Volume I – Research Volume

Assertive Outreach Services in the United Kingdom

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THESIS OVERVIEW

In Volume I two papers are presented which focus on the practice of Assertive Outreach Teams (AOT) in the United Kingdom. In chapter 1 of this volume a review of the literature on Assertive Outreach Teams in the UK is presented. This review focuses on studies from the UK as it is argued that generalizations cannot be made from USA based studies. This is followed in Chapter 2 by an empirical study on the relationship between the factors of shame, stigma, engagement and ethnicity in AOTs in Birmingham. This study investigated whether black clients and white clients differed with respect to how engaged they were with services, and what role the factors of shame and stigma play in this.

In Volume II five clinical practice reports (CPR) are presented. In CPR 1 the case of a client from secondary care is formulated from two theoretical perspectives. The perspectives are compared and contrasted and references are made to clinical implications. CPR 2 outlines a qualitative service evaluation into the use of interpreting services by those carrying out psychological therapies. The outcomes of this evaluation are linked to policy and legislation and the report makes recommendations with regard to future practice. In CPR 3 a single case experimental study is presented. The case presented is that of a 7 year old with Aspergers syndrome. A Cogntive Behavioral Intervention was utilised and its effectiveness is examined. CPR 4 outlines a case study of a man with learning disabilities who engages in cigarette pica. The behavioral intervention used in this case is outlined and assessed. Finally in CPR 5 a précis of a Cognitive Analytic Therapy (CAT) intervention is presented. A case study approach is

taken and reflections are made on all aspects of the work carried out (assessment, formulation, intervention and outcome).

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CONTENTS

Volume I – Research volume

Chapter 1

	Page
Literature review:	
Assertive outreach in the UK what is the evidence?	**11**
- Abstract	12
- Introduction	14
- Method	18
- Methodological analysis	21
- Review of the evidence	37
- Conclusions and future directions	47
- References	52

Chapter 2

	Page
Empirical paper:	
"The relationship between shame, stigma	**58**
and engagement for African Caribbean males and	
white British males in assertive outreach services"	
- Abstract	59
- Introduction	60
-Method	69
-Results	72
-Discussion	78
-References	84
Appendices	**93**

List of Appendices

	Page
Public dissemination document	**90**
Appendix 1 -Instruction for authors for nominated journals	**94**
Appendix 2 - Measures used	**95**
Appendix 3 - Consent form and information sheet	**96**
Appendix 4 - Literature review – table 1	**97**
Appendix 5 - Tests of normality	**98**
Appendix 6 - Non-parametric statistics and analyses of subscales	**102**
Appendix 7 - Quantitative statistics – raw data	**107**
Appendix 8 - Information relevant to ethical review and conduct	**114**

Volume II - Clinical

	Page
Clinical Practice report 1 - The case of a 58 year old woman with obsessive-compulsive disorder formulated from a cognitive behavioural and psychodynamic perspective	11
Clinical Practice Report 2 - A Service Evaluation on the use of interpreting services by Psychologists and other staff delivering Psychological therapies	36
Clinical Practice Report 3 – Single case experimental design – The case of a 7 year old with Aspergers syndrome	66
Clinical Practice Report 4 – Case study - A case of cigarette pica in a 23-year-old man with a severe learning disability: A behavioural assessment and intervention	81
Clinical Practice Report 5 – Case study précis **-** A cognitive analytical (CAT) intervention with an Assertive Outreach Client with Schizophrenia	100

Appendices

Page

Clinical Practice Report 1 Appendices:

Appendix 1 (Figure 1) 102

Appendix 2 (Figure 2 and 3) 103

Clinical Practice Report 2 Appendices:

Appendix 1 (Ethnic Profile) 104

Appendix 2 (Languages) 105

Appendix 3 (Interpreter audit questionnaire) 106

Appendix 4 (Interpreter audit) 107

Appendix 5 (Templates) 108

Clinical Practice Report 3 Appendices:

Appendix 1: (Graph depicting the levels of the target behaviour over the course of the study) 121

Appendix 2: (Graph depicting the SDQ, BAI-Y, and BDI-Y scores for the duration of the study.) 122

Appendix 3: (Time series results for analysis 1 (Baseline and intervention)) 123

Appendix 4: (Time series results for analysis 2 (Intervention and drop out)) 124

Clinical Practice Report 4 Appendices:

Appendix 1 (Map of respite) 125

Appendix 2 (Summary of ABC data) 126

Appendix 3 (Graph-frequency of pica) 127

Appendix 4 (Formulation) 128

Appendix 5 (Guidelines) 129

Volume I - Chapter 1: Literature Review

Assertive Outreach in the UK – What is the Evidence?

