

University of Southampton Research Repository ePrints Soton

Copyright © and Moral Rights for this thesis are retained by the author and/or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder/s. The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

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

AUTHOR (year of submission) "Full thesis title", University of Southampton, name of the University School or Department, PhD Thesis, pagination

UNIVERSITY OF SOUTHAMPTON
FACULTY OF MEDICINE, HEALTH AND LIFE SCIENCES
School of Psychology

**Experiential Avoidance:
Associations with Childhood Trauma,
Internalised Shame, Psychopathology
and Maladaptive Behaviours**

by

Rebecca Barrett, BSc, MSc.

Thesis for the Degree of Doctorate in Clinical Psychology

Volume I of I

May 2010

Word Count: 19,938

DISCLAIMER

I the undersigned confirm that the work I have presented as my thesis is entirely my own. Reference to, quotation from, and discussion of the work of any other person has been correctly acknowledged within the work in accordance with University guidelines for production of a thesis.

Rebecca Barrett

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF MEDICINE, HEALTH AND LIFE SCIENCES

SCHOOL OF PSYCHOLOGY

Thesis for the Degree of Doctorate in Clinical Psychology

EXPERIENTIAL AVOIDANCE: ASSOCIATIONS WITH CHILDHOOD

TRAUMA, INTERNALISED SHAME, PSYCHOPATHOLOGY AND

MALADAPTIVE BEHAVIOURS

by Rebecca Barrett

Research has consistently demonstrated a relationship between negative childhood experiences and the development of psychological difficulties in adulthood. Yet, it is only recently that the potential mechanisms underlying this relationship have been investigated. An increasing number of studies indicate heightened levels of experiential avoidance as potentially accounting for this relationship. The current review presents research, spanning the last five years, that describes associations and mediating relationships between experiential avoidance, psychopathology and maladaptive behaviours. However, whilst recent advances in the measurement of experiential avoidance, and newly emerging research, have broadened psychological understanding of this construct, conceptual and methodological difficulties within this field highlight the need for further research to be undertaken.

The empirical paper explores the potential contribution of experiential avoidance, childhood trauma and internalised shame in pathways to becoming and remaining homeless. In a sample of 79 homeless adults, a significant relationship between childhood trauma and experiential avoidance was found which was mediated by internalised shame. These findings indicate that experience of childhood trauma is associated with a greater tendency to avoid unwanted thoughts and feelings, which in turn is associated with greater levels of internalised shame. They further provide support for the role of interacting psychological factors in pathways to homelessness. Clinical implications resulting from this study are discussed, and directions for further research are indicated.

Contents

Literature Review

Abstract.....	15
1. Introduction	17
1.1 Aims and Scope of Literature Review	18
1.2 Literature Search Strategy	19
1.3 Overview of the Narrative Literature Review	26
2. The Construct of Experiential Avoidance	27
2.1 What is Experiential Avoidance?	27
2.2 Theoretical Approaches to Understanding Experiential Avoidance.....	28
2.3 The Development of Maladaptive Experiential Avoidance Behaviours	30
2.4 Paradoxical Effects of Experiential Avoidance.....	31
3. The Measurement of Experiential Avoidance.....	33
3.1 The Acceptance and Action Questionnaire (AAQ).....	33
3.2 Experimental Approaches Measuring Experiential Avoidance.....	37

4. Experiential Avoidance and its Association with Psychopathology and Maladaptive Behaviours.....	42
4.1 Overview.....	42
4.2 The Relationship between Experiential Avoidance and Psychopathology	43
4.2.1 <i>PTSD and Trauma</i>	43
4.2.2 <i>Depression</i>	49
4.2.3 <i>Anxiety</i>	53
4.3 The Relationship between Experiential Avoidance and Maladaptive Behaviours	54
4.3.1 <i>Substance Misuse</i>	55
4.3.2 <i>Deliberate Self Harm (DSH)</i>	58
4.3.3 <i>Trichotillomania</i>	59
4.4 Summary	61
5. Critical Review and Discussion	62
5.1 Limitations of the Experiential Avoidance Literature and the Considerations for the Future Research.....	62
5.2 Implications for Treatment	66

6. Conclusion	69
References.....	70
 Empirical Paper	
Abstract	96
1. Introduction	98
1.1 Overview.....	98
1.2 Definition of Homelessness	99
1.3 Aetiology of Homelessness	99
1.4 Pathways to Homelessness.....	101
1.5 Childhood Trauma and Experiential Avoidance.....	102
1.6 Experimental Approaches in the Measurement of Experiential Avoidance.....	104
1.7 The Relationship Between Childhood Trauma and Experiential Avoidance.....	105
1.7.1 <i>The Role of Emotional Non Acceptance</i>	105
1.7.2 <i>Internalised Shame</i>	106

1.8 Summary	108
2 Method	110
2.1 Design	110
2.2 Sample	110
2.2.1 <i>Sampling Strategy</i>	110
2.2.2 <i>Justification of Sample Size</i>	110
2.2.3 <i>Inclusion/Exclusion Criteria</i>	111
2.3 Participant Characteristics	111
2.3.1 <i>Demographic Characteristics</i>	111
2.4 Measures	113
2.4.1 <i>Child Abuse and Trauma Scale</i>	113
2.4.2 <i>Internalised Shame Scale</i>	114
2.4.3 <i>The Acceptance and Action Questionnaire</i>	115
2.4.4 <i>The Visual Probe Task</i>	116
2.4.5 <i>Hospital Anxiety and Depression Scale</i>	118
2.5 Procedure	119
2.5.1 <i>Approach</i>	119
2.5.2 <i>Recruitment</i>	120

2.5.3	<i>Data Collection</i>	121
2.5.4	<i>Ethical Considerations</i>	122
2.6	Analysis Strategy	123
3	Results	124
3.1	Preliminary Analyses	124
3.2	Descriptive Analyses	125
3.2.1	<i>Childhood Trauma</i>	125
3.2.2	<i>Internalised Shame</i>	126
3.2.3	<i>Experiential Avoidance</i>	127
3.2.4	<i>State Mood</i>	127
3.3	Correlations between Childhood Trauma, Internalised Shame, Experiential Avoidance and State Mood.....	129
3.3.1	<i>Childhood Trauma and Experiential Avoidance</i>	129
3.3.2	<i>Childhood Trauma and Internalised Shame</i>	129
3.3.3	<i>Internalised Shame and Experiential Avoidance</i>	130
3.3.4	<i>Experiential Avoidance: Correlations between the AAQ and VPT</i>	130
3.3.5	<i>State Mood: Correlations between Anxiety and Depression and all other Study Variables</i>	130

3.4 Mediation Analyses.....	132
4 Discussion.....	136
4.1 Interpretation of Key Findings.....	136
4.2 Clinical Implications	140
4.3 Strengths and Limitations	143
4.4 Directions for Further Research.....	147
4.5 Conclusion.....	150
References.....	152
Appendices.....	176
A Instructions to Authors: Clinical Psychology Review	177
B Instructions to Authors: Journal of Consulting and Clinical Psychology	181
C Demographics Form	187
D IAPS Images used in the VPT	189
E Study Poster	191
F Study Flyer	193
G Information Sheet	196
H Screening Form	199

I	School of Psychology Ethics Committee Approval Letter	201
J	Research and Development Committee Approval Letter.....	203
K	Debriefing form	205
L	Reaction Time and Data and Formula for Data Conversion	207

List of Tables

		Page No.
Table 1	Empirical Studies Examining the Relationship between Experiential Avoidance, Psychopathology and Maladaptive Behaviours	20-25
Table 2	Demographic Characteristics of the final sample	112
Table 3	IAPS Images used in the VPT	190
Table 4	Reaction time data for VPT	208
Table 5	Descriptive Statistics of Childhood Trauma, Internalised Shame, Experiential Avoidance and Mood	128
Table 6	Pearson's Correlation Coefficients between Research Variables	131
Table 7	Regression Analyses to Test Mediation	135

List of Figures

	Page No.
Figure 1 Mediated Model	132
Figure 2 Mediated Model with Standardised Coefficients	134
Figure 3 Mediated Model with Standardised Coefficients and Statistical Controls	134

Acknowledgements

There are many people that I would like to acknowledge. Firstly, I would like to extend my thanks and gratitude to my supervisor, Dr Nick Maguire whose insight, guidance and support has helped me immensely throughout the completion of this thesis. I would also like to thank Dr Matt Garner for the methodological and statistical advice provided throughout the conceptual, implementation and analytical stages of this research. Thanks also to Helen Bolderstone for her advice and expertise regarding the construct and measurement of experiential avoidance, and to Jin Zhang for customising the Visual Probe Task used in this research. Special thanks also go to my co-researchers, Helen Stanley and Charlotte Couldrey, for the support and friendship provided throughout this project.

Further to this, my huge thanks go to all of the staff at the homeless organisations in Southampton who agreed to take part in this research study, including those at Patrick House Hostel, Southampton Street Hostel, The Salvation Army based at the Booth Centre and St. James' Intensive Service. Thank you for the enthusiasm you showed in this research and for your support in recruiting participants for this study. Thank you also for the generous hospitality shown during the data collection stage and for the contributions made regarding practical and ethical considerations when working with homeless individuals. I would also like to show my heartfelt appreciation to all of the participants who volunteered their time to take part in this study. Your help has been invaluable and I hope that the findings of

this research will add to the growing evidence base of literature highlighting the importance of providing psychological services to homeless individuals.

My greatest thanks are offered to my wonderful family and friends, particularly my mother and father, for providing me with their unwavering support and encouragement throughout all my years of studying. Finally, and most importantly, I would like to thank my partner Stephen for your unfailing, unconditional love and support over the years. I am truly grateful for the patience and understanding you have always shown me (and for all of those cups of tea and hugs!!)

Thank you.

**Experiential avoidance and its association with
psychopathology and maladaptive behaviours:**

An updated review of the literature.

Rebecca Barrett, BSc, MSc

University of Southampton, School of Psychology, Shackleton Building, Southampton, SO17 1BJ

Tel: +44(0)23 8059 5575. Fax: +44(0)23 8059 2588. Email: rlb105@soton.ac.uk

Prepared for submission to Clinical Psychology Review

(See Appendix A for Instructions to Authors)

Abstract

Experiential avoidance is widely acknowledged as a phenomenon that occurs when a person is unwilling to experience certain negative experiences and, subsequently, makes purposeful attempts to avoid or alter the frequency, duration or form of such experiences. In the last two decades, a plethora of research evidence has emerged highlighting an association between excessive or chronic efforts to use experiential avoidance as a coping mechanism and the development and maintenance of a wide range of psychopathological conditions and maladaptive behaviours. This narrative literature review evaluates empirical literature generated from the last five years, building on a previous review in the area, which explores the relationship between experiential avoidance, psychopathology and maladaptive behaviours. The present review advances psychological understanding of the construct and its associations with emotional disorders and clinical problems by providing a critical and updated review of newly emerging literature. It further highlights experiential avoidance as a predictor for psychological distress in adulthood, and a mediator in the relationship between difficult childhood/adult experiences and later psychopathology. Consideration is also given to emerging experimental approaches in the measurement of this construct. The studies presented in this review highlight the need for acceptance-based psychotherapeutic interventions aimed at reducing an individuals' unwillingness to remain in contact with potentially distressing or aversive experiences. The review also highlights numerous

methodological limitations and conceptual issues that further research must seek to address.

Keywords: Experiential Avoidance; Psychopathology; Maladaptive Behaviours

1. Introduction

For many years, researchers have acknowledged the relationship between early childhood experiences and later psychological difficulties in both clinical and non-clinical populations. However, in the last decade, research attention has started to explore potential factors contributing to this relationship as the relationship between the two is not always direct. Indeed, some individuals with early traumatic experiences fail to develop psychological difficulties (Merrill, Thomsen, Sinclair, Gold & Milner, 2001), which suggests that there may be some individual difference characteristics underlying this relationship.

Experiential avoidance, a phenomenon which occurs when an individual is unwilling to remain in contact with potentially distressing or aversive experiences and attempts to alter the frequency, form or situational sensitivity of these experiences, is suggested to be one such individual difference (Hayes, Wilson, Gifford, Follette & Strosahl, 1996). In the last two decades, experiential avoidance has become an area of great research interest, with numerous research studies and theoretical orientations such as Acceptance and Commitment Therapy (ACT; Hayes, Strosahl & Wilson, 1999) identifying this construct as being crucial in the development and maintenance of psychopathology and maladaptive behaviours. As a result, the modification of experiential avoidance strategies is considered essential in the development and delivery of effective prevention and intervention strategies for at-risk populations. In light of the vast quantities of research emerging in the last ten years, that have explored experiential avoidance and its association with

psychopathology and maladaptive behaviours, updated critical reviews of the literature are necessary to help determine the relevance and applicability of this construct to different populations and psychological conditions. In 2007, Chawla and Ostafin published an important empirical review of the evidence for experiential avoidance as a functional dimension in psychopathology. This review focused on research evidence published between 1999 and 2006 and was successful in updating the pioneering research of Hayes et al., (1996). It further provided suggestions for future research focusing on the utility of experiential avoidance in understanding psychopathology. However, despite making a valuable contribution to current understanding of experiential avoidance, this review was limited by its failure to consider experimental approaches in the measurement of this construct, an emerging link between experiential avoidance and depression, and the clinical implications resulting from heightened tendencies towards experiential avoidance.

1.1 Aims and Scope of the Narrative Literature Review

The present narrative review aims to address such gaps in the literature whilst introducing new empirical research that both strengthens and updates those studies presented in Chawla and Ostafin's review. To this end, a review of studies undertaken between 2006 and 2010, which focus on the experiential avoidance construct and its relationship to both psychopathology and maladaptive behaviours, will be provided. In particular, updated literature regarding the proposed relationship between experiential avoidance and post

traumatic stress disorder (PTSD), anxiety, substance misuse and self harm will be critically discussed.

1.2 Literature Search Strategy

To locate relevant studies, the following electronic bibliographic databases were searched: PsychINFO, PsycARTICLES, Web of Knowledge, CINAHL, and MEDLINE. The search terms included experiential avoidance, emotional avoidance, cognitive avoidance, behavioural avoidance, psychopathology, maladaptive behaviours, and ACT. Searches were limited to English language peer reviewed papers conducted over the past 5 years. Reference lists from relevant studies were closely examined to help identify further relevant articles for inclusion in this review. In line with Chawla and Ostafin's (2007) empirical review, studies on the process and outcomes related to ACT, which failed to specifically address experiential avoidance, were excluded. (For details of these studies, see Hayes, Luoma, Bond, Masuda, & Lillis, 2006). A separate literature review spanning the last 15 years exploring the relationship between experiential avoidance and depression was also conducted. This step was deemed necessary given that Chawla and Ostafin (2007) failed to include this area of research in their empirical review, and the findings generated offer an important contribution to our understanding of the nature of experiential avoidance.

A summary of the results elicited from this literature search are presented in Table 1.

Table 1: Empirical Studies Examining the Relationships between Experiential Avoidance, Psychopathology and Maladaptive Behaviours

Study	Participants	Origin	Research Variable(s)	Research Design	Research Measures	Summary of Results
Holowka, Salters-Pedneault & Roemer (2005)	402 American undergraduate students (non-clinical sample)	USA	Emotional Avoidance; Cognitive Avoidance; Rumination and Depression	Correlational	Response Styles Questionnaire; Difficulties in Emotion Regulation Scale; The White Bear Suppression Inventory and Depression Anxiety and Stress Scales	Experiential avoidance and rumination were both significant predictors of depressive symptomatology. Rumination, however predicted depressive symptoms over and above the variance accounted for by indicators of experiential avoidance
Marx and Sloan (2005)	185 American undergraduate students (non-clinical sample)	USA	Peritraumatic Dissociation; Experiential Avoidance and PTSD symptom severity.	Correlational	AAQ(9-items); The Post-Traumatic Stress Diagnostic Scale and The Peritraumatic Dissociative Experiences Questionnaire- Self Report	Peritraumatic dissociation and experiential avoidance significantly predicted PTSD symptom severity. Experiential avoidance however, predicted PTSD symptom severity over and above baseline PTSD symptoms.
Brotchie et al., (2006)	60 patients attending an NHS substance misuse clinic, 30 of whom abused alcohol and 30 who abused opiates (clinical sample)	UK	Primary Avoidance of Effect and Secondary Avoidance of Effect	Correlational	Young Compensation Inventory and Young-Rygh Avoidance Inventory	No differences between groups in terms in overall levels of primary and secondary avoidance of affect. Severity of alcohol misuse, however, was associated with behavioural blocking of affect.

Table 1: Empirical Studies Examining the Relationships between Experiential Avoidance, Psychopathology and Maladaptive Behaviours cont

Study	Participants	Origin	Research Variable(s)	Research Design	Research Measures	Summary of Results
Flessner and Woods (2006)	92 individuals self reporting a diagnosis of Trichotillomania (non-clinical sample)	USA	Experiential Avoidance, Skin Picking Severity; Anxiety and Depression	Correlational	AAQ (9-items); The Skin Picking Scale; Beck Depression Inventory-I and The Beck Anxiety Inventory	The relationship between skin picking severity and symptoms of anxiety and depression was partially mediated by experiential avoidance
Rosenthal et al., (2006)	86 sexually assaulted women (non-clinical sample)	USA	Thought Suppression; Negative mood and PTSD symptom severity	Correlational	The Positive and Negative Affect Scale; The White Bear Suppression Inventory; The Thought Control Questionnaire-Worry; The Post-Traumatic Stress Diagnostic Scale	Chronic thought suppression partially mediated the relationship between negative mood and PTSD symptom severity after covarying the use of worry to control unpleasant thoughts
Verdejo-Garcia, Bechara, Recknor & Perez-Garcia, (2006)	35 substance dependent individuals and 36 healthy controls (clinical and non-clinical sample)	USA	Behavioural, Cognitive and Emotional Correlates of Addiction	Experimental/ Correlational	Frontal Systems Behaviour Scale; N-back, Go-No Go, and Wisconsin Card Sorting Tasks; and International Affective Picture System (IAPS) Tasks	Greater ratings of arousal noted for substance dependant individuals than controls when faced with unpleasant stimuli (IAPS images)
Gold et al., (2007)	74 gay male sexual assault survivors (non-clinical sample)	USA	Experiential Avoidance; Internalised Homophobia, PTSD; and Depression Symptom Severity	Correlational	AAQ (9-items); The Life Experiences Questionnaire-Modified; The Sexual Experiences Scale-Modified; The Revised Nungess Homosexuality Attitudes Inventory, Beck Depression Inventory and The Posttraumatic Diagnostic Scale	Experiential avoidance partially mediated the relationship between internalized homophobia and both PTSD and depression symptom severity

Table 1: Empirical Studies Examining the Relationships between Experiential Avoidance, Psychopathology and Maladaptive Behaviours cont.

Study	Participants	Origin	Research Variable(s)	Research Design	Research Measures	Summary of Results
Gratz et al., (2007)	76 inpatient substance users (clinical sample)	USA	Experiential Avoidance; Emotional Non-Acceptance and Childhood Sexual, Physical and Emotional Abuse	Experimental	The Structured Clinical Interview for DSM-IV Axis I Disorders; The Childhood Trauma Questionnaire-Short Form, The Difficulties in Emotion Regulation Scale; Paced Auditory Serial Addition Task-Computerized Version (Laboratory Measure) and The Computerised Mirror-Tracing Persistence Task (Laboratory Measure)- used to measure Experiential avoidance	Heightened experiential avoidance was associated with moderate to severe experiences of sexual, physical and emotional abuse in treatment seeking substance users. Increased risk for experiential avoidance was also associated with emotional non-acceptance, which itself was found to mediate the relationship between emotional abuse and experiential avoidance.
Moulds et al., (2007)	104 Australian university students (non-clinical sample)	AUS	Rumination; Avoidance and Depression	Correlational	Cognitive Behavioural Avoidance Scale; Beck Depression Inventory-II; Beck Anxiety Inventory and the Ruminative Response Scale of the Response Styles Questionnaire	Individuals more likely to engage in behavioural avoidance were more likely to ruminate. This association was independent of anxiety. Avoidance also predicted unique variance in depression scores over and above anxiety and rumination
Norberg et al., (2007)	404 individuals self reporting a diagnosis of Trichotillomania (TTM) (non-clinical sample)	USA	Experiential avoidance; dysfunctional beliefs about appearance; shameful cognitions; fear of negative evaluation and hair pulling severity	Correlational	AAQ (7-items); TTM Screening Measure; Massachusetts General Hospital Hair-Pulling Scale; The Other as Shamer Scale; Beliefs about Appearance Scale; Brief Fear of Negative Evaluation	Experiential avoidance mediated the relationship between specific dysfunctional beliefs about appearance, shameful cognitions and fears of negative evaluation, and hair pulling severity

Table 1: Empirical Studies Examining the Relationships between Experiential Avoidance, Psychopathology and Maladaptive Behaviours cont.

Study	Participants	Origin	Research Variable(s)	Research Design	Research Measures	Summary of Results
Santanello and Gardner (2007)	125 college students (non-clinical sample)	USA	Experiential avoidance, Maladaptive Perfectionism and Worry	Correlational	AAQ (17-items); Frost Multidimensional Scale; Penn State Worry Questionnaire; Beck Depression Inventory II; Social Interaction Anxiety Scale	Experiential Avoidance partially mediated the relationship between Maladaptive Perfectionism and Worry
Tull, et al., (2007)	113 men with a history of exposure to interpersonal violence (non-clinical sample)	USA	Experiential Avoidance; Emotional Expressivity; PTSD symptom severity and Aggressive Behaviour	Correlational	AAQ (9-items); Emotional Expressivity Scale; Life Events Checklist and the PTSD Checklist	Experiential avoidance predicted engagement in aggressive behaviour above and beyond trait levels of anger. Experiential avoidance and emotional inexpressivity both accounted for the variance in the relationship between PTSD symptom severity and aggressive behaviour
Berking et al., (2009)	81 female outpatients during one year of treatment for Borderline Personality Disorder (BPD). (clinical sample)	USA	Experiential Avoidance and Depression	Correlational	AAQ (16-items); Modified Hamilton Rating Scale for Depression and the Beck Depression Inventory	Significant correlations were found between experiential avoidance and depression at all points of assessment. A reduction in experiential avoidance during treatment for BPD was significantly associated with reductions in depression.

Table 1: Empirical Studies Examining the Relationships between Experiential Avoidance, Psychopathology and Maladaptive Behaviours cont.

Study	Participants	Origin	Research Variable(s)	Research Design	Research Measures	Summary of Results
Kashdan et al., (2009)	174 Albanian civilian survivors of the Kosovo War	USA	PTSD; Social Anxiety Disorder (SAD) and Major Depressive Disorder (MDD)	Correlational	MINI International Neuropsychiatric Interview; Life Stressor Checklist-Revised; AAQ-9; Brief Symptom Inventory and The Manchester Short Assessment of Quality of Life	Experiential avoidance partially mediated the effects of SAD and PTSD on quality of life
Merwin et al., (2009)	663 female university students - 190 of whom came from an ethnic minority background (non-clinical population)	USA	Experiential Avoidance; Sexual Victimization; PTSD and Depression	Correlational	Wyatt Sexual History Questionnaire; Sexual Experiences Survey; White Bear Suppression Inventory; Trauma Symptom Inventory, Post-Traumatic Stress Diagnostic Scale and the Beck Depression Inventory	Experiential avoidance mediated the relationship between sexual victimization and symptoms of depression and PTSD in both Caucasian and minority samples
Vernig and Orsillo (2009)	48 American non-treatment seeking alcohol-dependant and non-dependant students (non-clinical sample)	USA	Emotional responses to pleasant, unpleasant and neutral emotional stimuli	Experimental	Videos; IAPS images; The Self Assessment Manikin; The Alcohol Use Disorders Identification Test; Drug Abuse Screening Test	No differences between groups were identified on self-reported emotional responses to emotionally evocative stimuli. Alcohol dependence severity, however, was predicted by the intensity of psychophysiological responses to unpleasant pictures

Table 1: Empirical Studies Examining the Relationships between Experiential Avoidance, Psychopathology and Maladaptive Behaviours

Study	Participants	Origin	Research Variable(s)	Research Design	Research Measures	Summary of Results
Kingston, Clarke & Remington (2010)	290 Treatment Seeking and Post-Treatment Adults (clinical sample)	UK	Experiential Avoidance, Negative Affect Intensity; Childhood Trauma and Problem Behaviours e.g. excessive alcohol use, illicit drug use, and aggression	Correlational	AAQ (9- Items); The Affect Intensity Measure—Negative Intensity Scale; The Childhood Trauma Questionnaire-Short Form; The Composite Measure of Problem Behaviours and The White Bear Suppression Inventory	Experiential avoidance predicted the tendency to engage in co-varying problem behaviours. Experiential avoidance also mediated the relationship between self-reported Negative Affect Intensity (NAI) and childhood trauma, and engagement in problem behaviours
Berman, Wheaton, McgRath and Abramowitz (2010)	42 adults with diagnosed anxiety (clinical sample)	USA	Experiential Avoidance; Anxiety Sensitivity and Anxiety	Correlational	AAQ-II; Beck Anxiety Inventory; Anxiety Sensitivity Index and The Beck Depression Inventory	Associations between experiential avoidance, anxiety sensitivity and anxiety were found but regression analyses revealed that experiential avoidance may be a by-product of the variance shared with anxiety sensitivity

The following section describes 18 studies, which are considered pertinent to the updated review of the relationship between experiential avoidance and psychopathology/maladaptive behaviours. Other studies highlighted within this section offer background information and additional content to the topic under study.

