaires and should only take around 15 to 20 minutes to complete. You will be asked to give some background information (including on disability), provide details about your attitudes to certain things and describe how you have been feeling lately. You may be asked to fill in similar questionnaires at one and two year follow-ups.

If you do decide to take part all the information you provide will be treated confidentially. Your name and address will be stored separately from your responses to the study questionnaires and you will not personally be identified in any publication arising from the research.

There is absolutely no need to answer any questions you do not wish to answer. You are free to leave the study at any time, without having to give a reason. Declining participation will not affect your receipt of treatment.

The MS Society, who have assisted by advertising the research, would like to be informed of who participates. This is to help protect against their members being over researched. This is entirely optional and you can indicate your whether you wish this to occur on the consent form. Only your name and address would be provided to the society.

If you would like any more information please contact me at the above address.

Yours sincerely

Ian Kneebone
Clinical Psychologist
Principal Investigator

Appendix T
Study Consent Form

Haslemere and District Community Hospital**Surrey
Hampshire
Borders****NHS** Trust*MS and Mood Study: A joint project of The University
of Surrey and Surrey Hampshire Borders NHS*Haslemere and
District Community
Hospital
Church Lane,
Haslemere,
Surrey GU27 2BJTel: 01483 782000
Fax: 01483 782398**CONSENT TO RESEARCH FORM****NAMES OF PRINCIPAL INVESTIGATORS:**

Mr Ian Kneebone / Dr Emma Dunmore

ETHICS COMMITTEE APPLICATION NUMBER: ACE/99/30/Psych**HAVE YOU READ THE INFORMATION SHEET?:** YES
(Please ring as appropriate)**HAVE YOU RECEIVED ENOUGH INFORMATION
ABOUT THE STUDY?:** YES**DO YOU UNDERSTAND THAT YOU ARE FREE
TO LEAVE THE STUDY
AT ANY TIME?
WITHOUT HAVING TO GIVE A REASON
FOR LEAVING?** YES**DO YOU UNDERSTAND THAT NOT
PARTICIPATING WILL MAKE NO
DIFFERENCE TO ANY TREATMENT YOU
RECEIVE?** YES**DO YOU AGREE TO TAKE PART IN THE
QUESTIONNAIRE STUDY?** YES**DO YOU WISH THE MS SOCIETY TO BE
INFORMED OF YOUR PARTICIPATION ?** YES / NO

Signature

Name: (in block capitals)

Date:

Sub No: _____ (Office use)

Appendix U

Letter to GP

Haslemere and District Community Hospital

PSYCHOLOGY DEPARTMENT
DIRECT LINE: 01483 782360

*MS and Mood Study: A joint project of The University of Surrey and
Surrey Hampshire Borders NHS*

**Surrey
Hampshire
Borders**

NHS Trust

Haslemere and
District Community
Hospital
Church Lane,
Haslemere,
Surrey GU27 2BJ

Tel: 01483 782000
Fax: 01483 782398

Date

Dear

Re:

The above mentioned has requested you be informed they have agreed to participate in a research study considering **MS, DEPRESSION AND ATTRIBUTIONAL STYLE** and outlined below. They have been asked to complete some questionnaires.

The study is designed to look at the relationship between attributional style for negative events, (what people consider are responsible for the less good things in their lives) and symptoms of depression/low mood in persons with Multiple Sclerosis (MS). It is hoped the research will assist in identifying persons with MS at risk of developing depression and support the use of certain types of psychological treatment in the management of this problem.

It is important for anyone with MS to participate in the study, even if they have not experienced any significant despondence.

If you would like any more information please contact me at the above address.

Yours sincerely

Ian Kneebone
Clinical Psychologist
Principal Investigator

Appendix V

Letter to participants exhibiting significant depressive symptoms

Haslemere and District Community Hospital

Psychology Department
Research Line 01483 782319

*MS and Mood Study: A joint project of The University
of Surrey and Surrey Hampshire Borders NHS*

**Surrey
Hampshire
Borders**

NHS Trust

Haslemere and
District Community
Hospital
Church Lane,
Haslemere,
Surrey GU27 2BJ

Tel: 01483 782000
Fax: 01483 782398

Date

Dear

Thank you for completing the questionnaires for our study considering attitudes and mood in persons with multiple sclerosis.