Chapter word count: 9070

(excluding abstract, 246; references 1098)

Assertive Outreach in the UK – what is the evidence?

Abstract

Background: British Assertive Outreach Teams (AOT's) are built upon the Assertive Community Treatment (ACT) model. A past review on ACT (Marshall and Lockwood 2000) has highlighted the effectiveness of the ACT model. However this review was heavily based on US studies. Also there may be issues concerning the implementation of the ACT model in the UK. Hence the evidence for UK AOT needs to come under further scrutiny.

Objective: To review the evidence (post Marshall and Lockwood 2000) on the effectiveness of UK AOT. The following outcome indices were examined: (i. remaining in contact with services and engagement, ii. hospital admissions, iii. Clinical and social outcomes, iv. Costs)

Search strategy: Electronic searches of the databases Pubmed, Psych-info, and ASSIA were undertaken.

Selection criteria: The inclusion criteria were that studies must be quantitative, UK based, and aim to investigate at least one of the outcome indices highlighted above.

Main results: The majority of evidence was found to be non-experimental and of poor methodological rigour. There were inconsistencies in the definition of key variables and none of the studies were blinded. With regard to outcomes the strongest evidence was for AOTs being effective in engagement and helping clients remaining in contact with services. Evidence for the other outcome indices was either poor or inconclusive.

Conclusions: Due to methodological issues no firm conclusions can be made on the research currently available on UK AOTs. More research is needed utilising better methodological rigour before any firm conclusions can be made.

INTRODUCTION

Background

Assertive outreach teams (AOT's) have been functioning in the UK since 1999, with their inception being ushered in as part of the National Service Framework for Mental Health. The prominence of AOTs in the UK was enhanced further by The *Policy and implementation guide* (Department of Health , 2001) which stated that all mental health services should have implemented AOTs by April 2003. AOT's are built upon the Assertive Community Treatment (ACT) model, which originated in the USA. In line with this model, AOTs offer services to those with severe mental illnesses (most commonly psychosis) who are at risk of falling out of contact with services. Inclusion criteria also include those with high hospital use and those with multiple complex needs (this may include a history of violence or offending, risk of self harm and neglect, poor response to previous treatment, dual diagnosis, detention under the Mental Health Act 1983 in the past two years, and unstable accommodation or homelessness). AOTs involve the utilisation of multidisciplinary teams with a high staff to client ratio, extended working hours, and an emphasis on flexibility. AOTs often work within the service user's environment and may offer a variety of in-vivo interventions. Another core component of the model is that responsibility for patient care is shared amongst the team, rather then being designated to a specific member of staff (which is more line in with a case management model, e.g. Harris 1987).

Since their inception AOT's have garnered a growing body of research literature. Research studies from the US on the ACT model have found favourable evidence for the approach. For example Stein and Test (1980) have demonstrated significant reductions in hospital care. Herinckx et al (1997) have put forward evidence for better engagement when clients are attached to ACTs, and Quinlivan et al (1995) have presented evidence for ACTs leading to a reduction in service costs.

Comparably, evidence for AOTs in the UK is considerably meagre. The advantages of reduced inpatient care and reduced costs have not been replicated. For example the UK 700 group (1999) demonstrated no reduction in hospitalisation in comparison to controls. Two explanations have been put forward for this disparity in results. Firstly that standard care in the UK is better than that of other countries, so it is harder for UK AOTs to show that they are beneficial (Burns et al 2000). Burns (2009) has gone further to state that comparing AOTs to British community mental health teams (CMHTs) appears to be a redundant exercise. Burns states that in viewing CMHTs as "treatment as usual" (TAU) is doing them a disservice as they have been shown to be effective interventions in their own right. Thus a comparison of AOT care and CMHT care, can possibly be seen as a comparison of two interventions and this may be behind the lack of evidence for AOTs in the UK. The second argument is that UK AOT's do not stay faithful enough to central ACT tenants, that they have poor 'model fidelity'. Thus negative results are produced from UK studies as 'true' ACT isn't being measured (Mcgovern & Owen 1999). Areas where UK teams have been found to be lacking in comparison to US based teams include the absence of dual diagnosis and vocational workers (Wright et al 2003) and lower levels of patient contact and variation of activities (Fiander et al 2003)