1.3 Overview of the Narrative Literature Review

The first section of this paper introduces the construct of experiential avoidance and describes the paradoxical process through which individuals seek to avoid aversive experiences. An overview of the measures employed to assess experiential avoidance is also provided, comprising an in-depth critique of the most commonly used self-report measure of experiential avoidance (the Action and Acceptance Questionnaire) and a discussion of new methodological advances in the field.

The second section provides an overview of current knowledge regarding experiential avoidance and its association with psychopathology and maladaptive behaviours. This area has received considerable research attention over several decades, most of which has highlighted experiential avoidance as a mediator in, or risk factor for, the development and maintenance of psychological disorders and maladaptive behaviours.

Finally, whilst empirical studies relating to this important area are evaluated throughout this paper, a critical review section towards the end of the paper highlights the ways in which the literature regarding the relationship between experiential avoidance and psychopathology/maladaptive behaviours can be improved. Clinical implications are also presented by considering how knowledge of experiential avoidance in the development and maintenance of psychopathology and maladaptive behaviours can inform the delivery of psychological interventions and the promotion of acceptance.

2. The Construct of Experiential Avoidance

2.1 What is Experiential Avoidance?

Research has highlighted the relationship between thoughts and behaviour as being mediated by the way in which individuals typically approach unpleasant private events such as aversive thoughts and emotions (Hayes et al., 1996). This idea is now commonly referred to as experiential avoidance, a relatively recent and promising construct, which is believed to be central to many DSM-IV diagnoses (Hayes et al., 1996) and recognised by a wide number of theoretical orientations. Indeed, experiential avoidance is commonly recognised in the literature as a possible dimension of psychopathology consisting of two related parts: (1) excessive negative evaluations of, and an unwillingness to experience, aversive private experiences (including thoughts, feelings, memories and bodily sensations)

and (2) deliberate efforts to control or escape the aversive experiences or the events which elicit them (Hayes et al., 1996).

Experiential avoidance has also been defined as a broad category or class of cognitive, emotional and behavioural avoidance strategies, which enable individuals to avoid or escape from unwanted internal experiences. Within this framework, cognitive avoidance strategies typically include not thinking about, rationalising or minimising the event (Boeschen, Koss, Figueredo & Coan, 2001). Emotional avoidance refers to efforts to escape or avoid emotions (e.g. shame, guilt) associated with difficult experiences whilst behavioural avoidance involves avoiding places and people that remind them of the aversive experience.

2.2 Theoretical Approaches to Understanding Experiential Avoidance

Historically, research interest surrounding experiential avoidance stemmed from less empirical traditions, such as the psychoanalytic focus on undermining repression and bringing material that had previously been too threatening or painful into conscious awareness (Freud, 1920), and the client centred approach (Rogers, 1961), which recognised increasing individuals awareness of feelings and attitudes as a main therapeutic goal. In recent years, cognitive and behavioural therapies have started to acknowledge the importance of experiential avoidance, leading to the development of interventions, which focus on changing and weakening the numerous

maladaptive strategies underlying it (Foa, Steketee & Young, 1984). Modern therapies such as Dialectical Behaviour Therapy (DBT; Linehan, 1993), Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2001) and ACT (Hayes et al., 1999) also help individuals to recognise and deal with experiential avoidance by increasing acceptance of negative experiences rather than controlling them.

One of the most informative accounts of experiential avoidance derives from ACT and its underlying theory of language and cognition- Relational Frame Theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001). Within this theoretical framework, Hayes et al., (2001) propose that the bi-directionality of language and verbal knowledge broadens the range of situations deemed aversive to individuals because “symbolic behaviour promotes the categorisation of private events and contact with them”. Thus, if a number of situational cues and bodily sensations are labelled as “fear” and evaluated as “dangerous”, an emotional response of fear may be elicited merely by discussing a negative emotional experience (e.g. a feared event). Furthermore, given the notion that (1) the use of language may increase the number of potential cues for danger and (2) psychological pain cannot be avoided purely by avoiding external situations, individuals may be motivated to avoid both external cues and symbolic representations of the aversive experience.

ACT consequently views and operationalises experiential avoidance and acceptance as “two endpoints on a single continuum” (Hayes et al., 2006),

whereby the amount of time and energy deliberately spent employing experiential avoidance strategies is suggested to diminish contact with present experiences and interfere with progress towards valued goals. Psychological acceptance, conversely, is based on flexible and efficient response styles that enable individuals to stay in contact with their thoughts and emotions whilst attending to the information they provide (Kashdan, Morina & Priebe, 2009).

2.3 The Development of Maladaptive Experiential Avoidance Behaviours

Tendencies towards experientially avoidant responses may primarily develop from an individual's reliance on rule governed behaviour (Hayes et al., 1996). For example, an individual may adopt the verbal rule "If I drink, I will feel better" if they have personal experiences, or are aware of other people's experiences, where excessive alcohol consumption has produced feelings of relief. In response to this verbal rule, the individual may then misuse alcohol even though they are aware of the negative long term consequences e.g. poor physiological or psychological health, potentially resulting from this unhelpful behaviour. Verbal rules about the relieving consequences of experiential strategies may also interact with the effects of immediate emotional distress thus further increasing the likelihood of individuals feeling compelled to use these strategies. This is particularly true in the case of deliberate self harm (Chapman, Gratz & Brown, 2006).

Other researchers suggest that the failure to employ more skilful and effective strategies in response to emotional arousal is a further possible component in the development of experiential avoidant strategies. Skilful responses to experiences of emotional distress include an ability to reduce intense psychological arousal associated with the emotion, direct attention away from emotional stimuli, inhibit impulsive, mood driven behaviour and work towards achieving non-mood dependent goals (Gottman & Katz, 1989). Accordingly, when individuals with few effective emotion regulation strategies are faced with situations which they experience as emotionally intense, they are more likely to resort to strategies enabling them to avoid such emotions. Furthermore, despite the efficacy of some avoidance strategies, secondary problems such as reduced social skills and an inability to cope with inevitable life challenges may also contribute to the development of psychopathology (Chawla & Ostafin, 2007).

2.4 Paradoxical Effects of Experiential Avoidance

Central to the experiential avoidance paradigm is the notion that an unwillingness to remain in contact with particular private experiences is an effective short-term strategy. Here, the use of avoidance strategies is negatively reinforced since the act of avoiding produces an immediate reduction in discomfort (Chapman et al., 2006). This relationship increases in strength following repeated experiences thereby generating a vicious self-perpetuating cycle. However, when individuals routinely attempt to avoid, suppress and escape from negative thoughts, emotions, physical sensations

and the contexts that elicit them, this typically involves greater effort and energy that eventually becomes maladaptive (Tiwari et al., 2009). In the long term, the use of such strategies ultimately helps to maintain or exacerbate psychological difficulties (Hayes & Gifford, 1997).

This idea is supported by numerous studies demonstrating that the suppression of undesirable thoughts, and active attempts to push them out of awareness, typically increases both distress (Gross & Levenson, 1997) and the frequency of distressing thoughts (Koster, Rassin, Crombez & Naring, 2003). Studies also highlight chronic thought suppression as potentially underlying the relationship between trait negative affectivity and psychiatric symptoms (Rosenthal, Cheavens, Lejeuz & Lynch, 2005) thus increasing the likelihood of a rebound effect from the suppressed emotional experience. Behavioural avoidance and emotional suppression are similarly associated with lower levels of positive affect, poorer social adjustment, and decreased well-being (Gross & John, 2003; Penley, Tomaka, & Wiebe, 2002).

Nevertheless, the temporary relief experienced from intense emotional responding often reinforces and strengthens the use of avoidant behaviours, thereby increasing the likelihood of experiential avoidance strategies being used by individuals when faced with similar situations in the future (Chapman et al., 2006). Persistent avoidance of exposure to feared private events (Salters-Pedneault, Tull & Roemer, 2004) further maintains this cycle by

increasing anticipatory anxiety for future events and preventing individuals' from learning that aversive emotional states, while unpleasant, are not threatening and can be effectively managed (Chapman et al., 2006).

3. The Measurement of Experiential Avoidance

3.1 The Acceptance and Action Questionnaire (AAQ)

To date, the majority of studies investigating experiential avoidance has utilised self-report measures of the construct, the most widely used being the AAQ (Hayes et al., 2004). Indeed, following the growing recognition that experiential avoidance plays an important role in later psychological functioning, the AAQ was primarily developed as a research instrument to start exploring this concept. Whilst numerous self-report measures have been developed to assess experiential avoidance in specific clinical situations (e.g. the Chronic Pain Acceptance Questionnaire (CPAQ; McCracken, 1998) or specific aspects of the experiential avoidance concept (i.e. thought suppression as measured by the White Bear Suppression Inventory (WBSI; Wegner & Zanakos, 1994), the AAQ was designed to enable a broader exploration of experiential avoidance in population-based studies.

A number of versions of the AAQ have now been established, with many researchers, particularly those who have undertaken research on ACT (Hayes et al., 2006), utilising the 9-item version of the measure. Other

researchers have used the older 16-item version, both versions of which are strongly correlated with one another ($r=0.89$). The psychometric properties of this scale have been well-established in clinical and non-clinical samples (Hayes et al., 2004; Feldner, Zvolensky, Eifert & Spira, 2003) and there is now a plethora of research studies demonstrating its utility when assessing experiential avoidance in psychopathology.

To this end, one of the main strengths of the AAQ lays in the measure's good test-retest reliability scores, and its convergent, discriminant and concurrent validity (Hayes et al., 2004). The AAQ also demonstrates strong correlations with related measures or component processes, such as thought suppression and social desirability, and with established self-report measures of psychopathology such as the Posttraumatic Stress Diagnostic Scale (PDS; Foa, 1995). Further advantages to this approach include the speed at which this measure can be completed and the ease with which comparisons across different studies can be undertaken.

The AAQ does hold a number of limitations however, not least the purpose of what the scale actually measures, particularly in relation to the nine-item version. Indeed, whilst the AAQ has been designed to assess a number of experiential avoidance constructs, as described above, addressing a broad area using a limited number of items may result in limited depth and focus on the construct itself. It has also been argued that the items on the AAQ fail to

satisfactorily tease apart the construct of experiential avoidance from the outcomes through which it is theoretically related i.e. psychological distress (Chawla & Ostafin, 2007).

Furthermore, whilst the psychometric properties of this measure, as evidenced through initial validation studies, have provided adequate measures of internal consistency ($\alpha=0.70$; Hayes et al., 2004), other studies have reported somewhat lower estimates in older populations ($\alpha=0.57$; Robertson & Hopko, 2009) and with Dutch participants (Boelen & Reijntjes, 2008). Consequently, given the wide ranging item content and variable internal consistency of the AAQ, it will be important for further research to be undertaken to help refine this measure.

Given such limitations of previous versions of the AAQ, a newer, less wordy version of this measure, the AAQII, has recently been developed by Bond et al., (2007, submitted for publication). The AAQII contains ten items designed to assess experiential avoidance that anecdotally, many clinicians feel is an easier and more comprehensive way of measuring the construct in comparison to the original AAQ. Moreover, in a recent exploration of the psychometric properties of the AAQII using a sample of 2,226 participants, the alpha coefficient for the scale was .85. Strong relationships with other measures of psychological functioning e.g. the Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988) were also found (Bond et al., 2007

submitted for publication). These findings lend weight to the argument that the AAQII measures a construct distinct from those of the other measures and thus taps into a process distinct from the psychological processes and behavioural tendencies that researchers have traditionally focused on. However, it is important to note that the AAQII, whilst an improvement psychometrically on the original AAQ, remains a relatively new measure that has yet to be demonstrated in studies as a mediator/moderator. Furthermore, it has only appeared in a few published journals, leading clinicians to question both the utility and generaliseability of this measure to different populations. Further research using this measure is therefore required to address these issues.

Finally, as with all self-report measures of emotionality, responses on the AAQ may be prone to bias and, of particular relevance to experiential avoidance, individuals scoring high in this domain may not have a full awareness of their engagement in such behaviours. Many of the studies investigating the nature of experiential avoidance using the AAQ have also relied on participants from non-clinical populations, primarily university students. This makes sense given the AAQ was developed for population-based samples. However, there remains a need for additional research to be undertaken with a greater number of clinical samples to determine its effectiveness as a potential clinical instrument (Chawla & Ostafin, 2007). Extending this research to vulnerable populations such as the homeless or individuals residing in prison, who may also engage in experiential avoidance strategies, will further help to test the applicability of this measure.

3.2 Experimental Approaches Measuring Experiential Avoidance

Despite such limitations of the AAQ, emerging evidence derived from different methodological approaches has produced increased confidence in the experiential avoidance construct. Indeed, over the last few years, non-self-report (e.g. behavioural, physiological) measures and experimental designs that facilitate the assessment of emotional responding and subsequent display of experiential avoidance following exposure to potentially distressing stimuli, have been developed as an alternative means of measuring experiential avoidance as well investigating the construct itself.

In the latter case, numerous empirical studies have shown that non-clinical participants who engage in high levels of experiential avoidance report greater emotional distress and more negative cognitions when exposed to experimentally induced physical stressors e.g. inhalations of CO₂ and cold pressor tasks (Feldner, Zvolensky, Eifert, & Spira, 2003; Feldner et al., 2006). More recently, researchers have attempted to replicate these findings using non-physical stressors such as emotionally challenging visual material.

Cochrane, Barrett-Holmes, Barrett-Holmes, Stewart and Luciano (2007), for example, evaluated experiential avoidance in relation to individual response patterns on a simple matching task requiring participants to choose whether or not to look at an aversive visual image. The participants were 29 undergraduate students who were divided into high (n=15) and low (n=14)

experiential avoiders. Participants with high experiential avoidance scores demonstrated significantly slower reaction times when selecting an aversive image. They also reported higher levels of anxiety following their involvement in the study despite rating the aversive images as less unpleasant and emotionally arousing than low experiential avoiders. Cochrane et al., (2007) propose that these responses may reflect the attempts of highly experientially avoidant participants to suppress the unpleasant content of the aversive images when presented to them. Higher levels of post-experiment anxiety may consequently develop from a post-suppression rebound effect, which is consistent with findings reported in the thought suppression literature (Wenzlaff & Wegner, 2000).

A second experiment by Cochrane et al., (2007) repeated the aforementioned matching task with the additional recording of event-related potential (ERPs). Similar reaction times to the first experiment were found across high-, mid- and low-avoidance groups. However, there were neurological differences between high and low/mid- experiential avoidance groups with participants in the high- experiential avoidance group showing greater negativity for electrodes over the left hemisphere. These findings were interpreted as greater verbal activity taking place in highly experientially avoidant individuals (where verbal activity is thought to be linked to the regulation of emotional responses). Cochrane et al., (2007) consider such findings as being supportive of the construct of experiential avoidance although, as with many existing experiential avoidance experimental studies,

this assumes that response delay equates to experiential avoidance. Further research is required to replicate these findings, particularly in light of the small sample size and lack of consideration as to the contribution that extraneous factors such as gender and handedness may have made to these findings.

Research has also recently started to explore the concept of experiential avoidance using visual probe tasks (VPT). A VPT involves presenting participants with visual stimuli, containing images of both neutral and threat information, followed by a dot probe. Participants are then asked to indicate the location of the probe as quickly as possible, which in turn produces simple reaction time measures of vigilance (attention towards critical stimuli) or measures of avoidance (attention away from critical stimuli). The utility and efficacy of the VPT in measuring experiential avoidance has been evidenced in the research of King (2007, unpublished manuscript) who found a correlation between scores on the AAQII (Bond et al., 2007 submitted for publication) and avoidance of aversive images, as measured by reaction times to a VPT. These results are particularly interesting as they offer both support for the construct of experiential avoidance whilst further highlighting the possibility of an implicit, experimental measure of experiential avoidance.

Experiential avoidance has also been measured behaviourally by Gratz, Bornovalova, Delany-Brumsey, Bettina and Lejuez (2007). They

administered two laboratory tasks to a sample of 76 inner-city treatment-seeking substance users; the PASAT-C, a modified computer version of the Paced Auditory Serial Addition Task (Gronwall, 1977), and the computerised Mirror-Tracing Persistence Task (MTPT-C; Quinn, Brandon & Copeland, 1996). In both computer tasks, willingness to experience emotional distress was indexed as latency in seconds to task termination. The nature of these tasks included simple mathematical (addition) and tracing problems, both increasing in difficulty and potentially resulting in increased frustration. An analysis of the results gained from this study revealed a moderate correlation ($r=.41$; $p<.01$) between the termination latencies of both tasks, thus supporting the construct validity of these experimental tasks. The results also demonstrated heightened levels of experiential avoidance, as evidenced by scores on both laboratory tasks, among substance abusing individuals with moderate to severe sexual, physical and emotional abuse (in comparison to their counterparts). These findings are consistent with previous research demonstrating significant relationships between the experience of childhood trauma and self-reported experiential avoidance (e.g. Batten, Follette & Aban, 2001; Marx & Sloan, 2002) and thus highlight the usefulness and applicability of behavioural assessments in the exploration and measurement of this construct.

Nevertheless, despite being successful in evoking avoidant tendencies in a substance using population, caution should be noted with regards to the ecological validity of experimental assessments as methods for inducing distress (Gratz et al., 2007). Indeed, controlled laboratory tasks of this nature

may not offer enough personal relevance for participants to capture the full extent of their experiential avoidance. It is also difficult to tease apart genuine termination latencies, as an attempt to avoid or escape from emotional stress, from boredom or ulterior motives to end such tasks. Finally, the order of tasks administered to participants may also impact on the results.

Despite such promising advances in literature, few experimental studies of experiential avoidance, particularly those using VPT methodology, have been reported. Those in existence are thought to be rather crude in their approach given that additional variables such as mood (especially anxiety) influence participant performance on VPT's. Consequently, whilst such evidence has not been considered in any of the existing experiential avoidance experimental studies, it will be important for future studies aiming to explore this construct to take these findings into account. Moreover, the findings of the aforementioned studies, although valuable in their own right and supportive of the construct of experiential avoidance, highlight the need for additional studies to be undertaken using sophisticated experimental methodology. This will help to capture the types of distressing experiences/trauma that individuals are likely to experience in their everyday lives. VPT's, that incorporate the use of more emotionally salient or personally relevant distressing imagery may be one way of realistically and reliably assessing an individuals' willingness to experience emotional distress. It will also be important to explore the use of experimental tasks in other clinical and vulnerable populations to determine the generality of this

approach. Further exploration of the relationship between experimental tasks and pre-existing measures of experiential avoidance such as the AAQ will undoubtedly help to increase research confidence in the reliability and validity of these tasks.

4. Experiential Avoidance and its Association with Psychopathology and Maladaptive Behaviours

4.1 Overview

Whilst experiential avoidance is not pathogenic by definition, continuous or excessive attempts to escape negative subjective experiences is considered a significant psychological vulnerability underlying the onset and/or maintenance of a wide range of psychological disorders and maladaptive behaviours including PTSD (Boeschen et al., 2001), anxiety (Craske & Hazlett-Stevens, 2002) depression (Poulsny, Rosenthal, Aban & Follette, 2004) and self-harm in borderline personality disorder (BPD; Chapman, Specht, & Cellucci, 2005). An empirical review by Chawla and Ostafin (2007) has summarised a selection of studies, published between 1999 and 2006, which focus on experiential avoidance and its association with both psychopathology and maladaptive behaviours. However, interest in this construct is so widespread now, that a multitude of studies have emerged in the last five years that challenge and consolidate previous findings.

4.2 The Relationship between Experiential Avoidance and Psychopathology

4.2.1 *PTSD and Trauma*

In the last two decades, a wealth of research has explored the relationship between experiential avoidance and the mental health of trauma survivors, including male/female sexual assault survivors and male combat veterans across a range of traumatic experiences. An extensive review by Chawla and Ostafin (2007) highlighted five important studies where experiential avoidance was found to be a predictor of psychological distress or PTSD symptom severity in both clinical and non-clinical samples. However, as research interest in the experiential avoidance concept has continued to grow, so have the number of studies investigating this construct in relation to PTSD and the experience of trauma. The present review incorporates studies published over the last five years highlighting new evidence that compliments existing research in this field.

Numerous studies have highlighted an association between the use of experiential avoidance strategies and greater symptoms of PTSD. Rosenthal, Cheavens, Lynch and Follette (2006) for example, explored the role of thought suppression in the relationship between severity of PTSD symptoms and recent negative mood in a sample of 86 sexually assaulted women. Despite a small sample size and power, they found the use of thought suppression partially mediated the relationship between negative mood and

PTSD symptom severity. Tull and Roemer (2003) similarly found that experiential avoidance accounted for a significant portion of the variance in PTSD symptomatology in a sample of female sexual assault survivors.

Many individuals have also been found to develop dissociative responses during trauma including experiences of depersonalization, disorientation and out of body experiences (Bryant, 2007). This response is known as peritraumatic dissociation and numerous studies have highlighted this response as a significant risk factor for the development of PTSD (Birmes et al., 2003; Marx & Sloan, 2005). In an attempt to further elucidate the relationship between peritraumatic dissociation and PTSD, some researchers have proposed that dissociative behaviour could possibly be a form of experiential avoidance (Hayes et al., 1996). In this vein, Wagner and Linehan (1998) postulate that peritraumatic dissociation serves the function of regulating particular aspects of the trauma, such as aversive stimuli and affect, in order to help people cope with their experiences. Other researchers suggest that dissociative behaviour enables people to avoid unwanted emotions, thoughts and memories (Foa & Hearst-Ikeda, 1996). Nevertheless, experiential avoidance theory indicates that personal attempts to distance oneself from, control and/or avoid unwanted private experiences often results in psychological and behavioural difficulties. PTSD symptomatology (i.e. re-experiencing, avoidance and emotional numbing, and hyperarousal) as experienced by some trauma survivors, may therefore be the consequence of the experiential avoidance process.

Evidence to support this hypothesis has been provided by Marx and Sloan (2005) who, as part of a new avenue of research exploring the relationship between experiential avoidance, PTSD and peritraumatic dissociation, found that whilst peritraumatic dissociation and experiential avoidance significantly predicted PTSD symptom severity, only the latter predicted PTSD symptom severity over and above baseline PTSD symptoms. Given that this study was conducted with a sample of 185 American undergraduate students, it would be interesting to continue exploring this relationship with clinical samples likely to be reporting a greater severity of symptoms. Research that ascertains whether PTSD develops in the absence of experiential avoidance and the threshold of experiential avoidance at which psychological problems develop (Marx & Sloan, 2005), is also required.

An informative study by Gold, Marx and Lexington (2007) has also contributed to the abundance of research examining experiential avoidance as a predictor of psychological distress or PTSD symptom severity by focusing on a sample of 74 gay male sexual assault survivors. This is an important study as it is one of the first to examine the impact of sociocultural factors on the development or severity of symptomatology associated with sexual assault to gay sexual assault survivors. Interestingly, they found experiential avoidance partially mediated the relationship between internalised homophobia (defined as “a set of negative attitudes and affects towards homosexuality in other persons and toward homosexual features in oneself; Shidlo, 1994, p.178) and both PTSD and depression symptom

severity. The researchers attempted to explain this finding by suggesting that internalised homophobia possibly predisposes gay men to experiential avoidance by prompting them to suppress or avoid unwanted same-sex thoughts, attractions or arousal. For those individuals in the sample who had experienced sexual assault, experiential avoidance may have also been perceived as a useful strategy when confronted with sexual trauma-related thoughts, memories, and affect. Given such valuable findings, further research is ultimately required with other sexual minorities including lesbian, bisexual and transgendered survivors to determine whether experiential avoidance plays a similar role.

Research interest in PTSD and experiential avoidance has also extended its focus to the role of maladaptive coping strategies in the relationship between PTSD symptom severity and aggressive behaviour. Tull, Jakupcak, Paulson and Gratz (2007), for example, examined the extent to which experiential avoidance uniquely accounted for the relationship between PTSD symptom severity and aggressive behaviour in a non-clinical sample of 113 men with a history of exposure to interpersonal violence. Previous research suggests a predictive relationship between experiential avoidance and dysregulated emotional responding, whereby the avoidance of emotions through suppression is associated with elevated physiological arousal and slower reductions in negative affect when faced with emotionally evocative stimuli (Campbell-Sills, Barlow, Brown & Hofmann, 2006). The use of aggressive behaviour, as an attempt to avoid or escape dysregulated internal states,

may therefore be the product of heightened emotional arousal and distress resulting from experiential avoidance and emotional expressivity (Jakupcak, Lisak & Roemer, 2002). The findings provided by Tull et al., (2007) support this relationship as experiential avoidance was found to predict self-reported engagement in aggressive behaviour above and beyond trait levels of anger. Experiential avoidance and emotional inexpressivity were also both found to account for the unique variance in the relationship between PTSD symptom severity and aggressive behaviour. These results are really promising and point to the most effective interventions for men exposed to interpersonal violence as being those which focus on the strategies men use to cope with uncomfortable and negative emotions. It is important to note however, that these findings form one of the first studies to investigate the relationship between PTSD, experiential avoidance and aggression and therefore require further evaluation and replication. Furthermore, as possible selection biases may have resulted from the author's reliance on a self-selected, male, non-clinical population, replication studies should include clinical populations with a greater inclusion of women and ethnically diverse participants. This will help to ascertain the presence of any gender or cultural differences in the above relationship. Consideration of the age of traumatic exposure, relevance of the type of traumatic event and role of other coping strategies relevant to the experience of traumatic events may also help to strengthen these research findings.