Your score on one of the questionnaires indicates that you may be experiencing significant depression. If you are concerned by this we suggest you contact your GP who may be able to help.

As previously you may contact me with any queries about this or any other aspect of the study at the above address.

Yours sincerely

Ian Kneebone
Clinical Psychologist
Principal Investigator

Appendix W

Analyses of covariance for negative attributional style (COMP) by group with FASQ scores as the covariate

Appendix W

Analysis of Covariance for Negative Attributional Style (COMP) by Group with FASQ Scores as the Covariate

All groups

Source	Type III Sum of Squares	df	Mean Square	F	η^2
Corrected Model	38.60	3	12.87	21.09***	.20
Intercept	722.125	1	722.125	1183.61***	.82
FASQ	4.49	1	4.49	7.35**	.03
GROUP	25.66	2	12.83	21.03***	.14
Error	157.41	258	.61		
Total	7318.41	262			
Corrected Total	196.01	261			

Low depression versus Moderate depression

Source	Type III Sum of Squares	df	Mean Square	F	η^2
Corrected Model	15.04	2	7.52	12.12***	.11
Intercept	444.89	1	444.89	716.91***	.79
FASQ	1.31	1	1.31	2.11	.01
GROUP	11.82	1	11.82	19.05***	.09
Error	121.01	195	.62		
Total	5196.2	198			
Corrected Total	136.06	197			

Low depression versus High depression

Source	Type III Sum of Squares	df	Mean Square	F	η^2
Corrected Model	36.34	2	18.17	27.21***	.25
Intercept	493.86	1	493.86	739.59***	.82
FASQ	4.04	1	4.04	6.05*	.04
GROUP	22.71	1	22.71	34.01***	.17
Error	107.51	161	.67		
Total	4492.94	164			
Corrected Total	143.85	163			

Moderate depression versus High depression

Source	Type III Sum of Square	df	Mean Square	F	η^2
Corrected Model	10.21	2	5.11	9.51***	.11
Intercept	498.99	1	498.99	929.13***	.85
FASQ	4.53	1	4.53	8.4**	.05
GROUP	3.92	1	3.92	7.31**	.04
Error	85.39	159	.54		
Total	4947.64	162			
Corrected Total	95.60	161			

Note. FASQ = Functional Assessment Screening Questionnaire. Low depression, $n = 100$, Moderate depression, $n = 98$, High depression, $n = 64$.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Appendix X

Analyses of variance with planned comparisons for attributional style measures, by group

Appendix X

Analysis of Variance with Planned Comparisons for Stability of Attribution for Negative Events (STAB) by Group

Source	Sum of Squares	df	Mean Square	F
Between groups	30.95	2	15.47	20.67***
Within groups	231.35	309	0.75	
Total	262.30	311		

Note. Contrasts: Low depression versus Moderate depression, $t(309) = -4.09$, $p < .001$; Moderate depression versus High depression, $t(309) = -2.41$, $p < .05$; Low depression versus High depression, $t(309) = -6.23$, $p < .001$.
*** $p < .001$.

Analysis of Variance with Planned Comparisons for Globality of Attribution for (GLOB) Negative Events by Group

Source	Sum of Squares	df	Mean Square	F
Between groups	53.56	2	26.78	32.73***
Within groups	252.82	309	0.82	
Total	306.38	311		

Note. Contrasts: Low depression versus Moderate depression, $t(309) = -4.34$, $p < .001$; Moderate depression versus High depression, $t(309) = -3.93$, $p < .001$; Low depression versus High depression, $t(309) = -8.03$, $p < .001$.
*** $p < .001$.

Appendix Y

Intercorrelations for all variables included in the study.