It is the combination of the above two points (quality of treatment of usual, and issues around fidelity) that point to outcome studies from America not generalising directly onto British services. Thus studies based purely on UK based AOTs need further inspection.

Marshall & Lockwood's meta-analysis

The most recent review of the evidence for ACT has been completed by Marshall & Lockwood (2000). In this meta-analysis, the authors sought to determine the effectiveness of ACT in comparison to traditional hospital based rehabilitation, standard community care and case management. The outcome indices they used to measure effectiveness included; remaining in contact with services, hospital admissions, clinical and social outcomes and finally costs. The selection criteria for the inclusion of studies were stringent, only randomised control trials were included. Additionally all studies had to have participants of adult working age (18-65) and had to compare ACT to either hospital based rehabilitation, standard community care and case management. Marshall & Lockwood found favourable evidence for ACT and argued that it can reduce costs of hospital care and improve patient outcomes and satisfaction.

Whilst the Marshall and Lockwood's review does represent an in-depth review of ACT, what it adds to the UK picture of AOT can be questioned. Only one British study was included in the review, and this showed no effects. Additionally the evidence for ACT displayed in this review was heavily reliant on two American studies from the 1980s, so

along with cultural issues, the evidence in this review could be questioned with regard to current relevancy.

Objectives

In light of the outcomes of the Cochrane review outlined above and issues around US based research, this review aims to focus on the research carried out on UK AOTs since the Cochrane review was first published (post and inclusive the year 2000). This review will aim to examine what evidence there is for UK AOT, and to look at the quality of this evidence. Wider inclusion criteria than the Cochrane review will be utilised (not just RCTs). In examining whether AOTs are
effective, similar outcome indices to those utilised by Marshall and Lockwood (i. remaining in contact with services and engagement, ii. hospital admissions, iii. Clinical and social outcomes, iv. Costs) will be assessed. These indices were chosen as they map onto the service aims of UK AOTs.

METHOD

Criteria for considering studies for this review

Types of studies

All UK based AOT studies post and inclusive of the year 2000 were reviewed. Only studies which had some component of the assessment of the effectiveness of AOT as an aim were included. Qualitative studies were omitted as it was felt that they did not suit the explicit outcomes examined in this review, and also because their numbers were low.

Types of participants

Most participants in the included studies were required to be of adult working age (18 - 65) and suffering from severe mental illness (schizophrenia and schizophrenia like disorders, bipolar disorder, depression with psychotic features). Studies focused on substance misuse in the absence of a severe mental illness were not considered, however studies which looked at dual diagnosis (substance misuse and severe mental illness) were included.

Types of intervention

Only interventions/teams described as 'assertive outreach' or 'assertive community treatment' were included. Studies were teams that were not classed as AOT teams (e.g.

early intervention teams) used 'assertive outreach type interventions' were also omitted. This was thought to be an important selection criteria as it was believed that fidelity to the AOT model in these non AOT teams would be lower.

Search criteria

Three databases (Pubmed, Psych-info, and ASSIA) were searched. The following search term 'assertive outreach or assertive community treatment' with the limiting criteria of publication date (2000-2010) was used for all three databases. The selection criteria outlined above were then applied by the author in selecting studies. Reference lists of the chosen articles were also examined to identify any further studies.