Whilst the contribution that experiential avoidance makes to the mental health of trauma survivors, particularly American male combat veterans, has been widely acknowledged, little attention has traditionally been paid to other survivors of large scale wars. In order to address this gap in the literature, Kasdan, Morina and Priebe (2009) recently tested mediation models and found that experiential avoidance accounted for links between PTSD, social anxiety disorder (SAD) and major depressive disorder (MDD) in Albanian civilian survivors of the Kosovo war. In line with previous research, each of these conditions was associated with greater experiential avoidance, global distress and compromised quality of life. In terms of mediation, experiential avoidance was only found to mediate the effects of PTSD and SAD on quality of life.

Finally, whilst an array of research evidence, as discussed in Chawla and Ostafin's (2007) review, has highlighted the mediating role of experiential avoidance in the relationship between sexual victimisation and increased risk of developing anxiety, depression and PTSD, (Marx & Sloan, 2002; Polusny, et al., 2004), this research only pertained to Caucasian samples. In order to consolidate previous research and explore the applicability of this model to more ethnically diverse samples, Merwin, Rosenthal and Coffey (2009) investigated this relationship in 663 female undergraduates, 190 of whom originated from ethnic minority backgrounds. Consistent with the aforementioned literature, experiential avoidance mediated the relationship between sexual victimization and symptoms of depression and PTSD in both

Caucasian and minority samples thus lending weight to a growing body of literature indicating the contributory role of experiential avoidance in long term psychological difficulties.

4.2.2 Depression

The use of experientially avoidant response patterns has also been acknowledged as a significant risk factor in the development and maintenance of depression. Indeed, in the last decade, a number of longitudinal studies using non-clinical participants have been conducted, all of which provided preliminary support for the assumed causal effects of EA on depression (Bond & Bunce, 2003; Kashdan, Barrios, Forsyth & Sterger, 2006). Interestingly, research exploring the relationship between experiential avoidance and depression was not included in Chawla & Ostafin's (2007) review despite its potential in enhancing psychological understanding of the relationship between experiential avoidance and psychopathology. The following appraisal of studies, stemming from the last fifteen years, subsequently offers a preliminary exploration of associations between experiential avoidance and depression.

Much of the research exploring the relationship between experiential avoidance and depression has highlighted the role of thought suppression in the maintenance of depressive symptoms. Early research by Wegner and Zanakos (1994) found that individuals, who avoided emotions and used

thought suppression as a coping strategy, evidenced more depressive symptomatology than those who just avoided emotions. Lynch, Robins, Morse and Krause (2001) extended this research by attempting to examine the specific mechanisms underlying the relationship between negative affect intensity and psychological distress. In a sample of both psychiatric and nonclinical participants they found that emotion inhibition mediated the relationship between negative affect intensity and psychological distress, characterized as hopelessness and depressive symptomatology. These findings strengthen the argument that avoiding or inhibiting private experience is a problematic coping strategy which, in emotionally intense individuals, may increase their vulnerability to psychological distress.

Experiential avoidance may also be associated with ruminative thinking in depression. Rumination is typically defined as a “chronic, passive focus on one’s negative emotions”, that manifests itself in behaviours such as isolating oneself and repetitively thinking about problems rather than engaging in problem solving behaviour. (Nolen-Hoeksama & Morrow, 1991). To date, early research has supported the assertion that rumination prolongs negative moods and interferes with personal habituation to emotional stimuli (Rusting & Nolen-Hoeksama, 1998).

To further this research, Holowka, Salters-Pedneault and Roemer (2005) tested the hypotheses that there would be associations between rumination and cognitive and emotional avoidance in a sample of 402 university

students. They also assessed whether experiential avoidance would act as a proxy risk factor for rumination in predicting depressive symptomatology. Consistent with the hypotheses, both experiential avoidance and rumination were significant predictors of depressive symptoms in their sample. However, the contribution of rumination to this relationship was over and above the variance accounted for by indicators of experiential avoidance. Interestingly, the authors of this research infer from their findings that “experiential avoidance may take the form of rumination in the context of depression”. These results are consistent with a model in which experiential avoidance is a proxy risk factor for rumination in the prediction of depressive symptomatology. Rumination may therefore serve the purpose of reducing/avoiding emotional reactivity to external stimuli which, subsequently, leads to reduced stress in the short term.

Nevertheless, significant correlations between rumination, behavioural avoidance and depression have been found in the research of Moulds, Kandris, Starr and Wong (2007). In a sample of 104 university students, they examined the relationships between these variables using a newly developed self-report measure of avoidance in depression, the Cognitive Behavioural Avoidance Scale (CBAS; Ottenbreit & Dobson, 2004). Once anxiety had been controlled in this study, the researchers found that intercorrelations between rumination and behavioural avoidance remained stable whilst the relationship between cognitive avoidance and rumination disappeared. Moulds et al., (2007) suggest that rumination promoted focus on material rather than the avoidance of cognitive content. However, it is possible that

avoidance of the affect associated with ruminative content is the more appropriate index of the avoidant property of rumination. This is a dimension that the new measure of avoidance in depression was unable to capture, thus limiting the generaliseability of the results. Further research using the Acceptance and Action Questionnaire (AAQ; Hayes et al., 2004) may help to elucidate the relationship between experiential avoidance and rumination.

Despite the cross-sectional nature of these studies, utilisation of self-report measures and reliance on non-clinical participants, a number of important clinical and research implications stem from these findings. Firstly, the results of these studies provide support for utility of theoretical models that incorporate maladaptive processes (such as rumination and experiential avoidance) to account for the maintenance of depressive disorders. Secondly, future research should continue to investigate the interrelationship of different types of cognitive avoidance (e.g. thought suppression) to help ascertain the benefits of considering cognitive and behavioural maladaptive behaviours in the assessment, formulation and treatment of depression. Thirdly, research using clinical samples must be undertaken in order to continue examining the relationship between experiential avoidance and rumination in the aetiology and maintenance of depression.

Other researchers have chosen to explore depression in the context of differing psychological disorders. Berking Neacsiu, Comtois and Linehan

(2009) for example, explored the relationship between experiential avoidance and depression in 81 female outpatients during one year of treatment for BPD. They found significant correlations between experiential avoidance and depression and a reduction in experiential avoidance during treatment for BPD that was significantly associated with a reduction in depression. These are important findings as they highlight the importance of targeting EA when delivering treatment for BPD. Consideration must be given, however, to the fact that these findings fail to accurately indicate whether EA is an antecedent or consequence of depression. Uncertainty regarding which specific effect of experiential avoidance is the most important for impeding the treatment of depression in BPD also remains.

4.2.3 *Anxiety*

Whilst the role of experiential avoidance in anxiety, specifically generalized anxiety disorder (GAD) and anxiety related pathology, has been discussed in Chawla & Ostafin's (2007) review, supporting evidence for this construct as a potential predictor in the development of anxiety psychopathology continues to emerge. Berman, Wheaton, McGrath and Abramowitz (2010), for example, recently reported correlations between both anxiety sensitivity and experiential avoidance, and anxiety symptoms, in a clinical sample of 42 adults diagnosed with anxiety. However, anxiety sensitivity accounted for a greater variance in symptoms over and above that provided by experiential avoidance, suggesting that experiential avoidance may be too broad a construct to independently explain anxiety symptoms. However, further

research is required as the small sample size and cross-sectional design utilized in this study makes it difficult to draw any firm conclusions.

A further study by Santanello and Gardner (2007) assessed the influence of experiential avoidance in the relationship between maladaptive perfectionism and worry (a cognitive process serving the function of anxiety; Borkovec, Alcaine & Behar, 2004) in a sample of 125 college students. A regression analysis revealed experiential avoidance to be a partial mediator in this relationship thus highlighting the importance of this construct in understanding the relationship between anxiety related processes such as worry and maladaptive perfectionism.

4.3 The Relationship between Experiential Avoidance and Maladaptive Behaviours

Historically, research has indicated that individuals who react in a highly emotional way experience a greater magnitude of aversive thoughts and emotions (Najimi, Wegner & Nock, 2007). In order to cope with such difficult or painful thoughts/thoughts, people may engage in a number of maladaptive strategies, which serve the function of reducing awareness of, and providing temporary relief from, the emotional distress. These strategies include the misuse of alcohol and substances, DSH, suicide attempts, dissociation, impulsive eating and chronic hair-pulling from the body (also known as trichotillomania). It is beyond the scope of this literature review to discuss the

role of experiential avoidance in all of the aforementioned maladaptive behaviours and many of these are covered in Chawla & Ostafin's (2007) extensive review. However, research investigating this construct in relation to alcohol/drug abuse, DSH and Trichotillomania have been included as newer studies, which incorporate different methods of assessment and which strengthen the research presented in Chawla & Ostafin's review have emerged in the last five years.

4.3.1 Substance Misuse

For many years social learning theories have acknowledged substance misuse as an effective emotion-coping strategy, used by individuals to help cope with difficult or painful emotions in the absence of more adaptive and healthy means (Marlatt & Witkeiwitz, 2005). Hayes et al., (1996) describe this behaviour as a potential form of experiential avoidance, deriving from, and maintained by, the negative reinforcing consequences of drug and alcohol misuse in attenuating distress. This hypothesis has been tested in several studies, as described in the empirical review of Chawla and Ostafin (2007), and has resulted in a number of mixed findings. Stewart, Zvolensky and Eifert (2002), for example, found experiential avoidance to be a significant predictor of drinking for both negative and positive reinforcement in a student population. Forsyth, Parker and Finlay (2003) however, reported the inability of experiential avoidance to predict addiction severity or drug choice in a clinical sample of substance abusing individuals. Further research was indicated as the next step in helping to understand this discrepancy in

findings, yet a review of recent research exploring the relationship between experiential avoidance and substance misuse appears to have done little to clarify these differences.

Indeed, research by Brotchie, Hanes, Wendon and Waller (2006) failed to demonstrate any significant differences between 30 patients currently misusing alcohol and 30 patients misusing opiates in respect to overall levels of primary avoidance of affect (avoidance of emotional states being triggered) or secondary avoidance of affect (blocking of intolerable negative emotions). The severity of alcohol misuse, however, was associated with behavioural blocking of affect, indicating alcohol abuse as being one possible component of a broad behavioural somatic strategy serving to block emotional states. Nevertheless, as these cognitive processes were unable to offer adequate explanation for differences in patterns of substance misuse, the question regarding what other factors differentiate those who misuse specific substances remains unanswered.

The literature also suggests that individuals with substance-use disorders demonstrate a preference for coping strategies aimed at reducing negative emotions because of a heightened reactivity to emotionally evocative stimuli. This follows research indicating that individuals who misuse substances typically rate unpleasant stimuli e.g. traumatic pictures as more arousing (Verdejo-Garcia, Bechara, Recknor & Perez-Garcia, 2006). Vernig and Orsillo (2009) however, reported no differences between a non-treatment seeking alcohol-dependant and non-alcohol dependant college sample on

self-reported emotional responses to emotionally evocative stimuli. Alcohol dependence severity, however, was predicted by the intensity of psychophysiological responses, as measured by skin conductance, to unpleasant slides. Thus, despite a disparity between self-report and objective physiological responding, these findings lend some weight to the proposed model of alcohol abuse as a form of experiential avoidance.

Recent advances in experimental methodology have enabled greater measurement of experiential avoidance in substance abusing populations. Gratz et al., (2007), for example, reported evidence of heightened experiential avoidance tendencies, indexed as unwillingness to persist on two psychologically distressing laboratory tasks, in a sample of 76 inner-city treatment seeking substance users with moderate to severe experiences of sexual, physical and emotional abuse. Increased risk for experiential avoidance was also associated with emotional non-acceptance, which itself was found to mediate the relationship between emotional abuse and experiential avoidance. These findings indicate that individuals with the tendency to negatively evaluate their emotional responses are more likely to attempt to avoid or escape from emotional distress. They also indicate the presence of individual difference characteristics, other than experiential avoidance, which influence whether and to what extent, psychological difficulties develop as a function of early childhood abuse. Additional research however, is required to explore these findings within clinical and other vulnerable populations to ascertain the applicability of this type of assessment.

4.3.2. *Deliberate Self Harm (DSH)*

Experiential avoidance has also been suggested to play a critical role in the use of DSH, by helping to reduce unwanted emotional distress and arousal (Chapman et al., 2006). As with many other maladaptive behaviours, DSH is considered to be maintained and enhanced by a process of negative reinforcement, whereby engagement in avoidance strategies such as DSH results in temporary relief and escape from the distressing thought/emotion. The utility of this model, as described in Chawla & Ostafin's (2007) empirical review, has been supported in research sampling female prisoners with elevated rates of BPD and DSH (Chapman et al., 2005).

A similar theoretical framework, aiming to increase psychological understanding of the factors involved in self injuring thoughts and behaviours (SITB), has been proposed by Najimi et al., (2007). They proposed that high emotional reactivity is linked with the experience of aversive thoughts and emotions, which in turn encourages individuals to use suppression strategies. However, the use of suppression, although effective in the short-term, serves to exacerbate the unwanted thoughts and emotions. Therefore, in order to reduce emotional arousal, individuals are said to distract themselves with self injuring thoughts and behaviours (SITB). The utility of this model was explored in a sample of 94 adolescents recruited within community and local psychiatric clinics. The findings highlighted thought suppression as a mediator of the relationship between emotional reactivity and the frequency of non-suicidal self-injury and suicidal ideation. There was also a negative reinforcement function of thought suppression and STIB, where the

aforementioned behaviours were used as a means reducing aversive emotions.

To this end, it is possible that thought suppression, as one potential form of experiential avoidance, is more predictive of engagement in DSH/SITB than broader definitions of the experiential avoidance construct, which is typically measured by the AAQ. This is particularly true for models, as described above, which are limited to self harm behaviours maintained by negative reinforcement. Nevertheless, as with many of the other studies included within this review, research into the construct of experiential avoidance has still not reached the point where we can confidently assert its role in both psychopathology and maladaptive behaviours. Indeed, there are numerous limitations within experiential avoidance research, which are discussed later in this review that must be taken into consideration when interpreting the findings.

4.3.3 Trichotillomania

Research further indicates that Trichotillomania (TTM), a psychological condition associated with chronic hair-pulling from the body, may also serve the function of escaping from or avoiding aversive private experiences (Diefenbach, Mouton-Odom & Stanley, 2002). Models of Trichotillomania propose that temporary reductions in such experiences, as a result of engaging in hair-pulling, maintain the maladaptive behaviour through a cycle of negative reinforcement (Begotka, Woods & Wetterneck, 2004, as described in Chawla & Ostafin's review). This finding is supported in the

research of Flessner and Woods (2006) who reported a moderate to strong correlation between experiential avoidance and Chronic Skin Picking (CSP) severity, a condition which behaviourally bears many similarities to TTM, in 92 respondents to an Internet-based survey.

Norberg, Wetterneck, Woods and Conelea (2007) similarly highlight experiential avoidance as an underlying mechanism in the relationship between cognitions and Trichotillomania. Using a large-scale, internet-based self-report study, they found experiential avoidance mediated the relationship between specific dysfunctional beliefs about appearance, shameful cognitions and fears of negative evaluation, and hair pulling severity. These results, whilst conceptualizing TTM as a potential form of self harm are particularly interesting as they empirically confirm a relationship between the aforementioned variables. They also lend weight to the idea that therapeutic intervention should directly target the maladaptive strategies employed by experientially avoidant individuals.

Further to studies exploring the relationship between experiential avoidance and individual maladaptive behaviours, Kingston, Clarke and Remington (2010) recently described research where experiential avoidance predicted the propensity to engage in co-varying problem behaviours i.e. DSH, sexual promiscuity and aggression in a clinical opportunity sample ($n=290$).

Interestingly, heightened levels of experiential avoidance were found to mediate the relationship between self-reported Negative Affect Intensity (NAI) and childhood trauma, and the tendency to engage in problem behaviours.

These empirical findings strengthen a broadening evidence base highlighting experiential avoidance as being crucial for understanding the development and maintenance of psychopathology and maladaptive behaviours, as advocated by Hayes et al., (1996).

4.4 Summary

The research presented in this narrative review highlights the influential role of experiential avoidance in the development and maintenance of a number of psychopathological conditions and maladaptive behaviours. In line, with the empirical findings presented by Chawla and Ostafin (2007), evidence suggests that experiential avoidance exerts a predictive influence on PTSD, depressive and anxiety-related symptoms. Despite some inconsistencies between studies, an increasing number of studies also highlight experiential avoidance as a mediator in the relationship between psychological distress/traumatic experiences, and psychopathology and maladaptive coping strategies (i.e. substance misuse and DSH). Such findings, in addition to a consideration of experimental methodology in the measurement of experiential avoidance, advance Chawla and Ostafin's (2007) empirical review.

5. Critical Review and Discussion

5.1 Limitations of the Experiential Avoidance Literature and Considerations for Future Research

Despite the wealth of research supporting the utility of experiential avoidance as a functional dimension of psychopathology, it is necessary to exercise an appropriate degree of caution when interpreting such studies as they suffer from numerous methodological limitations which future research must address. Firstly, many of the studies presented in this review have relied on retrospective self report of participants' experiences and behaviours, which, although important for obtaining information on subjective experiences, fail to provide any way of substantiating the actual occurrence of any of these phenomena. Consideration should also be given to the fact that respondents with emotional difficulties may have inherent difficulties reporting their emotions and symptoms. Consequently, responses to self-report measures of emotional responding may be influenced by an individual's willingness and/or ability to accurately report their emotional responses. A more informative approach might therefore include the use of methodologically sophisticated and controlled laboratory tests that enable exploration of the relationship between verbal and expressive channels. However, studies utilizing these methods are still in their infancy and require further refinement to ensure that they are an effective measure of experiential avoidance in both clinical and non-clinical populations. Multi-method assessment could be incorporated into this body of research, via the inclusion of measures of

physiological reactivity and cognitive processing, to tap into the 'private' experiences defining experiential avoidance.

Secondly, the cross sectional nature of many of these studies prevent conclusions being drawn about the nature of causality. Many of the research studies undertaken thus far focus on correlates of experiential avoidance rather than the process. It is possible that this design is regularly employed due to the ease with which experiential avoidance can be measured.

However, the use of prospective or longitudinal studies which seek to test mediational models, and indeed those which incorporate structural equation modeling (SEM), would help to address this issue by extending understanding of the temporal relationships among variables.

Thirdly, there are limits to the generalisability of current experiential avoidance research given that participants are typically recruited from non-clinical (i.e. student) populations. Whilst clinical populations requiring treatment to manage their difficulties are now being studied, further research is ultimately required with ethnically diverse and vulnerable populations such as the homeless, who typically are unable to access psychological services yet engage in maladaptive behaviours akin to experiential avoidance. Day (2009) recently found that difficult childhood experiences, the use of maladaptive coping strategies (i.e. substance misuse and aggressive behaviour) and an inability to regulate emotions, were all factors implicated in pathways to homelessness. An exploration of the role of experiential

avoidance in this vulnerable population may further help to elucidate the process through which some individuals become or remain homeless. Furthermore, many of the studies included within this review originated from the USA, thus highlighting the need for additional research to be undertaken with UK participants to improve on the applicability of findings.

Fourthly, it is possible that there are other variables not addressed in the aforementioned studies, which are also linked to the aetiology and maintenance of clinical disorders and maladaptive behaviours.

Mitmansgruber, Beck, Höfer and Schüßler (2009), for example, highlight “meta-emotions”, defined as recurrent emotional reactions about one’s own emotions (e.g. feeling shame about being upset) as potentially playing a key role. They suggest that meta-emotions, which are fuelled by personal attitudes about emotions, may help to explain why some people are willing / unwilling to experience thoughts and emotions. In this regard, negative meta-emotions such as anger and anxiety may reflect distinct forms of non-acceptance of one’s emotions (Mitmansgruber, Beck & Schüßler, 2008).

However, research indicates that a reliance on emotional non-acceptance is negatively correlated with well-being and positively associated with psychopathology (Orsillo & Roemer, 2005). Evidence supporting this hypothesis is provided by Mitmansgruber et al., (2009) who found that both emotional non-acceptance and experiential avoidance strongly predicted psychological well-being in a sample of 336 university students. Emotional non-acceptance has also been reported to account for 62% of the variance in psychological well-being in a sample of experienced and novice paramedics

previously exposed to highly stressful rescue scenarios. This construct has further been implicated in the relationship between childhood trauma, and experiential avoidance in a substance misuse population (Gratz et al., 2007) thus highlighting the importance of assessing emotional non-acceptance when investigating experiential avoidance in clinical, non-clinical and vulnerable populations.

Fifthly, it would appear that there is still some confusion regarding the way in which experiential avoidance has been defined, particularly in relation to the component “unwillingness to experience emotional distress as part of pursuing undesired goals”. This component has been indexed in research as a form of both experiential avoidance (Gratz et al., 2007) and emotion dysregulation (Bornovalova et al., 2008). Such findings are indicative of a potential crossover between the two constructs, which in turn may impact on the way in which this concept is measured and whether experiential avoidance is viewed as a broad overarching, or multifaceted construct that incorporates cognitive, affective and behavioural dimensions. A weakness underlying this theoretical approach is subsequently, the vague distinction made between experiential avoidance and constructs specifically relating to it i.e. thought suppression and avoidant coping. Numerous studies have referred to constructs, relating to the unwillingness to remain in contact with aversive private experiences, as specific components of experiential avoidance. Yet further research is required to ascertain whether measures of experiential avoidance, and the aforementioned related constructs, actually

measure the same thing. Consequently, research seeking to develop a more definitive and inclusive scale of experiential avoidance, as advocated by Chawla and Ostafin (2007) is still required to address these concerns. Indeed, research incorporating structural equation modeling or a factor analysis on existing measures assessing experiential avoidance and its related constructs, would greatly enhance psychological understanding as to how best to define and measure this construct.

To this end, given the aforementioned limitations, further replication and more rigorous examination of the experiential avoidance construct and its relationship to psychopathology and maladaptive behaviours must be undertaken. This research will enhance the capability for experiential avoidance to act as an integrative functional diagnostic dimension (Hayes et al., 1996) whilst also establishing the robustness and directionality of the relations among these constructs.

5.2 Implications for Treatment

Clinically, much of the literature examining the role of experiential avoidance points to the need for treatments that target individuals' unwillingness to remain in contact with potentially distressing or aversive experiences. Indeed, there are now several established treatments, which can teach individuals with heightened tendencies towards experiential avoidance alternative

strategies for managing unwanted thoughts and the aversive emotions that they may produce.

ACT is one form of therapy explicit within a group of new third wave behavioural and cognitive interventions, which targets the function of cognitions and emotions rather than their form, frequency or situational sensitivity. Key proponents of the ACT approach (Hayes, et al., 1999) highlight experiential avoidance as being amenable to the creation of a therapeutic context which emphasizes “contact with aversive private experiences and decreases the literal meaning of language”. Interventions stemming from this approach subsequently encourage individuals to dispense with their experientially avoidant behaviours whilst experiencing both pleasant and unpleasant private experiences to help move behaviour in a valued direction (Begotka et al., 2004).

The efficacy of ACT in the treatment of experiential avoidance has been evidenced in research applying ACT-based treatments to numerous psychological conditions e.g. Obsessive Compulsive Disorder (Twohig, Hayes & Masuda, 2006), depression (Lappalainen et al., 2007) and BPD (Gratz & Gunderson, 2006). This approach has also been applied to trichotillomania (through the recently developed Acceptance Enhanced Behaviour Therapy (AEBT; Flessner, Busch, Heideman & Woods, 2008) which blends ACT with Habit Reversal Therapy (HRT). However, further

research is now required to ascertain whether ACT is more effective, or functionally different, to typical cognitive restructuring interventions.

MBCT (Teasdale, Segal, & Williams, 1995) and DBT (Linehan, 1993), which also promotes mindfulness, are similarly suggested to be effective in teaching individuals to manage distressing and unwanted thoughts and feelings. Indeed, mindfulness interventions have been found to produce reductions in avoidance and rumination in depressed patients (Kumar, Feldman & Hayes, 2008) whilst also interrupting individuals tendencies to resort to maladaptive behaviours such as substance misuse (Simpson, Kaysen, Bowen & MacPherson, 2007).

To this end, given the numerous studies which indicate the mediating role and adverse psychological consequences of experiential avoidance, it will be important for research to continue developing methods to decrease avoidance and increase acceptance. From a public health perspective, large-scale population-based studies are also required to determine the prevalence of experiential avoidance and help calculate the extent to which it is a risk factor for psychological difficulties (Biglan, Hayes & Pistorello, 2009). This information could then be used to inform future research on factors influencing the development of experiential avoidance e.g. schools and families and subsequently, strengthen preventative interventions e.g. incorporating ACT principles into parenting skills interventions.

6. Conclusion

The current narrative review highlights experiential avoidance as playing a central role in the development and maintenance of a wide range of psychopathological conditions and maladaptive behaviours. Whilst many of the studies presented in this review are subject to methodological limitations, advances in experimental apparatus have increased confidence in this construct and highlight the utility of multi-method assessments in the measurement of experiential avoidance. This study significantly adds to the empirical review provided by Chawla and Ostafin (2007) through its inclusion of the emerging link between experiential avoidance and depression, updated review of studies undertaken in this area, experimental approaches in the measurement of this construct, and the clinical implications resulting from heightened tendencies towards experiential avoidance.

References

- Batten, S. V., Follette, V. M., & Aban, I. B. (2001). Experiential avoidance and high-risk sexual behavior in survivors of child sexual abuse. *Journal of Child Sexual Abuse, 10*, 101-120.
- Beck, A., Epstein, N., Brown, G., & Steer, R. (1998). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of consulting and clinical psychology, 56*, 893-897.
- Begotka, A. M., Woods, D.W., & Wetterneck, C.T. (2004). The relationship between experiential avoidance and the severity of trichotillomania in a nonreferred sample. *Journal of Behavior Therapy and Experimental Psychiatry, 35*, 17-24.
- Berking, M., Neacsiu, A., Comtois, K.A., & Linehan, M. M. (2009). The impact of experiential avoidance on the reduction of depression in treatment for borderline personality disorder. *Behaviour Research and Therapy, 47*, 663-670.

Berman, N.C., Wheaton, M.G., McGrath, P., & Abramowitz, J.S. (2010).

Predicting anxiety: The role of experiential avoidance and anxiety sensitivity. *Journal of anxiety disorders*, 24, 109-113.

Biglan, A., Hayes, S.C., & Pistorello, J. (2008). Acceptance and Commitment:

Implications for Prevention. *Prevention Science*, 9, 139-152.

Birmes, P., Brunet, A., Carreras, D., Ducassé, J.L., Charlet, J.P., Lauque,

D., et al. (2003). The Predictive Power of Peritraumatic Dissociation and Acute Stress Symptoms for Posttraumatic Stress Symptoms: A

Three-Month Prospective Study. *American Journal of Psychiatry*, 160, 1337–1339.

Boelen, P. A., & Reijntjes, A. (2008). Measuring Experiential Avoidance:

Reliability and Validity of the Dutch 9-item Acceptance and Action

Questionnaire (AAQ). *Journal of Psychopathology and Behavioral Assessment*, 30, 241–251.

- Boesch, L. E., Koss, M.P., Figueredo, A.J., & Coan, J.A. (2001).
Experiential Avoidance and Post-Traumatic Stress Disorder. *Journal of Aggression, Maltreatment and Trauma, 4*, 211-245.
- Bond, F.W., & Bunce, D. (2003). The role of acceptance and job control in
mental health, job satisfaction, and work performance. *Journal of Applied Psychology, 88*, 1057–1067
- Bond, F.W., Hayes, S.C., Baer, R.A., Carpenter, K.M., Orcutt, H.K., Waltz, T.
& Zettle, R.D. (2007). *Preliminary psychometric properties of the Acceptance and Action Questionnaire – II: A revised measure of psychological flexibility and acceptance*. Manuscript submitted for publication.
- Borkovec, T.D., Alcaine, O.M., & Behar, E. (2004). Avoidance theory of worry
and generalized anxiety disorder. In R.G. Heimburg, C.L. Turk, & D.S. Menin (Eds.), *Generalized anxiety disorder: Advances in research and practice* (pp 77-108). New York: Guilford Press.

Bornovalova, M. A., Gratz, K. L., Daughters, S. B., Nick, B., Delaney-

Brumsey, A., Lynch, T. R., et al. (2008). A multimodal assessment of the relationship between emotion dysregulation and borderline personality disorder among inner-city substance users in residential treatment. *Journal of Psychiatric Research, 42*, 717-26.

Brotchie, J., Hanes, J., Wendon, P., & Waller, G. (2006). Emotional

avoidance among alcohol and opiate abusers: The role of schema-level cognitive processes. *Behavioural and Cognitive Psychotherapy, 35*, 231-236.

Bryant, R. A. (2007). Does dissociation further our understanding of PTSD?

Journal of Anxiety Disorders, 21, 183-191.

Campbell-Sills, L., Barlow, D.H., Brown, T.A., & Hofmann, S.G. (2006). Effect

of suppression and acceptance on emotional responses of individuals with anxiety and mood disorders. *Behaviour, Research and Therapy, 44*, 1251-1263.

Chapman, A.L., Gratz, K.L., & Brown, M.Z. (2006). Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behaviour Research and Therapy*, 44, 371–394.

Chapman, A.L., Specht, M.W., & Cellucci, T. (2005). Borderline personality disorder and deliberate self-harm: Does experiential avoidance play a role? *Suicide and Life Threatening Behavior*, 35, 388-399.

Chawla, N., & Ostafin, B. (2007). Experiential avoidance as a functional dimensional approach to psychopathology: An empirical review. *Journal of Clinical Psychology*, 63, 871-890.

Cochrane, A., Barnes-Holmes, D., Barnes-Holmes, Y., Stewart, I., & Luciano, C.(2007). Experiential avoidance and aversive visual images: Response delays and event-related potentials on a simple matching task. *Behaviour Research and Therapy*, 45, 1379-1388.

Craske, M.G., & Hazlett-Stevens, H. (2002). Facilitating symptom reduction and behaviour change in GAD: The issue of control. *Clinical Psychology: Science and Practice*, 9, 69-75.

Day, A. E. (2009). *Psychological Factors Implicated in Pathways to Homelessness: The Role of Childhood Trauma*. Unpublished Doctoral Thesis, University of Southampton.

Diefenbach, G.J., Mouton-Odum, S., & Stanley, M.A. (2002). Affective correlates of trichotillomania. *Behaviour, Research and Therapy*, 40, 1305-1315.

Feldner, M. T., Hekmat, H., Zvolensky, M. J., Vowles, K., E., Secrist, Z., & Leen-Feldner, E. W. (2006). The role of experiential avoidance in acute pain tolerance: A laboratory test. *Journal of Behavior Therapy and Experimental Psychiatry*, 37, 146-158.

Feldner, M. T., Zvolensky, M. J., Eifert, G. H., & Spira, A. P. (2003).

Emotional avoidance: An experimental test of individual differences and response suppression using biological challenge. *Behaviour Research and Therapy*, 41, 403-411.

Flessner, C.A., Busch, A.M., Heideman, P.W., & Woods, D.W. (2008).

Acceptance-enhanced behavior therapy (AEBT) for trichotillomania and skin picking: Exploring the effects of component sequencing. *Behaviour Modification*, 32, 579-594.

Flessner, C. A., & Woods, D. W. (2006) Phenomenological characteristics, social problems, and economic impact associated with skin picking (SP) and problem skin picking (PSP). *Behavior Modification*, 30, 944-963.

Foa, E.B. (1995). *Manual for the Posttraumatic Stress Diagnostic Scale (PDS)*. Minneapolis, MN: NCS Assessments.

Foa, E.B., & Hearst-Ikeda, D. (1996). Emotional dissociation in response to trauma. In L.K. Michaelson, & W.J. Ray (Eds.). *Handbook of dissociation: Theoretical, empirical and clinical perspectives* (pp 207-224). New York: Plenum Press.

Foa, E.B., Steketee, G., Young, M.C. (1984). Agoraphobia: Phenomenological aspects, associated characteristics, and theoretical considerations. *Clinical Psychology Review, 4*, 431-457.

Forsyth, J.P., Parker, J.D., & Finlay, C.G. (2003). Anxiety Sensitivity, controllability and experiential avoidance and their relation to drug of choice and addiction severity in a residential sample of substance-abusing veterans. *Addictive Behaviors, 28*, 851-870.

Freud, S. (1920). *Introductory lectures on Psychoanalysis*. New York: Norton.

Gold, S.D., Marx, B.P., & Lexington, J.M. (2007). Gay male sexual assault survivors: The relations among internalised homophobia, experiential avoidance, and psychological symptom severity. *Behaviour, Research and Therapy, 45*, 549-562.

Gottman, J. M., & Katz, L. F. (1989). Effects of marital discord on young children's peer interactions and health. *Developmental Psychology, 25*, 373–381.

Gratz, K.L., Bonovalova, M.A., Delaney-Brumsey, A., Bettina, N., & Lejeuz, C.W. (2007). Laboratory-Based Study of the Relationship Between Childhood Abuse and Experiential Avoidance Among Inner-City Substance Users: The Role of Emotional Nonacceptance. *Behavior Therapy, 38*, 256-268.

Gratz, K.L., & Gunderson, J.G. (2006). Preliminary data on an acceptance-based emotion regulation group intervention for deliberate self-harm among women with borderline personality disorder, *Behavior Therapy*, 37, 25-35.

Gronwall, D.M. (1977). Paced auditory serial-addition task: A measure of recovery from concussion. *Perceptual and Motor Skills*, 44, 367-373.

Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implication for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 64, 970-986.

Gross, J.J., & Levenson, R.W. (1997). Hiding feelings: The acute effects of inhibiting negative and positive emotion, *Journal of Abnormal Psychology*, 106, 95–103.

Hayes, S.C., Barnes-Holmes, D., & Roche, B. (2001). *Relational frame theory: A Post Skinnerian account of human language and cognition.*

New York: Kluwer Academic / Plenum Publishers.

Hayes, S.C. & Gifford, E.V. (1997). The trouble with language: Experiential avoidance, rules, and the nature of verbal events. *Psychological Science, 8*, 170-173.

Hayes, S.C., Luoma, J., Bond, F., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes, and outcomes. *Behaviour, Research and Therapy, 1*, 1-25.

Hayes, S.C., Strosahl, K.D., & Wilson, K.G. (1999). *Acceptance and commitment therapy: An experiential approach to behaviour change.*

New York, NY: Guilford Press.

Hayes, S.C., Strosahl, K.D., Wilson, K.G., Bissett, R.T., Pistorello, J.,

Toarmino, D., et al. (2004). Measuring experiential avoidance: A preliminary test of a working model. *The Psychological Record, 54*, 553–578.

Hayes, S.C., Wilson, K.G., Gifford, E.V., Follette, V.M., & Strosahl, K. (1996).

Experiential avoidance and behavioural disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology, 64*, 1152-1168.

Holowka, D.W., Salters-Pedneault, K., & Roemer, L. (2005, November). *The role of experiential avoidance and rumination in depressive symptoms.*

Poster presented at the annual convention of the Association for Advancement of Behavior Therapy. Washington, DC.

Jakupcak, M., Lisak, D., & Roemer, L. (2002). The role of masculine ideology and masculine gender role stress in men's perpetration of aggression and violence in relationships. *Psychology of Men and Masculinity, 3*, 97-106.

Kashdan, T.B., Barrios, V., Forsyth, J.P., & Sterger, M.F. (2006). Experiential avoidance as a generalized psychological vulnerability: comparisons with coping and emotion regulation strategies. *Behaviour, Research and Therapy, 44*, 1301-1320.

Kashdan, T.B., Morina, N., & Priebe, S. (2009). Post-traumatic stress disorder, social anxiety disorder, and depression in survivors of the Kosovo War: Experiential avoidance as a contributor to distress and quality of life. *Journal of Anxiety Disorders, 23*, 185-196.

King, M. (2007). *An exploration of the effects of mindfulness awareness and acceptance skills on explicit and implicit experiential avoidance and psychological well-being*. Unpublished manuscript. University of Southampton.

Kingston, J., Clarke, S., & Remington, B. (2010). Experiential Avoidance and Problem Behavior: A Mediation Analysis. *Behavior Modification, 34*, 145–163.

Koster, E., Rassin, E., Crombez, G., & Naring, G. (2003). The paradoxical effects of suppressing anxious thoughts during imminent threat. *Behaviour, Therapy and Research, 42*, 1113-1120.

Kumar, S., Feldman, G., & Hayes, S. C. (2008). Changes in mindfulness and emotion regulation in an exposure-based cognitive therapy for depression. *Cognitive Therapy and Research, 32*, 734-744.

Lappalainen, R., Lehtonen, T., Skarp, E., Taubert, E., Ojanen, M., & Hayes, S.C. (2007). The impact of CBT and ACT models using psychology trainee therapists: A preliminary controlled effectiveness trial. *Behavior Modification, 31*, 488-511.

Linehan, M. M. (1993). *Cognitive-Behavioral Treatment of Borderline Personality Disorder*. New York: The Guilford Press.

Lynch, T.R., Robins, C.J., Morse, J.Q., & Krause, E.D. (2001). A meditational model relating affect intensity, emotion inhibition, and psychological distress. *Behavior Therapy, 32*, 519-536.

Marlatt, G.A., & Witkiewitz, K. (2005). Relapse preventions for alcohol and drug problems. In G.A. Marlatt and D.M. Donovan (Eds.), *Relapse Prevention: Maintenance strategies in the treatment of addictive behaviours* (2nd ed., pp. 1-44). New York: Guilford Press.

Marx, B.P., & Sloan, D.M. (2002). The role of emotion in the psychological functioning of adult survivors of childhood sexual abuse. *Behavior Therapy, 33*, 563-577.

Marx, B.P., & Sloan, D.M. (2005). Experiential avoidance and peritraumatic dissociation as predictors of posttraumatic stress symptomatology, *Behaviour Research and Therapy, 43*, 569–583.

McCracken, L.M. (1998). Learning to live with pain: Acceptance of pain predicts adjustment in persons with chronic pain. *Pain, 74*, 21-27.

Merrill, L.L., Thomsen, C.J., Sinclair, B.B., Gold, S.R., & Milner, J.S. (2001). Predicting the impact of child sexual abuse on women: The role of abuse severity, parental support, and coping strategies. *Journal of Consulting and Clinical Psychology, 69*, 992-1006.

Merwin, R.M., Rosenthal, M.Z., & Coffey, K.A. (2009). Experiential Avoidance Mediates the Relationship Between Sexual Victimization and Psychological Symptoms: Replicating Findings with an Ethnically Diverse Sample, *Cognitive Therapy and Research*, 33, 537-542.

Mitmansgruber, H., Beck, T.N., Höfer, S., & Schüßler, G. (2009). When you don't like what you feel: Experiential avoidance, mindfulness and meta-emotion in emotion regulation. *Personality and Individual Differences*, 46, 448-453.

Mitmansgruber, H., Beck, T.N., & Schüßler, G. (2008). " Mindful helpers": Experiential avoidance, meta-emotions, and emotion regulation in paramedics. *Journal of Research in Personality*, 42, 1358-1363.

Moulds, M.L., Kandris, E., Starr, S., & Wong, A.C.M. (2007). The relationship between rumination, avoidance and depression in a non-clinical sample. *Behaviour, Research and Therapy*, 45, 251-261.

Najimi, S., Wegner, D.M., & Nock, M.W. (2007). Thought suppression and self-injurious thoughts and behaviours. *Behaviour Research and Therapy*, 45, 1957-1965.

Nolen-Hoeksama, S. & Morrow, J. (1991). A prospective study of depression and posttraumatic stress symptoms after a natural disaster: The 1989 Loma Prieta earthquake. *Journal of Personality and Social Psychology*, 61, 115-121.

Norberg, M.M., Wetterneck, C.T., Woods, D.W., & Conelea, C.A. (2007). Experiential avoidance as a mediator of relationships between cognitions and hair-pulling severity. *Behaviour Modification*, 31, 367-381.

Orsillo, S.M., & Roemer, L. (Eds). (2005). *Acceptance and mindfulness-based approaches to anxiety: New directions in conceptualization and treatment*. New York: Kluwer Academic/Plenum.

Ottenbreit, N.D., & Dobson, K.S. (2004). Avoidance and depression: the construction of the Cognitive-Behavioral Avoidance Scale. *Behaviour Research and Therapy*, 38, 611-617.

Penley, J.A., Tomaka, J., & Wiebe, J.S. (2002). The association of coping to physical and psychological health outcomes: A meta-analytic review, *Journal of Behavioral Medicine* 25, 551-603.

Polusny, M.A., Rosenthal, M.Z., Aban, I., & Follette, V.M. (2004). Experiential avoidance as a mediator of the effects of adolescent sexual victimization on adult psychological distress. *Violence and Victims*, 19, 1-12

Quinn, E.P., Brandon, T.H., & Copeland, A.L. (1996). Is task persistence related to smoking and substance abuse? The application of learned industriousness theory to addictive behaviours. *Experimental and Clinical Psychopharmacology*, 4, 186-190.

Robertson, S.M.C., & Hopko, D.R. (2009). Experiential avoidance: A moderator of the relationship between age and emotional expression. *Ageing & Mental Health, 13*, 611-618.

Rogers, C. A. (1961). *On becoming a person: A therapist's view of psychotherapy*. Boston: Houghton Mifflin.

Rosenthal, M. Z., Cheavens, J.S., Lejeuz, C. W., & Lynch, T.R. (2005). Thought suppression mediates the relationship between negative affect and borderline personality disorder symptoms. *Behaviour Research and Therapy, 43*, 1173-1185.

Rosenthal, M.Z., Cheavens, J.S., Lynch, T.R., & Follette, V. (2006). Thought suppression mediates the relationship between negative mood and PTSD in sexually assaulted women. *Journal of Traumatic Stress, 19*, 741-745.

Rusting, C., & Nolen-Hoeksema, S. (1998). Regulating responses to anger:

Effects of rumination and distraction on angry mood. *Journal of*

Personality and Social Psychology, 74, 790-803.

Salters-Pedneult, K., Tull, M.T., & Roemer, L. (2004). The role of avoidance

of emotional material in the anxiety disorders. *Applied and*

Preventative Psychology, 11, 95-114.

Santanello, A.W., & Gardner, F.L. (2007). The Role of Experiential Avoidance

in the Relationship Between Maladaptive Perfectionism and Worry.

Cognitive Therapy and Research, 30, 319-332.

Segal, Z.V., Williams, J.M.G., & Teasale, J.D. (2001). *Mindfulness-based*

cognitive therapy for depression: A new approach to preventing

relapse. New York: Guilford Press.

Shidlo, A. (1994). Internalized homophobia: Conceptual and empirical issues in measurement. In B. Greene, & G. M. Herek (Eds.), *Lesbian and gay psychology: Theory, research and clinical applications* (pp. 176-205). Thousand Oaks, CA: Sage Publications.

Simpson, T.L., Kaysen, D., Bowen, S., & MacPherson, L.M. (2007). PTSD Symptoms, Substance Use, and Vipassana Meditation among Incarcerated Individuals. *Journal of Traumatic Stress, 20*, 239-249.

Stewart, S.H., Zvolensky, M.J., & Eifert, G.H. (2002). The relations of anxiety sensitivity, experiential avoidance, and alexithymic coping to young adults' motivations for drinking. *Behavior Modification, 26*, 274-296.

Teasdale, J. D., Segal, Z. V., & Williams, J. M. G. (1995). How does cognitive therapy prevent depressive relapse and why should attentional control (mindfulness) training help? *Behaviour Research and Therapy, 33*, 25-39.

Tiwari, S., Podell, J.C., Martin, E.D., Mychailyszyn, M.P., Furr, J.M., & Kendall, P. (2008). Experiential avoidance in the parenting of anxious youth: Theory, research and future directions. *Cognition & Emotion*, 22, 480-496.

Tull, M.T., Jakupcak, M., Paulson, A., & Gratz, K.L. (2007). The role of emotional inexpressivity and experiential avoidance in the relationship between posttraumatic stress disorder symptom severity and aggressive behaviour among men exposed to interpersonal violence. *Anxiety, Stress and Coping*, 20, 337-351.

Tull, M.T., & Roemer, L. (2003). Alternate explanations of emotional numbing of posttraumatic stress disorder: An examination of hyperarousal and experiential avoidance. *Journal of Psychopathology and Behavioral Assessment*, 25, 147-154.

Twohig, M.P., Hayes, S.C., & Masuda, A. (2006). Increasing Willingness to Experience Obsessions: Acceptance and Commitment Therapy as a Treatment for Obsessive-Compulsive Disorder. *Behavior Therapy*, 37, 3-13.

Verdejo-garcía, A., Bechara, A., Recknor, E.C., & Pérez-García, M. (2006). Executive dysfunction in substance dependent individuals during drug use and abstinence: An examination of the behavioral, cognitive and emotional correlates of addiction. *Journal of the International Neuropsychological Society*, 12, 405-415.

Vernig, P.M. & Orsillo, S.M. (2009). Psychophysiological and self-reported emotional responding in alcohol-dependent college students: The impact of brief acceptance/mindfulness instruction. *Cognitive Behaviour Therapy*, 38, 174-183.

Wagner, A.W., & Linehan, M.M. (1998). Dissociative Behavior. In V.M.

Follette, J.I. Ruzek, & F.R. Abueg (Eds.). *Cognitive-behavioral*

therapies for trauma (pp. 191-225). New York: Guilford Press.

Wegner, D.M., & Zanakos, S. (1994). Chronic thought suppression. *Journal*

of Personality, 62, 615-640.

Wenzlaff, R.M., & Wegner, D.M, (2000). Thought suppression. *Annual*

Review of Psychology, 51, 59-91.

**An Exploration of the Relationship between Childhood
Trauma, Internalised Shame and Experiential Avoidance in an
Adult Homeless Population**

Rebecca Barrett BSc, MSc.

University of Southampton, School of Psychology, Shackleton Building, Southampton, SO17 1BJ

Tel: +44(0)23 8059 5575. Fax: +44(0)23 8059 2588. Email: rlb105@soton.ac.uk

Prepared for submission to Journal of Consulting and Clinical Psychology

(See Appendix B for Instructions to Authors)

Abstract

In the last decade, research exploring causes of homelessness has generally focused on individual and contextual factors rather than the psychological processes and causal pathways leading individuals to become or remain homeless. To increase psychological understanding of potential factors contributing to these pathways, the present study investigated whether childhood trauma is indirectly associated with a tendency to engage in experientially avoidant strategies, through its influence on feelings of internalised shame in a homeless population.

A sample of 79 homeless adults completed four self-report questionnaires measuring childhood trauma, internalised shame, experiential avoidance and mood. Participants also completed a Visual Probe Task as a means of assessing experiential avoidance behaviourally. In accordance with Baron and Kenny's (1986) 'causal steps approach', the hypothesised mediator model was tested using a series of regression analyses. Key findings revealed a significant relationship between childhood trauma and self-reported experiential avoidance that was mediated by internalised shame.

The results of the present study suggest that in an adult homeless population, traumatic experiences in childhood are associated with increased engagement in experiential avoidance, but only indirectly through its relationship with internalised shame. However, whilst making an important contribution towards understanding the psychological factors implicated in pathways to homelessness, the cross-sectional nature of the design prevents

causal conclusions from being drawn. Implications for further research and interventions, which seek to decrease experiential avoidance and promote emotional acceptance among individuals with a history of abuse are discussed.

Keywords: Homelessness; Childhood Trauma; Internalised Shame; Experiential Avoidance.

1. Introduction

1.1 Overview

Homelessness is an intractable and multifaceted problem in the United Kingdom (UK) that has significant implications for both the individual and society. For many years, the homeless have represented an excluded group in society who face difficulties in many areas including poverty, social isolation, psychiatric illness and substance misuse problems (Van den Bree, et al., 2009). Yet it is only recently, that research has been undertaken with this vulnerable population to help increase psychological understanding of the factors, which lead to individuals becoming and remaining homeless.

Government initiatives to reduce homelessness have to date resulted in a 21% reduction in the number of households living in temporary accommodation since December, 2008 (Department for Communities and Local Government [DCLG], 2010). New government targets further hope to reduce this to 50,500 by the end of 2010 (Office of the Deputy Prime Minister [ODPM], 2005). However, without clear understanding of the factors associated with repeated tenancy breakdown and other negative outcomes, many of which may perpetuate chronic and repeated homelessness, this target will be challenging to achieve. Additional research exploring causal and maintaining factors in homelessness is therefore essential, to enable the development and delivery of effective prevention and intervention strategies to those most in need.

1.2 Definition of Homelessness

Homeless individuals are often viewed as a homogenous population without a permanent or regular place to live (Crisis, 2005). However, as with housed populations, various sub-populations exist including those individuals who sleep on the streets or in other outdoor locations such as derelict buildings (ODPM, 2003). These individuals are typically known as '*rough sleepers*', the latest government figures for which, estimate that 483 people on average sleep rough every night in England (DCLG, 2008). There are also the '*hidden homeless*', a group of individuals who frequently reside in hostels, squats or on friends' sofas. It is estimated there are approximately 380,000 'hidden homeless' in Great Britain at any one time (Crisis, 2006); however accurate prevalence rates of homelessness are difficult to establish as this subgroup's way of living makes these individuals invisible to the public. Furthermore, although meeting the legal definition of homelessness¹, these individuals typically fail to fall into local authorities' remit for support (Crisis, 2005)².

1.3 Aetiology of Homelessness

The question of what causes homelessness has always been a rather complex one to answer, as the itinerant nature of, and changes in, heterogeneity in the homeless population have made longitudinal research

¹ A person is considered legally homeless if they have no right to occupy accommodation or that it is not reasonable to continue to occupy current accommodation (Housing Act, 1996).

² There is a difference between the legal definition of homelessness (see above) and statutory homelessness (homeless people or households recognised by the local authority as either unintentionally homeless and in priority need, intentionally homeless and in priority need, or homeless and not in priority need) (Crisis, 2005).

problematic. Furthermore, whilst numerous individuals remain homeless for extended periods (*chronic homelessness*), others cycle in and out of homelessness (*repeated homelessness*). These two groups are considered to be amongst the most vulnerable and disadvantaged people in society and often present to services with multiple and complex needs. To this end, it is likely that a great diversity exists in both the type of individuals classified as homeless and the reasons underlying the onset and maintenance of homelessness (Lehmann, Kass, Drake & Nichols, 2007).

Historically, theoretical contributions and empirical research findings have highlighted two broad explanations regarding possible causes of homelessness; the first is associated with economic issues and social policy e.g. poverty and lack of social housing (macro-level factors) while the second focuses on individual vulnerabilities and behaviours e.g. mental health (micro-level factors). Current understanding highlights the combined effect of macro and micro factors as being implicated in the pathway to homelessness (Morrell-Bellai, Goering & Boydell, 2000). In this context, macro factors such as unaffordable housing and unemployment are viewed as distal or pre-disposing factors to homelessness, which coupled with lack of skills, opportunities in housing and daily stressors may perpetuate homelessness (Slade, Scott, Truman & Leese, 1999). Micro factors conversely, are those which place individuals at risk of becoming homeless e.g. childhood abuse, relationship breakdown and leaving institutional settings (local authority care,

prison or armed forces) (Van den Bree et al., 2009; Caton et al., 2005; Morrell-Bellai et al., 2000).

1.4 Pathways to Homelessness

Whilst research highlights individual and contextual factors as potential causes of homelessness, the psychological processes and causal pathways which result in homelessness have only recently started to emerge. Models that have attempted to explain associations between such factors indicate distal factors (e.g. childhood trauma) as placing an individual at risk by contributing to subsequent events and conditions (e.g. mental illness). When these are combined with significant precipitating events such as loss of accommodation or employment, individuals are viewed as being more susceptible to becoming homeless (Crane et al., 2005; Maguire, 2006; Martijn & Sharpe, 2006). Many of the original risk factors precluding homelessness (e.g. psychological or substance use disorders) may also perpetuate homelessness (Morrell-Bellai et al., 2000).

Empirical evidence supporting one potential pathway to homelessness has recently been provided by Day (2009). In a sample of 57 homeless adults, the relationship between childhood abuse and use of maladaptive coping strategies (e.g. a reliance on alcohol, drugs and self harm) was found to be mediated by emotional dysregulation, the latter of which involves an inability to control behaviours when experiencing negative emotions. This research is

one of the first studies to explore the role of childhood trauma in pathways to homelessness and the mechanisms through which this relationship occurs. However, prior to being able to generalise these findings to all homeless individuals, this research needs to be refined and replicated with greater numbers. Consideration must also be given to additional psychological factors i.e. emotional non-acceptance and experiential avoidance, potentially implicated in pathways to homelessness and later dysfunction (Gratz, Bornovalova, Delany-Brumsey, Nick & Lejuez, 2007; Hayes, Wilson, Gifford, Follette & Strosahl, 1996).

1.5 Childhood Trauma and Experiential Avoidance

Within psychiatric and non-clinical populations, researchers have surmised that long-term psychological outcomes associated with childhood abuse e.g. post traumatic stress disorder (PTSD), deliberate self harm (DSH) and personality disorders (Spataro, Mullen, Burgess, Wells & Moss, 2004; Gratz, Conrad & Roemer, 2002; Stovall-McClough & Cloitre, 2006) may be best understood within the broader theoretical framework of experiential avoidance. Experiential avoidance is defined as a broad category or class of cognitive, emotional and behavioural avoidance strategies that can be called upon when an individual is unwilling to remain in contact with potentially distressing or aversive experiences (Hayes et al., 1996). Within this theoretical framework, engagement in behaviours such as DSH (Chapman, Gratz & Brown, 2006) and substance misuse (Marlatt & Witkeiwitz, 2005) are viewed as potential means of altering the frequency, form or situational

sensitivity of difficult experiences. The development, maintenance and exacerbation of psychological disorders such as anxiety and PTSD are viewed as paradoxical consequences of regular attempts to avoid or suppress and escape from unwanted or distressing experiences (Hayes & Gifford, 1997).

Nevertheless, despite the assumed importance of experiential avoidance in the development of psychopathology and maladaptive behaviours (Walser & Hayes, 1998), there is a paucity of empirical research investigating the relationship between childhood trauma and experiential avoidance, and the potential mechanisms underlying it. Of the limited research that has been undertaken, preliminary evidence highlights greater levels of experiential avoidance among adults with experiences of childhood sexual abuse (Batten, Follette & Aban, 2001). However, few empirical studies of this nature have originated from the UK, nor have they considered this relationship within vulnerable populations. Researchers have also tended to rely on self-report methodology in the measurement of experiential avoidance despite methodological advancement in this field.

1.6 Experimental Approaches in the Measurement of Experiential Avoidance

In the last few years, studies exploring experiential avoidance have started to incorporate experimental methodology as means of assessing this construct. This has included behavioural and physiological measures of experiential avoidance in response to inhalations of CO₂ and cold pressor tasks (Feldner, Zvolensky, Eifert, & Spira, 2003; Feldner et al., 2006). Other experimental designs that assess the emotional responses and display of avoidant behaviour following exposure to potentially distressing stimuli (Cochrane, Barrett-Holmes, Barrett-Holmes, Stewart & Luciano, 2007) have also emerged.

Visual Probe Tasks (VPT) is one such methodology, which measures vigilance or avoidance towards potentially threatening images. Recent research by King (2007, unpublished manuscript) indicated a correlation between scores on the AAQII (Bond et al., 2007 submitted for publication); a self-report questionnaire measuring experiential avoidance, and avoidance of aversive images using a VPT. These findings tentatively point to VPT's as being one potential approach through which experiential avoidance might be captured, however, before this can be ascertained, further research is required.

1.7 The Relationship between Childhood Trauma and Experiential Avoidance.

Given the clear implications resulting from research exploring relationships between childhood abuse and experiential avoidance in psychiatric and non-clinical populations, further research must be undertaken to extend this understanding to vulnerable populations i.e. the homeless, and address the limitations mentioned above. Moreover, given the lack of research focusing on the potential mechanisms through which this relationship occurs, future studies investigating these mechanisms may help to explain why not all individuals with histories of childhood abuse develop long-term psychological difficulties or demonstrate heightened levels of experiential avoidance. Thus it is necessary to investigate potential mediators of this relationship as such knowledge may help to advance psychological understanding of one of the potential pathways to homelessness.

1.7.1 The Role of Emotional Non-Acceptance

Emotional non-acceptance, which is defined as the evaluation of emotions as bad or wrong, and linked to the development of secondary emotional responses such as fear or shame, has been put forward as one potential mediator. Indeed, it is suggested by Gratz, Tull and Wagner (2005) that individuals with negative reactions to their own emotions (demonstrated by the presence of secondary emotional responses) will be increasingly motivated to engage in experiential avoidance to escape from or suppress

their perceived aversive state. Research to date, however, has failed to examine the specific role of shame or guilt in relation to experiential avoidance thus highlighting an area for further investigation.

1.7.2 Internalised Shame

Shame is an emotion of negative self-evaluation whereby self-image and identity are considered as defective or fundamentally damaged (Bedford & Hwang, 2003). It is often confused with guilt; a related but distinct emotion in which specific behaviours, rather than the entire self, are perceived as unacceptable or wrong. Shame is experienced in two ways. State shame is a response typically experienced as an acute, transient feeling, which is evident in certain situations. Internalised or trait shame refers to the experience of shame in a more intense and pervasive manner (Goss, Gilbert & Allan, 1994). Here, a fundamental sense of incompetence and inferiority is felt which results from enduring and intense levels of shame during development (Claesson & Sohlberg, 2002).

Internalised shame has been consistently associated with experiences of childhood sexual abuse (Finkelhor & Browne, 1986; Kessler & Bieschke, 1999) and psychological abuse (Hoglound & Nicholas, 1995; Webb, Heisler, Call, Chickering & Colburn, 2007). Indeed, individuals with histories of childhood abuse are said to experience “chronic and persistent negative evaluations of the self” (Feinauer, Hilton & Callahan, 2003). These include

cognitions around being unlovable, powerless, of not being valued as a person, and/or the perception that they have become tainted or defective in some way (Feiring & Taska, 2005; Feinauer et al., 2003). The consequences of emotional maltreatment have not been extensively investigated; however, preliminary research evidence indicates that histories of childhood emotional abuse and emotional neglect are associated with feelings of shame (Wright, Crawford & Castillo, 2009).

Given the previously theorised relationship between emotional non-acceptance and experiential avoidance, in addition to theories highlighting childhood abuse as being related to emotional non-acceptance (Linehan, 1993) and internalised shame (Webb et al., 2007), further research exploring potential associations between childhood abuse, internalised shame and experiential avoidance is required. Studies examining internalised shame as a potential mediator in the relationship between childhood abuse and experiential avoidance would also help to advance the literature. Preliminary support for a mediation model stems from research highlighting childhood trauma as being associated with greater emotional non-acceptance (Gratz & Tull, 2003); and emotional non-acceptance being associated with heightened tendencies towards experiential avoidance (Gratz & Roemer, 2004). Moreover, Gratz et al., (2007) recently provided preliminary laboratory-based evidence in a substance using population, that emotional non-acceptance mediates the relationship between childhood trauma and experiential avoidance. These findings are interesting as they highlight the

possible applicability of mediational models to other vulnerable populations including the homeless, which in turn may increase understanding of some of the potential risk factors leading individuals to become and remain homeless. In order to address the paucity of literature investigating this important area the present study aims to extend the research, and theorised mediational model of Gratz et al., (2007), to a homeless population. This research also seeks to advance mediational literature surrounding the relationship between childhood trauma and experiential avoidance by focusing on internalised shame as a key component of emotional non-acceptance and measuring experiential avoidance through self-report and VPT methodology.

1.8 Summary

Despite a gradual increase in psychological knowledge of the complex pathways into homelessness, additional research into the nature of associated risk factors is still required to support both prevention and early intervention programmes for this vulnerable population. Indeed, whilst research points to childhood trauma and maladaptive behaviours as being implicated in the pathways to becoming and remaining homeless (Day, 2009), there may be other risk factors e.g. experiential avoidance and internalised shame which also play a contributing role. These factors, whilst related to long term psychological difficulties in clinical and non-clinical populations, have only recently been studied in vulnerable populations. Given the new methodological developments in the field of experiential avoidance, it would be therefore be interesting to explore whether such a relationship

exists in a homeless population, using both self-report and experimental methodology. This would greatly add to the current research undertaken in the UK as, historically, the majority of research has emerged from the USA and assessed experiential avoidance using self-report measures.

This study aimed to explore the relationship between childhood trauma and experiential avoidance (measured through self-report and experimental methods), and whether greater feelings of internalised shame mediate this relationship in a homeless population. This was tested through the following hypotheses:

Hypothesis 1: Childhood trauma will be associated with high levels of shame and an increased tendency to engage in experiential avoidance (measured using self-report measures and attentional avoidance on a VPT) in an adult homeless population.

Hypothesis 2: The relationship between childhood trauma and experiential avoidance will be mediated by internalised shame.

2. Method

2.1 Design

The present study employed a cross-sectional correlational design. Validated self-report questionnaires measuring childhood trauma, internalised shame, experiential avoidance and mood were administered to homeless participants. A VPT provided a behavioural measure of experiential avoidance (a reaction time measure of biased selective attention towards vs. away from negative images).

2.2 Sample

2.2.1 Sampling strategy

An opportunity sample of 84 homeless adults was recruited from five hostels for homeless adults in Southampton. Recruitment occurred over ten sessions, and it is estimated that a pool of 130 potential participants were available to approach, thereby giving an estimated recruitment rate of 64%.

2.2.2 Justification of Sample Size

A priori power analysis, using G*Power version 3.1, indicated a sample size of 68 as being sufficient to detect a medium effect size ($r = .30$ / $f^2 = .15$), where power was .8 and α was .05 (Cohen, 1992; Faul, Erdfelder, Buchner, & Lang, 2007).

2.2.3 *Inclusion/Exclusion Criteria*

Adults who were currently homeless and who had been homeless for at least the past month or had a history of repeated homelessness (i.e. homeless more than once)³ were included in the present study.

Individuals were excluded from this study based on an inability to understand written or spoken English. This exclusion was deemed necessary due to the unavailability of interpreters and alternative language tests⁴. Individuals were not excluded on the basis of drug or alcohol use.

2.3 Participant Characteristics

2.3.1 *Demographic Characteristics*

In total, 84 homeless adults participated in the study. Five participants were excluded from the statistical analysis due to invalid responses to the questionnaires⁵ and where there were demonstrable difficulties understanding written and spoken English (as per the exclusion criteria). The final sample consisted of 79 participants (94% participation rate). The majority of participants were white British (n=69, 87.3%) males (n=63, 79.7%)

³ A broad definition of homelessness was used encompassing anyone who did not have a permanent place to live including rough sleepers and those residing in other forms of temporary accommodation. Rough sleepers included anyone who slept in the open air or in buildings or other places not designed for habitation.

⁴ This exclusion criteria was approved by the University of Southampton School of Psychology Ethics Committee and was not considered to be unnecessarily prejudicial.

⁵ Where the same response was provided across a whole questionnaire irrespective of reversed items.

with an average age of 35.3 years (SD=10.9). The majority of participants also resided in homeless hostels ($N=75$, 94.9%). The remaining participants ($n=4$, 5.1%) were identified as street homeless. Demographic characteristics of the final sample are presented in Table 2.

Table 2: Demographic Characteristics of the final sample ($N=79$)

Variable	Category	N	Frequency (%)
Age (Years)	18-25	19	24.0
	26-35	20	25.3
	36-49	33	41.8
	>50	7	8.9
Gender	Male	63	79.7
	Female	16	20.3
Ethnicity	White British	69	87.3
	White Other	2	2.5
	Black Caribbean	2	2.5
	Black Other	1	1.3
	Indian	1	1.3
	Other	4	5.1
Accommodation Status	Hostel	75	94.9
	Street Homeless	4	5.1

2.4 Measures

Each participant was asked to complete a demographic form (Appendix C), which was designed to assess age, gender, ethnicity and housing status. Four questionnaires assessing childhood trauma, internalised shame, experiential avoidance and impact of mood, and one computerized measure (measure selective attention towards vs. away from negative stimuli) were administered to the participants (details below).

2.4.1 Child Abuse and Trauma Scale (CATS: Sanders & Becker-Lausen, 1995)

The CATS is a 38 item self-report inventory which measures subjective reports of the frequency and extent of various types of negative childhood and adolescent experiences. The CATS produces individual scores on four subscales: negative home environment/ neglect (14 items), childhood sexual abuse (6 items), childhood physical abuse (6 items) and childhood emotional abuse (7 items; created by Kent & Waller, 1998). A further six items also contribute to the total CATS score.

Respondents are required to indicate on a 4 point scale (0 = never; 4 = always) how frequently each of a range of traumatic experiences happened to them during their childhood and adolescence. All items within this measure are sensitively worded e.g. “How often were you left alone as a child” as a means of minimising any potential distress resulting from

completing the questionnaire. The score for each subscale is the mean score on the items that make up that subscale. Total CATS scores can also be derived from the mean of all items with higher scores reflecting a greater frequency and severity of adverse childhood experience.

The CATS has been found to have reasonable psychometric properties including high internal consistency (Cronbach's alpha = .90) for the total CATS score. Test-retest reliability of the CATS scales are also reportedly good with Pearson's r coefficients ranging from .71 to .91 (Kent & Waller, 1998; Sanders & Becker-Lausen, 1995). The validity of the CATS has also been supported as significant correlations between the CATS and outcomes such as depression, difficulties in interpersonal relationships and victimisation have been demonstrated in the literature (Kent & Waller, 1998; Sanders & Becker-Lausen, 1995). The CATS has also been used in previous research exploring the relationship between adverse childhood experiences and later psychological difficulties (Hartt & Waller, 2002; Briggs & Price, 2009).

2.4.2 Internalised Shame Scale (ISS: Cook, 1994)

The ISS is a self-report questionnaire designed to measure the extent to which respondents have internalised shame feelings. This measure contains 30 questions with 24 negatively worded items from which a 'shame score' is derived. There are also 6 positively worded items, which have been adapted from the Rosenberg (1965) Self-Esteem Scale. These items, when scored

separately, may be used as an indication of self-esteem whilst also preventing response set bias. The total shame score is obtained by excluding the self esteem items and summing the remaining items giving a score range of 0 to 96. Items are rated on a 4 point scale (0= never; 4= always) where a score over 50 points to clinical levels of internalised shame whilst scores over 60 are indicative of extreme levels of internalised shame (Cook, 1994).

The ISS has adequate test re-test reliability with Cook (1994, 2001) reporting stability coefficients of .84 and .69 for shame and self esteem subscales respectively over a seven-week interval. Good internal consistency has also been demonstrated across both subscales (Chronbach's alpha= .95 and .96) in clinical and non-clinical samples (Cook, 1994). More recently, del Rosario and White (2006) reported high levels of stability, across both internalised shame and self-esteem subscales, over a 14-week test period.

2.4.3 The Acceptance and Action Questionnaire (AAQ: Hayes et al., 2004)

The AAQ is a nine-item, self-report measure of experiential avoidance, primarily in regard to emotions and distressing thoughts. Respondents are asked to rate the degree to which each statement applies to them e.g. "I'm not afraid of my feelings" using a seven-point likert scale (1= "never true"; 7= "always true"). Four items are reversed scored and the nine items are summed to produce a total score ranging from 9 to 63. Higher scores on the

AAQ indicate immobility and higher levels of experiential avoidance, whereas low scores indicate action and acceptance.

This measure has been found to have adequate internal consistency, with reported Chronbach's alpha's ranging between .70 and .79 (Bond & Bunce, 2003; Hayes et al., 2004). The AAQ is a relatively new measure, with many of the validation studies having been undertaken on the 16-item version of the scale. However, strong correlations have been found (Pearson $r=.89$) with the 9-item version (Hayes et al., 2004). The AAQ also correlates highly with numerous measures of general psychopathology as well as with specific measures of depression, anxiety and PTSD symptomatology (Hayes, Luoma, Bond, Masuda & Lillis, 2006). The AAQ also has demonstrated convergent validity ($r = 0.44 - 0.50$) with the White Bear Suppression Inventory (Wegner, 1994), an additional measure of avoidant coping.

2.4.4 The Visual Probe Task using the International Affective Picture System. (IAPS: Lang, Ohman, & Vaitl, 1988)

The VPT is a widely used paradigm, which provides a simple reaction time measure of selective attention (i.e. biases in vigilance (attention towards critical stimuli) or avoidance (attention away from critical stimuli)). Within this task, participants are shown a pair of stimuli for a short time at two different spatial locations on a screen. One of the stimuli contains 'threat' information while the other stimulus is neutral.

Thirty-two pictures were selected from the International Affective Picture System (IAPS; Lang, et al., 1988), which is a standardised set of emotion eliciting, colour pictures with normative ratings on valence, dominance and arousal. A list of IAPS images used in the present study can be found in (Table 3 in Appendix D). The selection of pictures contained 'mild trauma related imagery' (e.g. a boy crying) and 'moderately threatening images' (e.g. a man with a knife). Each image was paired with a different neutral image e.g. a hair dryer (matched for colour and complexity). Standardised ratings of valence (-4 to +4) and arousal (0-8) informed selection for the present study. These images were piloted with one homeless adult and hostel manager to assess suitability with this client group, following which, negatively valenced, moderately arousing 'threatening' pictures (values -2/-3 level) were chosen.

In each trial of the VPT, participants saw a fixation cross for 750 ms followed by two pictures which appeared for 17ms (subliminally), 500ms and 1500ms. In total there were 96 trials (32 at each of the 3 time exposures). Each pair of images was matched as closely as possible for colour and layout and was presented side by side with a 75 mm space between the two pictures. They were programmed using the Presentation software package (Presentation 12.1.04.10.08) and displayed on a plain black background on an AMD Turion (tm) 1.90GHz laptop.

Immediately after the offset of the two pictures, a small dot probe (5 mm diameter) emerged at the location of the threatening stimulus (congruent presentation) or at the location of the neutral stimulus (incongruent presentation). Participants were asked to indicate the probe location by pressing one of two buttons on a computer keyboard as quickly and accurately as possible. Reaction time scores on congruent and incongruent trials were used to calculate attentional bias scores, where positive scores indicate vigilance (attention towards critical stimulus) and negative scores indicate avoidance (attention away from critical stimulus).

VPT's have been widely and successfully used with both IAPS and face stimuli, in studies exploring attention bias for threat in clinical anxiety disorders (Mogg, Garner & Bradley, 2007; Mogg, Millar & Bradley, 2000) and enjoys a considerable evidence base in healthy and clinical samples (Bar-Haim et al., 2007).

2.4.5 Hospital Anxiety and Depression Scale (HADS: Zigmond & Snaith, 1983)

The HADS is a 14-item self-report questionnaire designed to assess anxiety and depression as two distinct dimensions in non-clinical populations. Each item begins with a statement e.g. "Worrying thoughts go through my mind" and respondents are instructed to indicate, which option out of the four listed best describes how they have been feeling over the preceding seven days.

Individual items are summed to provide a total anxiety score (HADS-A) and a total depression score (HADS-D). A score of 8 or greater on one or both of the subscales indicates the presence of a depressive or anxiety disorder whilst scores over 15 indicate particularly severe symptoms.

The HADS has been found to perform reliably in psychiatric, non-psychiatric and well populations as a screening tool. It has demonstrated good internal consistency with Chronbach's alpha values ranging from .68 to .93 (mean .83) for anxiety, and .67 to .90 (mean .82) for depression (Bjelland, Dahl, Haug & Neckelmann, 2002). Test-retest reliability for this measure has been demonstrated to be acceptable (Pearson $r = .85$; Quintana et al., 2003). The HADS is also reported to have good face, concurrent, and construct validity (Moorey et al., 1991). This measure was included in the present study to ascertain the impact of mood on the proposed relationships between childhood trauma, internalised shame and experiential avoidance.

2.5 Procedure

2.5.1 Approach

Participants were recruited from five homeless hostels in Southampton between October and December 2009. Initial contact was made with the hostels, and following permission for service users to be approached, staff members were briefed on the purpose and nature of the study. Study posters outlining the purpose of the study (Appendix E) and flyers advertising

recruitment session dates (Appendix F) were given to staff in order to provide further information. These were subsequently displayed in suitable locations at each of the homeless agencies to encourage participation. With staff agreement, potential participants were further approached through organised hostel meetings. These meetings enabled the researchers to outline the nature of the study, level of involvement required and potential advantages/disadvantages of taking part. Participants were informed that they would receive a £9 supermarket voucher as a 'thank you' for taking part in the study.

2.5.2 Recruitment

Recruitment and data collection for this study was conducted jointly with two other trainee clinical psychologists.⁶ The three projects were presented together thus incorporating nine questionnaires, one VPT and a demographics form. This step was taken to maximise data collection from a potentially small pool of participants and minimise participant burden.⁷

⁶ All other aspects relating to this study, specifically the research design, analysis and interpretation of the results were carried out independently. The research questions presented in this empirical paper are unique to the author. The only significant measure shared by the three researchers was the CATS (in addition to a mood check questionnaire).

⁷ Aside from the practical aspects highlighted above, numerous ethical considerations were also associated with this combined approach. Primarily, it was considered more ethically acceptable to conduct one combined study, when undertaking research with this vulnerable population, rather than three separate studies administering the same sensitive questionnaire. A consideration of potential risk issues, when conducting research with homeless adults, further justified this approach.

Participants were recruited on each assessment day held at the hostels using a flexible drop-in format. These sessions started with a verbal explanation regarding the nature of the study and level of involvement required. The researchers also emphasised the sensitive nature of some of the questionnaires and VPT. It was explained that withdrawal from the study would be permitted at any point and that all responses would remain confidential. A written information sheet (Appendix G) outlining this information was made available to all participants.

Screening forms (Appendix H) were routinely administered to help identify those participants requiring support to complete the questionnaires and VPT, and whether this was preferred via an individual or group format. Informed consent was assumed on the basis of completion of the VPT and return of the anonymous questionnaires.

2.5.3 Data collection

Seventy-six participants completed the self-report questionnaires and VPT within a group format either independently or with some support from the researchers. The remaining eight participants requested an interview format with one of the three researchers. The VPT was administered in a separate location by one of the researchers, with a staff member in attendance, to ensure privacy and reduce any potential distraction.

Risk assessments were undertaken at each hostel to ensure the safety of both the researcher and participants. The researchers and a staff member from each hostel were available to offer support and guidance to participants prior to, during and immediately following the completion of the questionnaires and VPT. Participants took approximately 45-60 minutes to complete the study. Participants were given a unique identification number, placed on each of the questionnaires and used in the VPT, to enable the researchers to match up individual responses and ensure confidentiality and anonymity.

2.5.4 Ethical Considerations

The study was initially reviewed and approved by the University of Southampton Ethics Committee (Appendix I) and was sponsored and insured by the University of Southampton (Appendix J). Given the sensitive nature of the research, in particular asking participants about their experiences of childhood trauma and asking them to view mild to moderate threat pictures as part of a VPT, a verbal and a written debrief (Appendix K) were provided.

During the debriefing process those aspects of the study, which may have evoked strong feelings, were acknowledged. Participants were asked to inform the researchers if they had experienced any distress through their involvement in the study. No levels of distress were reported. All participants were directed to appropriate sources of support and advice (e.g. a staff

member, Samaritans or hostel general practitioner) should any potential distress resulting from the study arise in the future.

A qualified clinical psychologist, with experience of working with homeless adults, was available for consultation and support should any distress have been identified. This option was not utilised since no participants reported feeling distressed subsequent to taking part in the study. Telephone calls to all of the hostels involved in the study, one week following participation, confirmed no reports of distress.

2.6 Analysis Strategy

The data was analysed using the Predictive Analytics Software (PASW/SPSS) Version 18.0. Preliminary statistics, which assessed variable distributions and descriptive statistics, were reported. Relationships between variables were assessed using correlation analysis, and the hypothesised mediator model was assessed using a series of simple and multiple regression analyses. The bootstrapping method was added as a fifth step to test whether the mediated effects were significant.

3.0 Results

3.1 Preliminary Analyses

In order to determine whether the data for the final sample ($N=79$) conformed to the assumptions of normality, a number of preliminary analyses were carried out using mean scores for both subscales and total scores. Measures of skewness and kurtosis, and a one-sample Kolmogorov-Smirnov test demonstrated normal distributions for all variables, with the exception of the child sexual abuse (CSA) ($D(83) = 2.078, p < .001$).

Preparation of the reaction time data for the VPT resulted in a number of erroneous responses being excluded from statistical analyses. The mean number of errors ranged from 0-63 ($M=7.56$ $SD= 12.57$). Reaction times shorter than 200 ms or longer than 2000 ms, or those which deviated more than three standard deviations (SD) from the individual mean latency time, were removed from the data. Errors and outliers accounted for 10.2 % of the data.

As with previous VPT studies, attention bias scores (ABS) were calculated from the reaction time data to simplify interpretation of the results. An ABS, which summarises the aversive stimulus x dot probe position interaction, was generated for each participant and for each stimulus presentation duration (SPD). This process provided positive ABS scores, indicating attentional bias towards the aversive stimulus, and negative values indicating avoidance.

(For relevant reaction time data and formula for data conversion see Table 4, Appendix L).

A one-way repeated measures ANOVA was carried out to test for an effect of SPD on attentional bias. Mauchly's test of sphericity was non-significant ($W(2) = .98, p > .05$) indicating that the assumption of sphericity had not been violated. There was no significant effect of SPD on attentional bias ($F(2, 73) = 1.128, p > .05$). A one-sample t-test revealed no evidence of significant vigilance or avoidance in the current sample 17ms (subliminal) presentation ($t = .852, p > .05$), 500ms presentation ($t = -1.296, p > .05$) and the 1500ms presentation ($t = .450, p > .05$).

3.2 Descriptive Statistics

Table 5 displays the means, standard deviations and Cronbach's Alphas for all research variables including subscales and total scores. All scores demonstrated acceptable reliability with the exception of childhood physical and sexual abuse⁸.

3.2.1 *Childhood Trauma*

An exploration of the descriptive statistics revealed physical abuse ($M=2.07, SD= 1.38$) as the most frequent form of abuse during childhood. This was

⁸ Consequently, total CATS rather than subscale scores were used in the main analysis.

followed by emotional abuse and neglect. The mean total CAT score (M= 1.58, SD= 1.39) was found to be greater in the present adult homeless population than some non-clinical and clinical populations previously studied. Sanders and Becker-Lausen (1995) and Kent and Waller (1998) for example, reported mean total CATS scores as ranging from .72 to .77 in university samples. The total CATS mean score in the present study was also higher than a sample of bulimic women (M= 1.19, SD =.82; Hart & Waller, 2002) and nearly equivalent to the total mean CAT score in a sample of adults with at least one DSM-IV diagnosis (American Psychiatric Association, 1994) (M= 1.59, SD= 0.78 and M= 1.87, SD= 0.75 for men and women respectively). A further exploration of the presence or absence of sexual abuse indicated that 58.2% (N= 46) of the sample reported sexual maltreatment during their childhood.

3.2.2 Internalised Shame

The summed total mean internalised shame score derived from the study (M=40.86, SD=19.08) was found to be higher than the summed total mean scores in a sample of non-clinical university students (M= 27.48, SD= 15.76; del Rosario & White, 2006) but lower than a sample of participants with bulimia (M=45.0, SD= 20.0; Jambekar, Masheb & Grilo, 2003).

3.2.3 *Experiential Avoidance*

The mean total experiential avoidance score ($M= 37.39$, $SD= 9.17$) as measured by the AAQ, was found to be higher than the mean AAQ score in a sample of Dutch bereaved adults ($M=30.5$, $SD= 7.8$), undergraduate students ($M= 31.5$, $SD=5.8$) and 60 outpatients recruited from three outpatient psychotherapy practices ($M=36.0$, $SD=7.4$; Boelen & Reijntjes, 2008). However, mean attention bias scores, as measured by the VPT, provided no evidence of experiential avoidance to negative images in the present sample.

3.2.4 *State Mood*

The total mean HADS scores for anxiety ($M=10.41$, $SD=4.02$) and depression ($M=7.70$, $SD=4.02$) in the present sample were found to be higher than the total mean anxiety and depression scores in a non-clinical adult population (Anxiety; $M=3.56$, $SD= 5.39$, Depression; $M= 5.55$, $SD= 7.48$, Crawford & Henry, 2003) and lower than total means scores in a clinical sample of self harming adults (Anxiety; $M=11.00$, $SD= 3.7$, Depression; $M=11.55$, $SD= 4.73$, O'Connor, Connery & Cheyne, 2000).

Table 5: Descriptive Statistics for Childhood Trauma, Internalised Shame, Experiential Avoidance and Mood (N = 79)

Research Variable (Scale)	Subscale	α^9	<i>M</i>	<i>SD</i>
Childhood Trauma (CATS)	Childhood Emotional Abuse	.91	1.73	1.39
	Childhood Sexual Abuse	.86	0.71	1.19
	Childhood Physical Abuse	.44	2.07	1.38
	Neglect	.91	1.69	1.48
	Total CATS	.95	1.58	1.39
Internalised Shame (ISS)	Internalised Shame	.95	1.86	1.26
	Self Esteem	.76	1.81	1.14
Experiential Avoidance (AAQ)		.72	4.15	1.82
Visual Probe Task (VPT) ¹⁰	17ms (ShortAB)	-	5.24	53.29
	500ms (MedAB)	-	8.75	57.69
	1500ms (LongAB)	-	3.06	58.92
State Mood (HADS)	Anxiety	.74	1.49	.92
	Depression	.71	1.09	.95

Note: CATS= Child Abuse and Trauma Scale (Sanders & Becker-Lausen, 1995); ISS= Internalised Shame Scale (Cook, 1994); AAQ= Acceptance and Action Questionnaire (Hayes et al., 2004); VPT=Visual Probe Task; HADS= Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983).

⁹ Cronbach's alpha co-efficient values of between .70 and .80 indicate good reliability (Field, 2005).

¹⁰ It is not possible to calculate Cronbach Alpha values for reaction time data

3.3 Correlations between Childhood Trauma, Internalised Shame, Experiential Avoidance and State Mood.

Table 6 displays Pearson correlation coefficients for all variables under investigation. A summary of key relationships is presented below.

3.3.1 *Childhood Trauma and Experiential Avoidance*

In the present study, greater levels of childhood trauma were associated with an increased tendency to engage in experiential avoidance, as demonstrated by a significant positive correlation between the total CATS score and experiential avoidance as measured by the AAQ ($r = .339, p = .003$). No significant correlations were observed between the total CAT score and attention bias scores as measured by the VPT. Due to such findings, no further analysis of the VPT attention bias scores was undertaken. The following VPT results are included for descriptive information.

3.3.2 *Childhood Trauma and Internalised Shame*

The results also demonstrated that high levels of internalised shame were associated with greater levels of childhood trauma. A positive significant correlation was found between the total CATS score and ISS ($r = .423, p < .001$).

3.3.3 Internalised Shame and Experiential Avoidance

High levels of internalised shame also correlated with the tendency to engage in experiential avoidance. This was evidenced by a positive significant correlation between scores on the ISS and the AAQ ($r = .544, p < .001$). A marginal level of significance was also noted for scores on the ISS and greater vigilance on the VPT 1250ms presentation ($r = .228, p = .049$).

3.3.4 Experiential Avoidance: Correlations between the AAQ and VPT

Experiential avoidance, as measured by the AAQ, positively correlated with attention bias scores on the 1250ms VPT ($r = .255, p = .038$). No correlations were found for either the VPT 17ms or 500ms presentation rates.

3.3.5 State Mood: Correlations between Anxiety and Depression scores, and all other study variables

High levels of anxiety were associated with greater levels of childhood trauma ($r = .406, p < .001$), internalised shame ($r = .654, p < .001$), experiential avoidance ($r = .462, p < .001$), and attention bias scores towards (vigilance) threat images presented for 500 ms ($r = .270, p < .05$). Depression scores similarly correlated with Internalised Shame ($r = .326, p < .001$) and Experiential Avoidance ($r = .252, p < .05$), in addition to attention bias scores for vigilance on the 17 ms VPT presentation ($r = .267, p < .05$).

**Table 6: Pearson's Correlation Coefficients between Research Variables
(Total Scores, N = 79)**

Subscale	1	2	3	4	5	6	7	8
1. Total CATS	-							
2. Total ISS	.423**	-						
3. Total AAQ	.339**	.544**	-					
4. VPT – shortAB	-.068	-.104	-.120	-				
5. VPT – medAB	.004	.148	-.012	-.107	-			
6. VPT – longAB	.081	.228*	.244*	-.086	.097	-		
7. Total HADS Anxiety	.406**	.654**	.462**	-.022	.270*	.164	-	
8. Total HADS Depression	.191	.326**	.252*	.267*	-.014	.186	.426**	-

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

Note: CATS= Child Abuse and Trauma Scale (Sanders & Becker-Lausen, 1995); ISS= Internalised Shame Scale (Cook, 1994); AAQ= Acceptance and Action Questionnaire (Hayes et al, 2004); VPT=Visual Probe Task; HADS= Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983).

3.4. Mediation Analysis

A series of simple regression analyses were conducted to test the proposed meditational model (See Table 7). Whilst there are numerous methods available for testing hypotheses about intervening variable effects, the 'causal steps approach' advocated by Baron and Kenny (1986) is most commonly used. Within this approach, support for the meditational model is provided if:

- 1) The presence of childhood trauma significantly predicts experiential avoidance in the absence of a mediator (path c, total effect).
- 2) The presence of childhood trauma significantly predicts internalised shame (path a).
- 3) Internalised shame significantly predicts experiential avoidance (path b) whilst controlling for childhood trauma.
- 4) Childhood trauma does not remain a significant predictor of experiential avoidance once internalised shame is entered in the equation as an independent variable (path c', direct effect).

This hypothesised model is shown in Figure 1.

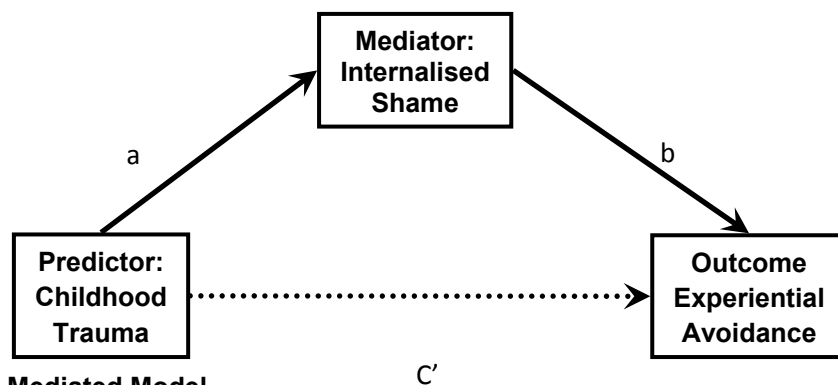


Figure 1: Mediated Model

Note: Solid lines indicate direct relations; dashed lines indicate indirect (mediated) relations.

A simple regression analysis indicated that childhood trauma significantly predicted experiential avoidance, as measured by the AAQ ($\beta = .34, t = 3.13, p < .003$), (path c was significant – step 1). A second regression revealed that childhood trauma significantly predicted internalised shame ($\beta = .42, t = 4.09, p < .001$; path a was significant - step 2). The relationship between internalised shame and experiential avoidance also remained significant ($\beta = .49, t = 4.55, p < .001$) whilst controlling for childhood trauma (path b was significant- step 3). Furthermore, the third regression equation provided an estimate of path c', the relation between childhood trauma and experiential avoidance, whilst controlling for internalised shame. This coefficient was not significant ($\beta = .125, t = 1.16, p > .05$) and, as the coefficient of the relationship between childhood trauma and experiential avoidance reduced from .34 to .13 once the mediator had been added to the model, the condition for step 4 was fulfilled.

Bootstrapping¹¹ (with $N = 1000$ bootstrap resample's) was also conducted, the results of which indicated that the indirect effect through the mediator was also significant (point estimate = .0628, 95% CI = .0236, .118).¹² These findings indicate that internalised shame mediated the relationship between childhood trauma and experiential avoidance, as measured by the AAQ.

Standardised coefficients are displayed on a mediation model in Figure 2.

¹¹ Bootstrapping is a nonparametric resampling procedure which tests the critical mediated (indirect) path in small to moderately sized samples (i.e., 20-80 cases; Efron & Tibshirani, 1993) whilst controlling for all other variables in the model. Bootstrapping is increasingly preferred over use of the Sobel test (Sobel, 1982, 1986) as it makes no assumptions about the shape of the sampling distribution of the indirect effect (Hayes, 2009).

¹² The indirect effect is 'significant' given that zero is outside of the confidence interval.

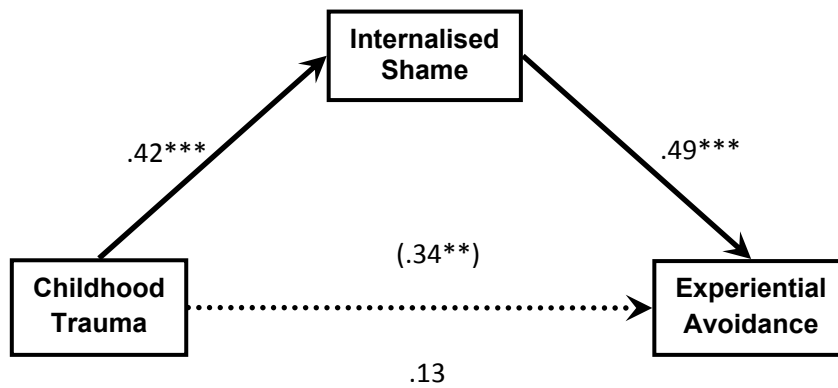


Figure 2: Mediated Model with Standardised Coefficients

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

Note: Total effect is shown in parentheses

In order to determine whether mood may have impacted on the overall indirect effect of the mediator, anxiety and depression, as potential covariates, were statistically controlled for using an ‘INDIRECT’ macro developed by Preacher and Hayes (2008). The results of this analysis highlighted that both HADS anxiety ($\beta=.34$, $p>.05$) and HADS depression ($\beta=.11$, $p>.05$), did not significantly impact on the overall indirect effect of internalised shame on the relationship between childhood trauma and experiential avoidance. All standardised coefficients are illustrated in the mediation model in Figure 3.

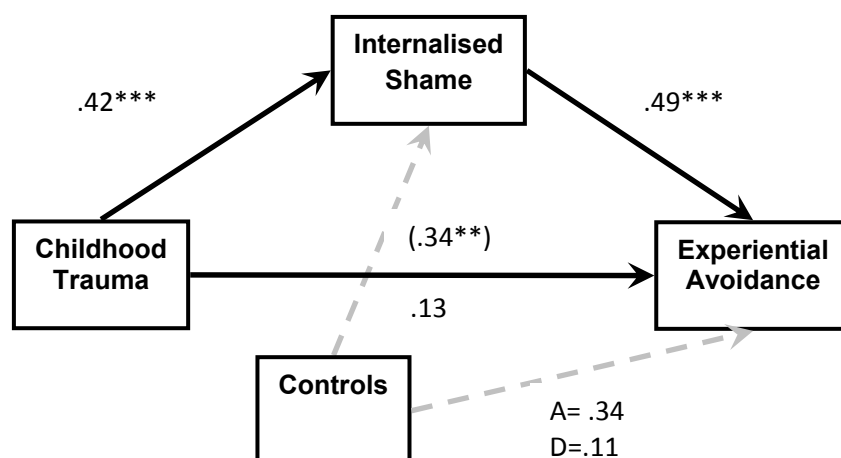


Figure 3: Mediated Model with Standardised Coefficients and Statistical Controls

* $p < .05$, ** $p < .01$, *** $p < .001$, A= Anxiety, D= Depression

Note: Total effect is shown in parentheses

Table 7: Regression Analyses to Test Mediation (N = 79)

Regressions to Test Mediation Model	<i>B</i>	<i>SE B</i>	<i>t</i>	95% CI	<i>B</i>	<i>R</i> ²
Regression 1 (Path c)						
Outcome: Experiential Avoidance						
Predictor: Childhood Trauma	.099	.032	3.13	.036, .162	.34**	.12
Regression 2 (Path a)						
Outcome: Internalised Shame						
Predictor: Childhood Trauma	.258	0.63	4.10	.133, .384	.42***	.18
Regression 3 (Paths b and c')						
Outcome: Experiential Avoidance						
Mediator: Internalised Shame (Path b)	.234	.051	4.55	.131, .336	.49***	
Predictor: Childhood Trauma (Path c')	.036	.031	1.59	-.026, .099	.13	.31

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

Note: *B* = unstandardised beta weights, β = standardised beta weights

In terms of the proportion of variance accounted for by the regression analyses, the results indicated that internalised shame accounted for 31% of the variance whilst childhood trauma accounted for 18% of the variance.

4. Discussion

The present study aimed to explore the role of childhood trauma, internalised shame and experiential avoidance in pathways to becoming and remaining homeless. It further sought to extend the research, and theorised mediational model provided by Gratz et al., (2007) to a homeless population. The study also sought to identify factors underpinning the possible benefit of prevention and intervention approaches for individuals at risk of becoming and remaining homeless.

4.1. Interpretation of key findings

Using an adult homeless adult population, the results of this novel study demonstrated a significant relationship between childhood trauma and experiential avoidance, as measured by the AAQ. This relationship was mediated by internalised shame, which points to traumatic experiences in childhood as being associated with increased engagement in experiential avoidance, but only indirectly through its relationship with internalised shame. This relationship also exists when anxiety and depression are considered as potential covariates, indicating that mood is not a significant factor in this relationship. Consequently, as associations between negative childhood experiences, such as abuse and neglect, internalised shame and self-reported experiential avoidance were found in this population, hypothesis one and two can be accepted.

The present study therefore adds to the general literature on the relationship between childhood abuse and self-reported experiential avoidance (Marx & Sloan, 2002; Polusny, Rosenthal, Aban & Follette, 2004). These findings are also consistent with the research of Gratz et al., (2007) who found similar associations between childhood trauma (including sexual, physical and emotional abuse) and experiential avoidance in a substance-using population. The present study advances the research of Gratz et al (2007) however, by exploring one component of emotional non-acceptance (internalised shame) in more detail and using both experimental and self-report methodology, to assess experiential avoidance. This study is also one of the first to incorporate a VPT, as a potential measure of experiential avoidance, in a sample of homeless adults and thus highlights the relative ease with which experimental tasks can be utilised with vulnerable populations.

Interestingly, the attention bias scores of participants with greater levels of internalised shame and heightened tendencies towards experiential avoidance demonstrated vigilance rather than avoidance towards threatening stimuli at the 1250ms stimuli presentation duration. This finding contradicts the idea that homeless adults would attempt to avoid or escape from aversive stimuli. Indeed, the VPT, despite having a considerable evidence base in healthy and clinical samples (Bar-Haim et al., 2007), as a potential measure of experiential avoidance, did not replicate itself in this study. To the contrary,

this study demonstrated that a population of homeless adults were more vigilant than had been anticipated.

Of further interest to the author is the finding that participants' attention bias scores for vigilance on the 500 ms visual probe task were related to higher levels of anxiety. These findings, whilst unsupportive of research indicating that anxious participants will demonstrate greater vigilance at 200ms but significantly reduce vigilance by 500ms (Mogg & Bradley, 2006), do compliment the research of Gardner and Garner (2007) who reported a significant bias towards threat (pictures of angry faces) in both high and low anxiety groups by 500ms in their study. The present study's findings may also be viewed in terms of the wealth of literature highlighting the positive relationship between high levels of anxiety, and facilitated engagement towards threat related stimuli or difficulty in disengaging attention from the location of the threatening stimuli (Broomfield & Turpin, 2005; Koster, Crombez, Verschuere & De Houwer, 2004).

One possible explanation for the present study's VPT findings may stem from the low threat valence ratings used throughout the task. Valence ratings for the IAPS threatening images typically range from -4 to +4, however, the decision to incorporate images with valence ratings at the -2/-3 level was based on an ethical consideration of the population under study. It is therefore possible that greater avoidance of threat would have been detected

had lower valence-rated images been used. Furthermore, as alcohol and substance misuse were not controlled for in this study, participant reaction times to the VPT may have been impaired by the use of either alcohol or substances. It is also feasible that the participants in this study reacted differently on the VPT i.e. demonstrated greater vigilance towards threatening images, due to the higher levels of immediate environmental threat they may be typically exposed to. Consequently, the potential for homeless adults to experience higher levels of hypervigilance and anxiety, as a result of these environmental threats, may have contributed to the study's findings.

Further research, using the VPT as a potential measure of experiential avoidance, is therefore required in order to address these findings. Additional support for the use of the VPT as a potential measure of experiential avoidance could also be achieved with the use of a control sample.

Nevertheless, the present study contributes significantly to the growing evidence base of research exploring micro-level factors, as potential contributors in the pathway to homelessness. To the author's knowledge, this study forms one of the first investigations to explore the relationships between such variables in a UK adult homeless population. It is important for such research to have been undertaken as, historically, the homeless have been largely neglected in the literature. The study also advances the psychological understanding of the mediating role of internalised shame in the relationship between childhood trauma and experiential avoidance. It is

subsequently proposed that experiential avoidance, which appears to be maintained, at least in part, by internalised shame, plays a key contributing role in the onset and maintenance of homelessness.

4.2 Clinical Implications

The present study demonstrates potential clinical implications with regards to the utility of interventions aimed at decreasing judgemental, non-accepting responses to emotions such as shame, which is associated with the tendency to engage in experiential avoidance. This will be particularly relevant among individuals with a history of childhood trauma. The study also offers support for models that propose a complex interaction between numerous predisposing, perpetuating and precipitating factors, which in turn, increase the risk of individuals becoming homeless (Martijn & Sharpe, 2006; Morrell-Bellai et al., 2000). This study's exploration into the psychological factors linked to homelessness stands in contrast to previous research which emphasised the role of social and economic factors (Stein, Leslie & Nyamathi, 2002) but failed to acknowledge historical and psychological influences. The findings also endorse recent research providing support for a complex interactional model of the factors involved in homelessness (Day, 2009).

The present study revealed a high number of homeless adults (more than half the sample) who reported experiencing childhood trauma including

childhood sexual abuse. Given that the majority of participants were male, this finding is interesting because research typically indicates higher rates of childhood abuse in homeless women rather than men (Johnson, Rew & Sternglaz, 2006). Consequently, had the research involved a greater number of participants, particularly women, reports of childhood sexual abuse may have dramatically increased.

This finding also highlights the importance of providing comprehensive assessments to homeless individuals that take into account previous childhood maltreatment. The resulting information will enable the development and delivery of psychotherapeutic interventions targeting abuse related perceptions and cognitions, and the associated mental health problems stemming from abusive experiences. Recommended treatment approaches for individuals with experiences of childhood abuse include Dialectical Behaviour Therapy (DBT; Linehan, 1993) and Schema-Focused Therapy (Young, 1999). Their focus largely lies in teaching people how to manage their emotions more effectively, and develop more adaptive skills to help them cope with life's adversities. These findings further point to the need for dedicated psychological services for the homeless to be developed which would enable psychological treatment to become more accessible to those most in need. Although services such as these exist in the UK, they are few and far between as difficulties with funding typically prevent their expansion (Jarrett, 2010).

The demonstration that internalised shame mediates the relationship between childhood trauma and experiential avoidance in a sample of homeless adults has important implications for the delivery of psychotherapeutic interventions to those individuals at risk of becoming or remaining homeless. Indeed, the participants in the present study may benefit from Compassionate Mind Training (CMT; Gilbert, 2005), a therapeutic approach that has been developed for people with high levels of shame and self-criticism (Gilbert & Irons, 2005). Its purpose is to reduce self-directed hostility and enable individuals to develop the ability to generate feelings of self-reassurance, warmth and self-soothing when dealing with setbacks and failures. Consequently, given the high level of internalised shame experienced by homeless adults in the current sample, interventions such as CMT may be useful in enhancing coping skills, which in turn may reduce the need to engage in experiential avoidance or other unhelpful ways of coping. Consequently, when considering the most effective psychological approach for these individuals, the results point to the modification of internalised shame as potentially being a key step in this process.

It is also suggested that teaching homeless individuals skills to decrease emotional avoidance will help to reduce maladaptive behaviours which function to avoid emotional experiences such as substance misuse (Hayes et al., 1996). Such skills could also reduce paradoxical increases in distress often arising as a consequence of rigid emotional avoidance (Campbell-Sills, Cohen & Stein, 2006). As such, this study provides further empirical support for the recent development of mindfulness and acceptance-based

interventions for trauma-related psychotherapy (Follette, Palm, & Rasmussen-Hall, 2004; Orsillo & Batten, 2005). These therapies originate from a group of new third wave behavioural and cognitive interventions that target the function of cognitions and emotions rather than their form, frequency or situational sensitivity. Both are considered helpful in promoting emotional acceptance by encouraging individuals to experience pleasant and unpleasant private experiences from a non-judgmental and non-evaluative stance. The efficacy of such approaches in the treatment of internalised shame and experiential avoidance has been evidenced in research undertaken in psychiatric populations (Gratz & Gunderson, 2006; Twohig, Hayes & Masuda, 2006). However, when providing therapeutic interventions, consideration must be given to the fact that engagement in experiential avoidance may bring short term benefits to homeless adults i.e. temporary escape from the environmental challenges associated with being homeless. Such challenges include the chaotic nature of rough sleeping/hostel dwelling, upsetting interpersonal relationships and exposure to substance misuse cultures (and the distress associated with it).

4.3 Strengths and limitations

One of the most important strengths of the present study is the preliminary empirical support it provides for high rates of childhood trauma in a UK adult homeless population, and a relationship between childhood trauma and experiential avoidance that is mediated by internalised shame. As such, the findings of this study contribute to a psychological understanding of one of

the complex pathways leading individuals either to become or remain homeless.

Nevertheless, there are a number of issues worthy of consideration when interpreting the results of the present study. Firstly, whilst the sample was relatively homogenous (i.e. white British males) the sample was not truly representative of the broader range of people now experiencing homelessness e.g. women and ethnic minority groups (Warnes, Crane, Whitehead & Fu, 2003). A selection bias may have taken place with regards to this study's sample as the majority of participants were residing in hostel accommodation. Indeed, only four participants were classified as 'rough sleepers' therefore the study's findings can only be generalised to hostel dwelling homeless adults. The sample was also restricted to the users of the hostels visited in the Southampton area. The study is therefore unable to comment on whether this sample is representative of the homeless population throughout the UK (in terms of the make-up of ethnicity, gender and age) or whether the sample is purely representative of homeless adults in Southampton.

Secondly, it would have been helpful to have controlled for the effect of substance abuse throughout the study. It is possible that many of the individuals who took part in the study may have been under the influence of drugs and/or alcohol. This may have increased the likelihood of errors being

made when answering the self-report questionnaires, in addition to negatively influencing reaction times to the VPT. However, attempts were made throughout the study, to reduce the likelihood of participants being under the influence of drugs or alcohol. These included carrying out the majority of assessment sessions in the morning and offering a flexible drop in format where those deemed under the influence were given opportunities to participate on different days.

Thirdly, the motivation for completing the self-report questionnaires and VPT may also have been affected by the incentive of a supermarket voucher as a thank-you for taking part.

The study's reliance on a correlational and cross sectional design means that causal conclusions regarding the directionality or temporal order of the relationships highlighted in this study cannot be drawn. Whilst theoretical literature and the results of this study indicate that internalised shame may increase the risk for experiential avoidance, it is equally plausible that experiential avoidance leads to increased feelings of internalised shame. Furthermore, it is likely that emotional responses such as guilt, fear or anger, which have received little empirical attention in research studies with vulnerable populations, will also influence engagement in experiential avoidance. It is also not possible to ascertain, on the basis of this study's findings, whether experiential avoidance preceded the onset of

homelessness or whether such behaviour developed in response to being homeless. Consequently, the question of whether experiential avoidance is viewed as a causal or maintaining factor in the pathway to homelessness requires further investigation.

It is also recognised that the current study's reliance on self-report methodology, which involved the recollection of childhood experiences of maltreatment, may have resulted in a degree of under-reporting and retrospective bias (Fergusson, Horwood, & Woodward, 2000). The self-report nature of the CATS provides no way of substantiating actual occurrences of childhood maltreatment. However, given the demonstrated adequate psychometric properties of this measure and utility in previous research studies, it can be assumed that this questionnaire provided a fairly accurate assessment of the variables in question.

The assessment of childhood trauma via self-report methodology, and indeed experiential avoidance as measured by the VPT, was an area of ethical concern throughout the study. An important strength of the study was therefore the substantial amount of time spent with participants at the recruitment and data collection stage. Time was further invested in developing relationships with staff members to increase their understanding of the research at hand and to enable them to support participants should any emotional discomfort or distress have arisen. This was in addition to

putting a comprehensive debriefing procedure in place and remaining in contact with the relevant homeless agencies in the days and weeks following the data collection.

A final point with regard to the overall study design is that when the present study's measures were combined with two other trainees research measures¹³, the questionnaire pack was rather lengthy, which may have lead to a loss in concentration for some participants due to boredom or fatigue. However, all questionnaires were randomly ordered in an attempt to control for order effects and breaks were provided throughout the testing period which, on average, lasted between 45 and 60 minutes.

4.4 Directions for further research

As one of the first studies to explore these constructs in a homeless population, it will be important to replicate this research with a larger, more representative sample. Indeed, future studies would benefit from recruiting a broader range of homeless individuals (i.e. rough sleepers, women and ethnic minority groups). Longitudinal studies, in which risk factors have been established before the onset of homelessness, and/or the use of structural equation models, may help to provide an important insight into the temporal sequence of pathways into homelessness. The use of a control sample

¹³ Who were undertaking similar research with homeless adults.

would also help to determine whether the effects found in the present study are specific to a homeless population.

Future studies should also continue to explore the potential mechanisms underlying this relationship i.e. constructs other than internalised shame, which are related to the construct of emotional non-acceptance (e.g. fear of emotions). It will be also important to undertake research which seeks to investigate additional potential mediators of the aforementioned relationship e.g. low self-esteem, cognitive distortions and dissociation, the latter of which has already has reported associations with experiential avoidance (Marx & Sloan, 2005).

Where this study has demonstrated a very strong correlation between childhood trauma and experiential avoidance, an exploration of the extent to which this relationship occurs above and beyond other potentially relevant forms of psychopathology may be of benefit. The results indicated that whilst internalised shame accounted for 31% of the variance in the relationship between childhood trauma and experiential avoidance, 69% of the variance was unaccounted for. Further research is therefore required to ascertain what other psychological variables may be potentially influencing this relationship. Similarly, additional research looking at the impact of gender, age, locality, duration and frequency of abuse as potential moderating factors may help to enhance understanding of the complex interacting factors linking to pathways

to homelessness. This research will develop and facilitate the delivery of appropriate psychotherapeutic interventions to those homeless individuals most in need.

A consideration of the VPT findings obtained from this study, indicate that to achieve greater ecological validity of experimental measures of experiential avoidance, tasks incorporating personally relevant stimuli should be used. The IAPS stimuli used in the present study, whilst enabling standardisation across participants, prevented such images being used despite their strong association with experiential avoidance (Roemer & Borkovec, 1994). The use of personally relevant stimuli may have resulted in attention bias scores demonstrating avoidance away from, rather than vigilance towards, aversive stimuli. It would also be interesting to alter the valence ratings of the aversive stimuli presented in the VPT, as was originally intended, to ascertain whether greater scores of avoidance as measured by this task are present in a homeless population. However, this calls into question the matter of ethics given the vulnerable nature of such participants. Nevertheless, whilst potentially weak stimuli may have affected the VPT findings, it should be acknowledged that homeless individuals reflect a complex population facing considerable and ongoing stress. The consequences of this stress i.e. anxiety and hypervigilance to potential threat may have also contributed to these findings.

Finally, there is a need to develop the clinical implications resulting from this study including ongoing development of targeted interventions for individuals with a history of childhood trauma; focusing on decreasing experiential mindfulness (Follette, Palm & Rasmussen-Hall, 2004; Orsillo & Batten, 2005).

4.5 Conclusion

The current study has made important and valuable findings towards the understanding of some of the predisposing and perpetuating factors involved in the pathway to becoming and remaining homeless. The results demonstrated that in a UK homeless population, traumatic childhood experiences were associated with greater feelings of internalised shame, which in turn was associated with an increased tendency to engage in self-reported experiential avoidance strategies. However, despite such promising findings, this study is exploratory in nature and the aforementioned conclusion is tentatively made in light of the additional research that must be undertaken. In particular, further research is required regarding the applicability of experimental tasks, i.e. the VPT, in the measurement of experiential avoidance. An exploration into other factors potentially impacting on the relationship between childhood trauma and experiential avoidance is also required. Nevertheless, the findings of the current study demonstrate the importance of assessing for childhood trauma, as well as experiences of internalised shame and experiential avoidance in homeless individuals. They also highlight the need for psychotherapeutic interventions, which target

these interacting factors, to be made accessible to this vulnerable population. Further research is ultimately required to continue informing psychological understanding of the complex pathways leading to and maintaining homelessness; however the current study's findings are promising in the contribution they make to the identification of psychological factors experienced by the homeless, which psychotherapeutic interventions clearly need to target.

References

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders. Fourth edition.* Washington D.C: APA.

Bar-Haim, Y., Lamy, D., Pergamin, L., Bakermans-Kranenburg, M. J., & Van IJzendoorn, M. H. (2007). Threat-related attentional bias in anxious and nonanxious individuals: A meta-analytic study. *Psychological Bulletin, 133*, 1-24.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Batten, S. V., Follette, V. M., & Aban, I. B. (2001). Experiential avoidance and high-risk sexual behavior in survivors of child sexual abuse. *Journal of Child Sexual Abuse, 10*, 101-120.

Bedford, O., & Hwang, K. (2003). Guilt and shame in Chinese culture: A cross-cultural framework from the perspective of morality and identity. *Journal for the Theory of Social Behavior*, 33, 127–144.

Bjelland, I., Dahl, A.A., Haug, T.T., Neckelmann, D. (2002). The validity of The Hospital Anxiety and Depression Scale. An updated literature review. *Journal of Psychosomatic Research*, 52, 69-77.

Boelen, P.A. & Reijntjes, A. (2008). Measuring Experiential Avoidance: Reliability and Validity of the Dutch 9-item Acceptance and Action Questionnaire (AAQ). *Journal of Psychopathology and Behavioral Assessment*, 30, 241–251.

Bond, F.W., & Bunce, D. (2003). The role of acceptance and job control in mental health, job satisfaction, and work performance. *Journal of Applied Psychology*, 88, 1057–1067.

Bond, F.W., Hayes, S.C., Baer, R.A., Carpenter, K.M., Orcutt, H.K., Waltz, T.

& Zettle, R.D. (2007). Preliminary psychometric properties of the Acceptance and Action Questionnaire – II: A revised measure of psychological flexibility and acceptance. Manuscript submitted for publication.

Briggs, E.S., & Price, I, R. (2009). The relationship between adverse childhood experience and obsessive-compulsive symptoms and beliefs: the role of anxiety, depression, and experiential avoidance. *Journal of Anxiety Disorders*, 23, 1037- 46.

Broomfield, N.M., & Turpin, G. (2005). Covert and over attention in trait anxiety: A cognitive psychophysiological analysis. *Biological Psychology*, 68, 179-200.

Campbell-Sills, L., Cohen, S. L., & Stein, M. B. (2006). Relationship of resilience to personality, coping, and psychiatric symptoms in young adults. *Behaviour Research and Therapy*, 44, 585-599.

Caton, C. L., Dominguez, B., Schanzer, B., Hasin, D. S., Shrout, P. E., Felix, A., et al. (2005). Risk factors for long-term homelessness: findings from a longitudinal study of first-time homeless single adults. *American Journal of Public Health, 95*, 1753-1759.

Chapman, A.L., Gratz, K.L., & Brown, M.Z. (2006). Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behaviour Research and Therapy, 44*, 371–394.

Claesson, K., & Sohlberg, S. (2002) Internalized shame and early interactions characterized by indifference, abandonment, and rejection: Replicated findings. *Clinical Psychology and Psychotherapy, 9*, 277–284.

Cochrane, A., Barnes-Holmes, D., Barnes-Holmes, Y., Stewart, I., & Luciano, C. (2007). Experiential avoidance and aversive visual images: Response delays and event-related potentials on a simple matching task. *Behaviour Research and Therapy, 45*, 1379-1388.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.

Cook, D.R. (1994). *Internalised Shame Scale: professional manual*.

Menomonie, WI: Channel Press.

Cook, D.R. (2001). *Internalized Shame Scale: technical manual*,

North Tonawanda, NY: Multi-Health Systems, Inc.

Crane, M., Byrne, K., Fu, R., Lipmann, B., Mirabelli, F., Rota-Bartelink, A. et

al. (2005). The causes of homelessness in later life: findings from a 3-

nation study. *Journals of Gerontology Series B: Psychological*

Sciences and Social Sciences, 60, S152-159.

Crawford, J.R., & Henry, J.D. (2003). The Depression Anxiety Stress Scales

(DASS): Normative data and latent structure in a large non-clinical

sample. *British Journal of Clinical Psychology*, 42, 111–131.

Crisis (2005). *What is homelessness?* London: Crisis UK.

Crisis (2006). *Statistics about Homelessness*. London: Crisis UK.

Day, A. E. (2009). *Psychological Factors Implicated in Pathways to Homelessness: The Role of Childhood Trauma*. Unpublished Doctoral Thesis, University of Southampton.

DCLG (2008). *No one left out: Communities ending rough sleeping*.

Retrieved 20th January 2010 from <http://www.communities.gov.uk/publications/housing/annualroughsleeping>.

Department for Communities and Local Government (2010). Statutory

Homelessness: 4th Quarter (October to December) 2009.

Retrieved 20th January 2010 from <http://www.communities.gov.uk/publications/corporate/statistics/homelessnessq42009>.

del Rosario, P.M., & White, R.M. (2006). The Internalized Shame Scale:

Temporal stability, internal consistency, and principal components

analysis. *Personality and Individual Differences*, 41, 95-103.

Efron, B., & Tibshirani, R. (1993). *An introduction to the bootstrap*. New York: Chapman & Hall.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175-191.

Feinauer, L., Hilton, H.G., & Callahan, E.H. (2003). Hardiness as a moderator of shame associated with childhood sexual abuse. *American Journal of Family Therapy*, 31, 65–78.

Feiring, C. & Taska, L. (2005). The persistence of shame following sexual abuse: A longitudinal look at risk and recovery. *Child Maltreatment*, 11, 337-349.

Feldner, M. T., Hekmat, H., Zvolensky, M. J., Vowles, K., E., Secrist, Z., &

Leen-Feldner, E. W. (2006). The role of experiential avoidance in acute pain tolerance: A laboratory test. *Journal of Behavior Therapy and Experimental Psychiatry*, 37, 146-158.

Feldner, M.T., Zvolensky, M.J., Eifert, G.H., & Spira, A.P. (2003) Emotional

avoidance: An experimental test of individual differences and response suppression using biological challenge, *Behaviour Research and Therapy* 41, 403–411.

Fergusson, D.M., Horwood, L.J., & Woodward, L. J. (2000). The stability of

child abuse reports: A longitudinal study of young adults. *Psychological Medicine*, 30, 529-544.

Field, A. (2005). *Discovering Statistics Using SPSS (Introducing Statistical*

Methods series). Sage Publications Ltd.

Finkelhor, D., & Browne, A. (1986). Initial and long-term effects: A conceptual framework. In D. Finkelhor (Ed.), *Sourcebook on child sexual abuse* (pp. 180-198). Newbury Park, CA: Sage.

Follette, V. M., Palm, K. M., & Rasmussen-Hall, M. L. (2004). Acceptance, mindfulness, and trauma. In S. C. Hayes & V. M. Follette & M. M. Linehan (Eds.), *Mindfulness and acceptance: Expanding the cognitive-behavioral tradition* (pp. 192-208). New York: The Guilford Press.

Gardner, H., & Garner, M. (2007). *Anxiety-related attentional bias in the dot-probe task: charting the attentional trajectory*. Unpublished manuscript.

Gilbert, P. (2005). *Compassion: Conceptualisations, Research and Use in Psychotherapy*. New York: Routledge.

Gilbert, P., & Irons, C. (2005). Focused therapies and compassionate mind training for shame and self-attacking. In P. Gilbert (Ed.), *Compassion: Conceptualisations, research and use in psychotherapy* (pp. 263-325). London: Routledge.

Goss, K., Gilbert, P., & Allan, S. (1994). An exploration of shame measures – I: the other as shamer scale, *Personality and Individual Differences* 17, 713–717.

Gratz, K. L., Bornovalova, M. A., Delany-Brumsey, A., Nick, B., & Lejuez, C. W. (2007). A laboratory-based study of the relationship between childhood abuse and experiential avoidance among inner-city substance users: the role of emotional nonacceptance. *Behavior Therapy*, 38, 256-268.

Gratz, K. L., Conrad, S. D., & Roemer, L. (2002). Risk factors for deliberate self-harm among college students. *American Journal of Orthopsychiatry*, 72, 128-140.

Gratz, K.L. & Gunderson, J.G. (2006). Preliminary data on an acceptance-based emotion regulation group intervention for deliberate self-harm among women with borderline personality disorder, *Behavior Therapy*, 37, 25-35.

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment*, 26, 41-54.

Gratz, K.L., & Tull, M.T. (2003). *Exploring the relationship between invalidating environments and emotional inexpressivity: Mediating roles of emotional avoidance, acceptance, and awareness*. Poster presented at the 37th annual meeting of the Association for Advancement of Behavior Therapy, Boston, MA.

Gratz, K.L., Tull, M.T., & Wagner, A.W. (2005). Applying DBT mindfulness skills to the treatment of clients with anxiety disorders. In S.M. Orsillo and L. Roemer, Editors, *Acceptance and mindfulness-based approaches to anxiety: Conceptualization and treatment*, Springer, New York, pp. 147–161.

Hartt, J., & Waller, G. (2002). Child abuse, dissociation, and core beliefs in bulimic disorders. *Child Abuse and Neglect*, 26, 923-938.

Hayes, A.F. (2009). Beyond Baron and Kenny: Statistical Mediation Analysis in the New Millenium. *Communication Monographs*, 76, 408-420.

Hayes, S.C. & Gifford, E.V. (1997). The trouble with language: Experiential avoidance, rules, and the nature of verbal events. *Psychological Science*, 8, 170-173.

Hayes, S. C., Luoma, J., Bond, F., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes, and outcomes.

Behaviour Research and Therapy, 44, 1–25.

Hayes, S. C., Strosahl, K., Wilson, K. G., Bissett, R. T., Pistorello, J.,

Toarmino, D., et al. (2004). Measuring Experiential Avoidance: A

Preliminary Test of a Working Model. *Psychological Record, 54*

553-578.

Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K.

(1996). Experiential avoidance and behavioral disorders: A functional

dimensional approach to diagnosis and treatment. *Journal of*

Consulting and Clinical Psychology, 64, 1152-1168.

Hoglund, L., & Nicholas, K.B. (1995). Shame, guilt, and anger in college

students exposed to abusive family environments, *Journal of Family*

Violence, 10, 141–157.

Housing Act (1996). Chapter 52. *Part VII: Homelessness* Retrieved 28th

December 2009 from <http://www.opsi.gov.uk/acts/acts1996/>

ukpga_19960052_en_1.

Jambekar, S.A., Masheb, R.M., & Grilo, C.M. (2003). Gender Differences in Shame in Patients with Binge-Eating Disorder. *Obesity Research*, 11, 571-577.

Jarrett, C. (2010). Helping the homeless. *The Psychologist*, 23, 284-287.

Johnson, R. J., Rew, L., & Sternglanz, R. W. (2006). The relationship between childhood sexual abuse and sexual health practices of homeless adolescents. *Adolescence*, 41, 221-234.

Kent, A., & Waller, G. (1998). The impact of childhood emotional abuse: An extension of the Child Abuse and Trauma Scale. *Child Abuse & Neglect*, 22, 393-399.

Kessler, B. L., & Bieschke, K. J. (1999). Retrospective analysis of shame, dissociation, and adult victimization in survivors of sexual abuse.

Journal of Counseling Psychology, 46, 335-341.

King, M. (2007). An exploration of the effects of mindfulness awareness and acceptance skills on explicit and implicit experiential avoidance and psychological well-being. Unpublished manuscript. University of Southampton.

Koster, E.H.W., Crombez, G., Verschuere, B., & De Houwer, J. (2004).

Selective attention to threat in the dot probe paradigm: differentiating vigilance and difficulty to disengage. *Behaviour, Research and Therapy, 42*, 1183-1192.

Lang, P. J., Öhman, A & Vaitl, D. (1988). *The International Affective*

Picture System [photographic slides]. Gainesville, FL: The Center

for Research in Psychophysiology, University of Florida.

Lehmann, E.R., Kass, P.H., Drake, C.M., & Nichols, S.B. (2007). Risk factors for first-time homelessness in low-income women. *American Journal of Orthopsychiatry*, 77, 20-8.

Linehan, M. M. (1993). *Cognitive-Behavioral Treatment of Borderline Personality Disorder*. New York: The Guilford Press.

Maguire, N. (2006). Cognitive Behavioural Therapy and Homelessness: A Case Series Pilot Study. *Behavioural and Cognitive Psychotherapy*, 34, 107-111.

Marlatt, G. A., & Witkiewitz, K. (2005). Relapse Prevention for Alcohol and Drug Problems. In G. A. Marlatt & D. M. Donovan (Eds.). *Relapse Prevention: Maintenance Strategies in the Treatment of Addictive Behaviors*, Second Edition (2 ed., pp. 416). New York: The Guilford Press.

Martijn, C., & Sharpe, L. (2006). Pathways to youth homelessness.

Social Science and Medicine, 62, 1-12.

Marx, B.P., & Sloan, D.M. (2002). The role of emotion in the psychological

functioning of adult survivors of childhood sexual abuse. *Behavior*

Therapy, 33, 563–578.

Marx, B.P., & Sloan, D.M. (2005). Experiential avoidance and peritraumatic

dissociation as predictors of posttraumatic stress symptomatology,

Behaviour Research and Therapy, 43, 569–583.

Mogg, K., & Bradley, B. (2006). Time course of attentional bias for fear-

relevant pictures in spider-fearful individuals. *Behaviour Research and*

Therapy, 44, 1241-1250.

Mogg, K., Garner, M., & Bradley, B. P. (2007). Anxiety and orienting of gaze

to angry and fearful faces. *Biological Psychology*, 76, 163–169.

Mogg, K., Millar, N., & Bradley, B. P. (2000). Biases in eye movements to threatening facial expressions in generalized anxiety disorder and depressive disorder. *Journal of Abnormal Psychology, 109*, 695-704.

Moorey, S., Greer, S., Watson, M., Gorman, C., Rowden, L., Tunmore, R., et al. (1991). The factor structure and factor stability of the Hospital Anxiety and Depression Scale in patients with cancer. *British Journal of Psychiatry, 158*, 255-259.

Morrell-Bellai, T., Goering, P. N., & Boydell, K. M. (2000). Becoming and remaining homeless: A qualitative investigation. *Mental Health Nursing, 21*, 581-604.

O'Connor, R.C., Connery, H., & Cheyne, W.M. (2000). Hopelessness: the role of depression, future directed thinking and cognitive vulnerability. *Psychology, Health & Medicine, 5*, 155-161.

ODPM (2003). *More than a Roof: a report into tackling homelessness*, March

2003. Retrieved 28th December 2009 from

<http://www.communities.gov.uk/publications/housing/morethan>.

Office of the Deputy Prime Minister. (2005). *Sustainable communities, settled*

Homes, changing lives: A strategy for tackling homelessness.

London: Office of the Deputy Prime Minister.

Orsillo, S. M., & Batten, S. V. (2005). Acceptance and commitment therapy in

the treatment of posttraumatic stress disorder. *Behavior Modification*,

29, 95-129.

Polusny, M.A., Rosenthal, M.Z., Aban, I., & Follette, V.M. (2004). Experiential

avoidance as a mediator of the effects of adolescent sexual

victimization on adult psychological distress. *Violence and Victims*,

19, 1-12.

- Preacher, K.J., & Hayes, A.F. (2008). Asymptomatic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879-891.
- Quintana, J.M., Padierna, A., Esteban, C., Arostegui, I., Bilbao, A., Ruiz, I. (2003). Evaluation of the psychometric characteristics of the Spanish version of the Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica, 107*, 216-221.
- Roemer, E., & Borkovec, T. D. (1994). Effects of suppressing thoughts about emotional material. *Journal of Abnormal Psychology, 103*, 467-474.
- Rosenberg, M. (1965). *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press.
- Sanders, B., & Becker-Lausen, E. (1995). The measurement of psychological maltreatment: Early data on the child abuse and trauma scale. *Child Abuse and Neglect, 19*, 315-323.

Slade, M., Scott, H., Truman, C., & Leese, M. (1999). Risk factors for tenancy breakdown for mentally ill people. *Journal of Mental Health*, 8, 361 – 371.

Sobel, M.E. (1982). Asymptomatic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological Methodology* (pp. 290-212). San Francisco: Jossey-Boss.

Sobel, M.E. (1986). Some new results on indirect effects and their standard errors in covariance structure models. In N. Tuma (Ed.), *Sociological Methodology* (pp. 159-186). Washington, DC: American Sociological Association.

Spataro, J., Mullen, P. E. , Burgess, P. M. , Wells, D. L. & Moss, S. A. (2004). Impact of child sexual abuse on mental health: prospective study in males and females. *British Journal of Psychiatry* 184, 416-421.

Stein, J. A., Leslie, M. B., & Nyamathi, A. (2002). Relative contributions of parent substance use and childhood maltreatment to chronic homelessness, depression, and substance abuse problems among homeless women: mediating roles of self-esteem and abuse in adulthood. *Child Abuse and Neglect, 26*, 1011-1027.

Stovall-McClough, K.C., & Cloitre, M. (2006). Unresolved attachment, PTSD, and dissociation in women with childhood abuse histories. *Journal of Consulting & Clinical Psychology, 74*, 219-228.

Twohig, M. P., Hayes, S. C., & Masuda, A. (2006). Increasing Willingness to Experience Obsessions: Acceptance and Commitment Therapy as a Treatment for Obsessive-Compulsive Disorder. *Behavior Therapy, 37*, 3-13.

van den Bree, M.B., Shelton, K., Bonner, A., Moss, S., Thomas, H., & Taylor, P.J.(2009). A longitudinal population-based study of factors in adolescence predicting homelessness in young adulthood. *Journal of Adolescent Health, 45*, 571–578.

Walser, R.D., & Hayes, S.C. (1998). Acceptance and trauma survivors: Applied issues and problems. In: V.M. Follette, J.I. Ruzek and F.R. Abueg, Editors, *Cognitive-behavioral therapies for trauma*, Guilford Press, New York, pp. 256–277.

Warnes, A. M., Crane, M., Whitehead, N., & Fu, R. (2003). *Homelessness Factfile*. London: Crisis.

Webb, M., Heisler, D., Call, S., Chickering, S.A., & Colburn, T.A. (2007). Shame, guilt, symptoms of depression, and reported history of psychological maltreatment. *Child Abuse & Neglect, 31*, 1143-1153.

Wegner, D.M., & Zanakos, S. (1994). Chronic thought suppression. *Journal of Personality, 62*, 615-640.

Wright, M.O., Crawford, E., & Del Castillo, D. (2009). Childhood emotional maltreatment and later psychological distress among college students: The mediating role of maladaptive schemas. *Child Abuse & Neglect*, 33, 59-68.

Young, J. E. (1999). *Cognitive therapy for personality disorders: A schema-focused approach*. Florida, USA: Professional Resource Exchange.

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

Appendices

A. Instructions to Authors: Clinical Psychology Review

Guide for Authors



Preparation

Use of wordprocessing software

It is important that the file be saved in the native format of the wordprocessor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the wordprocessor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. Do not embed "graphically designed" equations or tables, but prepare these using the wordprocessor's facility. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier: <http://www.elsevier.com/guidepublication>). Do not import the figures into the text file but, instead, indicate their approximate locations directly in the electronic text and on the manuscript. See also the section on Electronic illustrations.

To avoid unnecessary errors you are strongly advised to use the "spell-check" and "grammar-check" functions of your wordprocessor.

Article structure

Subdivision - numbered sections

Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to "the text". Any subsection may be given a brief heading. Each heading should appear on its own separate line.

Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

Material and methods

Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

Results

Results should be clear and concise.

Discussion

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive

citations and discussion of published literature.

Conclusions

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

Appendices

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on.

Essential title page information

Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible. **Note: The title page should be the first page of the manuscript document indicating the author's names and affiliations and the corresponding author's complete contact information.**

Author names and affiliations. Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name, and, if available, the e-mail address of each author within the cover letter.

Corresponding author. Clearly indicate who is willing to handle correspondence at all stages of refereeing and publication, also post-publication. **Ensure that telephone and fax numbers (with country and area code) are provided in addition to the e-mail address and the complete postal address.**

Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a "Present address" (or "Permanent address") may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Abstract

A concise and factual abstract is required (not exceeding 200 words). This should be typed on a separate page following the title page. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separate from the article, so it must be able to stand alone. References should therefore be avoided, but if essential, they must be cited in full, without reference to the reference list.

Keywords

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, "and", "of"). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article, using superscript Arabic numbers. Many wordprocessors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Table footnotes

Indicate each footnote in a table with a superscript lowercase letter.

Electronic artwork

General points

- **Make sure you use uniform lettering and sizing of your original artwork.**
- **Save text in illustrations as "graphics" or enclose the font.**
- **Only use the following fonts in your illustrations: Arial, Courier, Times, Symbol.**
- **Number the illustrations according to their sequence in the text.**
- **Use a logical naming convention for your artwork files.**
- **Provide captions to illustrations separately.**
- **Produce images near to the desired size of the printed version.**
- **Submit each figure as a separate fill.**

B. Instructions to Authors: Journal of Consulting and Clinical Psychology

Instructions to Authors

Length and Style of Manuscripts

Full-length manuscripts should not exceed 35 pages total (including cover page, abstract, text, references, tables, and figures), with margins of at least 1 inch on all sides and a standard font (e.g., Times New Roman) of 12 points (no smaller). The entire paper (text, references, tables, etc.) must be double spaced.

Instructions on preparing tables, figures, references, metrics, and abstracts appear in the Publication Manual of the American Psychological Association (6th edition).

For papers that exceed 35 pages, authors must justify the extended length in their cover letter (e.g., reporting of multiple studies), and in no case should the paper exceed 45 pages total. Papers that do not conform to these guidelines may be returned without review.

The References section should immediately follow a page break.

Authors can publish auxiliary material as online supplemental material. These materials do not count toward the length of the manuscript. Audio or video clips, oversized tables, lengthy appendixes, detailed intervention protocols, and supplementary data sets may be linked to the published article in the PsycARTICLES database.

Supplemental material must be submitted for peer review at the end of the manuscript and clearly labeled as "Supplemental Material(s) for Online Only." Please see [Supplementing Your Article With Online Material](#) for more details.

Brief Reports

In addition to full-length manuscripts, the **JCCP** will consider Brief Reports of research studies in clinical psychology. The Brief Report format may be appropriate for empirically sound studies that are limited in scope, contain novel or provocative findings that need further replication, or represent replications and extensions of prior published work.

Brief Reports are intended to permit the publication of soundly designed studies of specialized interest that cannot be accepted as regular articles because of lack of space.

Brief Reports must be prepared according to the following specifications: Use 12-point Times New Roman type and 1-inch (2.54-cm) margins, and do not exceed 265 lines of text including references. These limits do not include the title page, abstract, author note, footnotes, tables, or figures.

An author who submits a Brief Report must agree not to submit the full report to another journal of general circulation. The Brief Report should give a clear, condensed summary of the procedure of the study and as full an account of the results as space permits.

This journal no longer requires an extended report. However, if one is available, it should be submitted to the Editorial Office, and the Brief Report must be accompanied by the following footnote:

Correspondence concerning this article (and requests for an extended report of this study) should be addressed to [give the author's full name and address].

Letters to the Editor

JCCP considers primarily empirical work and occasionally reviews. Letters to the Editor are no longer published.

Title of Manuscript

The title of a manuscript should be accurate, fully explanatory, and preferably no longer than 12 words. The title should reflect the content and population studied (e.g., "treatment of generalized anxiety disorders in adults").

If the paper reports a randomized clinical trial (RCT), this should be indicated in the title, and the CONSORT criteria must be used for reporting purposes.

Abstract and Keywords

Manuscripts must include an abstract with a maximum of 250 words. All abstracts must be typed on a separate page (p. 2 of the manuscript). Abstracts must contain a brief statement about each of the following:

- the purpose/objective;
- the research methods, including the number and type of participants;
- a summary of the key findings;
- a statement that reflects the overall conclusions/implications

After the abstract, please supply up to five keywords or short phrases.

Participants: Description and Informed Consent

The Method section of each empirical report must contain a detailed description of the study participants, including (but not limited to) the following: age, gender, ethnicity, SES, clinical diagnoses and comorbidities (as appropriate), and any other relevant demographics.

In the Discussion section of the manuscript, authors should discuss the diversity of their study samples and the generalizability of their findings.

The Method section also must include a statement describing how informed consent was obtained from the participants (or their parents/guardians) and indicate that the study was conducted in compliance with an appropriate Internal Review Board.

Measures

The Method section of empirical reports must contain a sufficiently detailed description of the measures used so that the reader understands the item content, scoring procedures, and total scores or subscales. Evidence of reliability and validity with similar populations should be provided.

Statistical Reporting of Clinical Significance

JCCP requires the statistical reporting of measures that convey clinical significance. Authors should report means and standard deviations for all continuous study variables and the effect sizes for the primary study findings. (If effect sizes are not available for a particular test, authors should convey this in their cover letter at the time of submission.) **JCCP** also requires authors to report confidence intervals for any effect sizes involving principal outcomes.

In addition, when reporting the results of interventions, authors should include indicators of clinically significant change. Authors may use one of several approaches that have been recommended for capturing clinical significance, including (but not limited to) the reliable change index (i.e., whether the amount of

change displayed by a treated individual is large enough to be meaningful; see Jacobson et al., **Journal of Consulting and Clinical Psychology**, 1999), the extent to which dysfunctional individuals show movement into the functional distribution (see Jacobson & Truax, **Journal of Consulting and Clinical Psychology**, 1991), or other normative comparisons (see Kendall et al., **Journal of Consulting and Clinical Psychology**, 1999). The special section of **JCCP** on "Clinical Significance" (**Journal of Consulting and Clinical Psychology**, 1999, pp. 283-339) contains detailed discussions of clinical significance and its measurement and should be a useful resource.

Discussion of Clinical Implications

Articles must include a discussion of the clinical implications of the study findings or analytic review. The Discussion section should contain a clear statement of the extent of clinical application of the current assessment, prevention, or treatment methods. The extent of application to clinical practice may range from suggestions that the data are too preliminary to support widespread dissemination to descriptions of existing manuals available from the authors or archived materials that would allow full implementation at present.

General Instructions

APA Journals Manuscript Submission Instructions For All Authors

The following instructions pertain to all journals published by APA and the Educational Publishing Foundation (EPF).

Please also visit the web page for the journal to which you plan to submit your article for submission addresses, journal-specific instructions and exceptions.

Manuscript Preparation

Prepare manuscripts according to the Publication Manual of the American Psychological Association (6th edition). Manuscripts may be copyedited for bias-free language (see Chapter 3 of the **Publication Manual**).

Double-space all copy. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts appear in the **Manual**.

If your manuscript was mask reviewed, please ensure that the final version for production includes a byline and full author note for typesetting.

Review APA's Checklist for Manuscript Submission before submitting your article.

Submitting Supplemental Materials

APA can now place supplementary materials online, available via the published article in the PsycARTICLES database. Please see Supplementing Your Article With Online Material for more details.

Abstract and Keywords

All manuscripts must include an abstract containing a maximum of 250 words typed on a separate page. After the abstract, please supply up to five keywords or brief phrases.

References

List references in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References section.

Examples of basic reference formats:

Journal Article:

Herbst-Damm, K. L., & Kulik, J. A. (2005). Volunteer support, marital status, and the survival times of terminally ill patients. **Health Psychology, 24**, 225–229.
doi:10.1037/0278-6133.24.2.225

Authored Book:

Mitchell, T. R., & Larson, J. R., Jr. (1987). **People in organizations: An introduction to organizational behavior** (3rd ed.). New York: McGraw-Hill.

Chapter in an Edited Book:

Bjork, R. A. (1989). Retrieval inhibition as an adaptive mechanism in human memory. In H. L. Roediger III & F. I. M. Craik (Eds.), **Varieties of memory & consciousness** (pp. 309–330). Hillsdale, NJ: Erlbaum

C. Demographics Form

Demographics Form

1. Age _____

2. Gender **(please tick)**

Male Female

3. What is your ethnicity? **(Please tick one box)**

White British	White & black African	Pakistani	Black African
White Irish	White Asian	Bangladeshi	Black other
White other	White & other	Asian other	Chinese
White Black Caribbean	Indian	Black Caribbean	Other

4. What is your current circumstance with regards to accommodation? **(Please tick one box)**

Sleeping on the streets	<input type="checkbox"/>	Staying in a squat	<input type="checkbox"/>	Staying in a shelter	<input type="checkbox"/>
In derelict buildings	<input type="checkbox"/>	Staying on friends sofa's	<input type="checkbox"/>	Staying in homeless hostel	<input type="checkbox"/>
Other outdoor _____	<input type="checkbox"/>	Overcrowded housing	<input type="checkbox"/>	Other _____	<input type="checkbox"/>

D. IAPS Images used in the VPT

Table 3: IAPS Images used in the VPT

Category	IAPS Image Number
Threat	2053, 2205, 2571, 2800, 2900, 3101, 3230, 3350, 3550, 6212, 6821, 7380, 9006, 9007, 9040, 9050, 9140, 9220, 9252, 9254, 9280, 9300, 9421, 9560, 9571, 9600, 9635, 9800, 9810, 9910, 9911 and 9921.
Neutral	1030, 1230, 1390, 2210, 2221, 2230, 2410, 2440, 3210, 4233, 5120, 5130, 5534, 5940, 6930, 7002, 7025, 7030, 7031, 7060, 7110, 7130, 7150, 7217, 7224, 7560, 7590, 7700, 7920, 8010, 9210 and 9700.

E. Study Poster

A STUDY INVESTIGATING THE EXPERIENCES OF HOMELESS PEOPLE AND THE PROBLEMS THEY MAY FACE

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley

& Dr. Nick Maguire

STUDY POSTER

WHAT IS THE STUDY ABOUT?

- TO INVESTIGATE THE EXPERIENCES OF HOMELESS PEOPLE AND THE PROBLEMS THEY MAY FACE
- TO PROVIDE INFORMATION THAT MAY HELP IMPROVE SERVICES FOR HOMELESS PEOPLE

HOW CAN I TAKE PART?

- YOU WILL BE ASKED TO COMPLETE SEVERAL QUESTIONNAIRES AND ONE COMPUTER TASK, ALL OF WHICH WILL TAKE APPROXIMATELY 90 MINUTES.
- TO THANK YOU FOR COMPLETING THE QUESTIONNAIRES, YOU WILL BE OFFERED A £9.00 FOOD VOUCHER

INTERESTED?

- PLEASE ASK A MEMBER OF STAFF FOR AN INFORMATION LEAFLET

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley & Dr. Nick Maguire

School of Psychology, Doctoral Programme in Clinical Psychology, 34 Bassett Crescent East,
University of Southampton, SO16 7PB. 02380 592609.

F. Study Flyer

A STUDY INVESTIGATING THE EXPERIENCES OF HOMELESS PEOPLE

AND THE PROBLEMS THEY MAY FACE

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley

& Dr. Nick Maguire

STUDY FLYER

WHAT IS THE PURPOSE OF THIS STUDY?

To look at the experiences of homeless people and the problems they face. It is hoped that this study may influence the future delivery of more appropriate services for homeless people.

DO I HAVE TO TAKE PART?

It is your choice whether you wish to take part in this study. If you do decide to take part, you will be free to withdraw from the study at any time without giving a reason. This will not affect the services you receive. If you fill out the questionnaires, this will be taken as you giving informed consent to participate in this study.

WHAT WILL I HAVE TO DO IF I TAKE PART?

You will be asked to fill in some questionnaires and complete one computer task. Altogether these should take approximately 1 hour and 30 minutes to complete. The researchers will be available to help you complete these questionnaires and the computer task if required.

IF I TAKE PART IN THIS STUDY WILL MY INFORMATION BE KEPT CONFIDENTIAL?

All the information collected from the questionnaires will be confidential (and only identifiable by the researchers for data collection purposes). The information collected will be stored in a locked filing cabinet and will be separate from any identification. The results of this study will be written up in a report and you can get a summary of these results if you wish.

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley & Dr. Nick Maguire

WHO WILL BE DOING THE RESEARCH?

Our names are Rebecca Barrett, Helen Stanley, and Charlotte Couldrey. We are trainees on the doctoral programme in Clinical Psychology at the University of Southampton. This study has been reviewed and approved by the school of psychology ethics committee, University of Southampton.

WHAT DO I NEED TO DO IF I AM INTERESTED IN TAKING PART?

If you would like to take part in this study, we will be visiting your hostel on Friday 6th November 2009 and staff will let you know when to expect us.

TO THANK YOU FOR COMPLETING ALL OF THE QUESTIONNAIRES AND COMPUTER TASK YOU WILL BE OFFERED A £9.00 FOOD VOUCHER.

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley & Dr. Nick Maguire

School of Psychology, Doctoral Programme in Clinical Psychology, 34 Bassett Crescent East,
University of Southampton, SO16 7PB. 02380 592609.

G. Information Sheet

**A STUDY INVESTIGATING THE EXPERIENCES OF HOMELESS PEOPLE
AND THE PROBLEMS THEY MAY FACE**

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley
& Dr. Nick Maguire

INFORMATION SHEET

You are being asked to take part in a research study. Before you decide whether to take part, you need to understand what it will involve. Please read this information sheet carefully and talk to one of the researchers or a member of staff if you wish. If you are not sure about something, or need more information, please ask. Thank you.

WHO ARE WE?

We are Rebecca Barrett, Helen Stanley and Charlotte Couldrey, trainees on the Doctoral Programme in Clinical Psychology at the University of Southampton. This study forms part of the training and has been reviewed by the School of Psychology Research Ethics Committee.

WHAT IS THE PURPOSE OF THIS STUDY?

This study aims to look at the experiences of homeless people and the problems they may face. It is hoped that the study will help in the provision of more appropriate services for homeless people.

DO I HAVE TO TAKE PART?

It is up to you to decide if you wish to take part. If you do decide to take part in this study you will be given this information sheet to keep. If you fill out the questionnaires, this will be taken as you giving informed consent to participate in this study. You can withdraw from the study at any time, without this affecting the services you receive.

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley & Dr. Nick Maguire

School of Psychology, Doctoral Programme in Clinical Psychology, 34 Bassett Crescent East,
University of Southampton, SO16 7PB. 02380 592609.

WHAT WILL I HAVE TO DO IF I TAKE PART?

You will be asked to fill in several questionnaires and one computer task. Altogether these should take approximately 1 hour and 30 minutes to complete. Once you have completed them, you will be given an envelope to put the questionnaires in so that one of the researchers can collect them. If you need help to complete the questionnaires, please let one of the researchers know, and we can arrange this.

WILL THE INFORMATION I GIVE IN THIS STUDY BE CONFIDENTIAL?

All the information collected from the questionnaires will be kept strictly confidential (and only identifiable by the researchers for data collection purposes). You will be given a unique identification number which will be put on all of the questionnaires to enable the researchers to match up individual responses. All information collected will be stored in a locked filing cabinet and will be separate from any identification. The results of this study will be written up in a report and you can get a summary of these results if you wish by contacting us.

WHAT MIGHT BE THE DISADVANTAGES OF TAKING PART?

It is possible that some of the questionnaires you will be asked to fill out may make you feel upset or distressed. If this should happen, you will be free to stop participating and will be offered support from the researchers or staff members if you would like it.

WHAT MIGHT BE THE BENEFITS OF TAKING PART?

The information from this study will help provide clearer information about the experiences faced by homeless people. It is hoped that this information in turn will help to inform the future development of services for homeless people. Also as a 'thank you' for completing all the questionnaires and computer task, you will be offered a £9.00 food voucher.

HOW WILL YOU BE ABLE TO CONTACT US?

If you have any questions or would like further information, please contact us at:

School of Psychology

Doctoral Programme in Clinical Psychology

University of Southampton

34 Bassett Crescent East

Southampton

SO16 7PB

Tel: 02380 595320

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley & Dr. Nick Maguire

School of Psychology, Doctoral Programme in Clinical Psychology, 34 Bassett Crescent East, University of Southampton, SO16 7PB. 02380 592609.

H. Screening Form

**A STUDY INVESTIGATING THE EXPERIENCES OF HOMELESS PEOPLE
AND THE PROBLEMS THEY MAY FACE**

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley & Dr. Nick Maguire

SCREENING FORM

1. Are you able to read one of the daily newspapers (e.g. The Mirror, The Independent)?

YES

NO

2. Are you able to fill in your own benefit forms without any help / support?

YES

NO

3. For this study, how would you prefer to fill in the questionnaires?

You will be able to change your mind on the day, if you wish.

Please tick one box

I would like to fill in questionnaires by myself

I would like to fill in questionnaires with some help

I would like to fill in questionnaires in an interview

Participant ID no: _____

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley & Dr. Nick Maguire

School of Psychology, Doctoral Programme in Clinical Psychology, 34 Bassett Crescent East,
University of Southampton, SO16 7PB. 02380 592609.

I. School of Psychology Ethics Committee Approval Email

This email is to confirm that your ethics form submission for "THE RELATIONSHIP BETWEEN CHILDHOOD TRAUMA, SHAME AND EXPERIENTIAL AVOIDANCE IN HOMELESS ADULTS" has been approved by the ethics committee

Project Title: THE RELATIONSHIP BETWEEN CHILDHOOD TRAUMA, SHAME AND EXPERIENTIAL AVOIDANCE IN HOMELESS ADULTS

Study ID : 774

Approved Date : 2009-05-11 12:42:25

J. Research and Development Committee Approval Letter

Rebecca Barrett
School of Psychology
University of Southampton
University Road
Highfield
Southampton
SO17 1BJ

RGO Ref: 6470

28 May 2009

Dear Sir/Madam

Project Title The Relationship Between Childhood Trauma, Shame and Experiential Avoidance in Homeless Adults.

This is to confirm the University of Southampton is prepared to act as Research Sponsor for this study, and the work detailed in the protocol/study outline will be covered by the University of Southampton insurance programme.

As the sponsor's representative for the University this office is tasked with:

1. Ensuring the researcher has obtained the necessary approvals for the study
2. Monitoring the conduct of the study
3. Registering and resolving any complaints arising from the study

As the researcher you are responsible for the conduct of the study and you are expected to:

1. Ensure the study is conducted as described in the protocol/study outline approved by this office
2. Advise this office of any change to the protocol, methodology, study documents, research team, participant numbers or start/end date of the study
3. Report to this office as soon as possible any concern, complaint or adverse event arising from the study

Failure to do any of the above may invalidate the insurance agreement and/or affect sponsorship of your study i.e. suspension or even withdrawal.

On receipt of this letter you may commence your research but please be aware other approvals may be required by the host organisation if your research takes place outside the University. It is your responsibility to check with the host organisation and obtain the appropriate approvals before recruitment is underway in that location.

May I take this opportunity to wish you every success for your research.

Yours sincerely



Dr Lindy Dalen
Research Governance Manager

Tel: 023 8059 5058
email: rgoinfo@soton.ac.uk

K. Debriefing Form

**A STUDY INVESTIGATING THE EXPERIENCES OF HOMELESS PEOPLE AND
THE PROBLEMS THEY MAY FACE**

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley
& Dr. Nick Maguire

DEBREFING FORM

Thank you for taking part in this study and for providing us with lots of valuable information. Our study aimed to investigate the experiences of homeless people and the problems they may face. It is hoped that the study may help to provide better information regarding future provision of services for homeless individuals.

When the research is completed, it will be submitted for publication and may be presented at conferences to other researchers and clinicians. This final report will NOT include any identifying information but instead will group together the results of all participants. A summary of these findings will be available upon completion of the research. If you would like a copy of this report, please inform us and we will be happy to forward a copy of this report to you.

The contents of these questionnaires may produce strong emotions, feelings, or thoughts. These are normal experiences. However, if you feel that this is a concern for you, please speak to a member of staff or one of the researchers. Alternatively, should you need further help and support, please contact any of these people who will be able to help.

- Your **support worker** at the service
- Dr _____ (the service's healthcare GP)
- The **Samaritans** on 08457 909090

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Chair of the Ethics Committee, Department of Psychology, University of Southampton, Southampton, SO17 1BJ. Phone: (023) 8059 5578

Researchers: Rebecca Barrett, Charlotte Couldrey, Helen Stanley & Dr. Nick Maguire

L. Reaction time data and formula for data conversion

Formula for converting reaction time data to attentional bias scores

$$ABS = \frac{1}{2} [(LpRa - LpLa) + (RpLa - RpRa)]$$

LpRa = reaction time when dot probe presented on the left of the screen following the aversive stimulus presented on the right of the screen

LpLa = reaction time when dot probe presented on the left of the screen following the aversive stimulus presented on the left of the screen

RpLa = reaction time when dot probe presented on the right of the screen following the aversive stimulus presented on the left of the screen

RpRa = reaction time when dot probe presented on the right of the screen following the aversive stimulus presented on the right of the screen

Table 4: Reaction time data for VPT

<i>SPD</i>		<i>Mean</i>	<i>SD</i>	<i>Range</i>
17ms	LpRa	663.98	243.24	971.63 (375.38 - 1347.00)
	LpLa	650.68	236.96	927.38 (367.38 - 1294.75)
	RpLa	667.90	244.25	964.25 (366.25 - 1330.50)
	RpRa	666.75	250.30	1088.38 (349.75 - 1438.13)
500ms	LpRa	677.97	224.55	891.75 (396.25 - 1288.00)
	LpLa	689.72	250.91	949.13 (377.88 - 1327.00)
	RpLa	675.88	235.78	992.52 (326.86 - 1319.38)
	RpRa	675.57	262.01	1174.08 (312.75 - 1486.83)
1500ms	LpRa	683.73	255.73	1054.71 (358.71 - 1413.43)
	LpLa	688.28	247.93	1045.75 (369.75 - 1415.50)
	RpLa	694.25	230.46	970.43 (368.71 - 1339.14)
	RpRa	685.18	251.94	1061.36 (347.50 - 1408.86)