Summary of included studies

In the following section a critical analysis of the studies included in this review will be carried out. The approach taken will list key areas of interest with respect to design and analysis carried out in the studies listed. The reader is directed to the summary table (Table 1 in Appendix 4). Each of the studies have been placed into groups according to the grading criteria utilised in the NICE guidelines for schizophrenia (2009). This grading system is summarised below. Methodologically this grading system is evaluative, with studies with less methodological rigour given a higher number grading. The number of studies included in this review that fit each grading level are displayed in brackets:

Level 1a: Evidence obtained from a single large randomised trial or a meta-analysis of at least three randomised controlled trials. (3 studies)

Level 1b: Evidence obtained from a small randomised controlled trial or a meta-analysis of less than three randomised controlled trails (0 studies)

Level 2a: Evidence obtained from at least one well-designed controlled study without randomisation (0 studies)

Level 2b: Evidence obtained from at least one other well-designed quasi-experimental study (3 studies)

Level 3: Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies. (12 studies)

Level 4: Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. (0 studies)

Each of the groups of studies will now be reviewed. For each grouping the following aspects will be reviewed; design issues, sampling, team characteristics, the measurement of hospital usage and blinding.

METHODOLOGICAL ANALYSIS

Level 3 studies – Evidence obtained from well-designed non-experimental descriptive studies

Twelve studies utilised non-experimental designs. The majority of these studies utilised a longitudinal observational design (11 studies). Of these longitudinal studies the majority utilised a prospective longitudinal design (6 studies) with the remaining studies utilising a retrospective longitudinal design (5 studies).
One study that was not longitudinal in design, but was given a level 3 grading was that of Schneider et al (2006), which utilised a survey design

Design issues

The studies that implemented a prospective longitudinal design differed with regard to the intervals at which data was collected. Three studies within this group (Fakhoury et al 2007, Priebe et al 2004, and Preibe et al 2003) all utilised data from the Pan-London Assertive Outreach Study (PLAO) and hence all used the same design. The follow up period for these three studies was nine months from baseline. The two studies by Commander et al (2005, and 2008) followed participants up two years after baseline. Finally the study by Macpherson et al (2007) had a six month follow up after baseline. None of these studies give a rationale for why the length of time from baseline to follow up was implemented. One could argue that clients within AOT services may require more long-term interventions and may show gradual changes in line with this. Thus a longer follow up period may be more suited to this client group, and the six month

follow up by Macpherson et al may be deemed to be too short. A counter argument could be that the two-year period utilised by the Commander studies may be too long as it may hinder further (already within a design where cause and effect cannot be ascertained) the confidence with which any changes can be attributable to the intervention. One year has been shown to be a realistic time point for demonstrating change within assertive outreach settings (Latimer 1999), hence a compromise between these two approaches may be something more akin to the timescale implemented by the PLAO studies (nine months). However this is also still short of one year, and despite the evidence of Latimer, there is still not a consensus that one year is long enough to measure change (with others promoting longer times e.g. Killaspy et al 2006).

Five studies within this group utilised a retrospective longitudinal design (Glover et al (2006), Keown et al (2007), Mirza et al (2003), Meaden et al (2004) and Paget et al (2009)). Glover et al (2006) looked at outcome data from NHS databases for six separate administrative years spanning from 1998/9 to 2003/4. Similarly Keown et al (2007) collected data over a 5-year period (1999 to 2004). However Keown et al took a slightly different approach to Glover et al. Rather than looking at the whole year, they looked at the same sample period each year (1 April to 30 June). A rationale on the basis of this being implemented because it made the study more feasible is given, however no rationale is given for why this particular three month period was chosen, and whether it was deemed to be representative in respect to the outcome variables (hospital use, suicides, diagnosis).

Mirza et al (2003) reviewed data on bed day usage for a cohort of newly accepted AOT clients. They state that they collected data up to the year 1999, so it is assumed that they covered the whole bed day history of a given client up to that date. They then divided this period between time spent in hospital whilst under community care as opposed to AOT care.

Two final studies that used a retrospective design were Paget et al (2009) and Meaden et al (2004). Both Meaden and Paget compared hospital usage before and during AOT, with Paget, unlike other studies, also assessing the impact of staffing levels during the AOT period.

It is perhaps inevitable that the retrospective studies rely heavily on pre-existing routine clinical data/case notes. As a consequence the reliability and accuracy of this data can be questioned in comparison to data collected prospectively for the purpose of research. Overall, as this literature presents with little agreement in terms of minimum duration of treatment, the impact of treatment duration on the reported outcomes remains an unexplored source of variation in this literature.

Sampling

Of the level 3 studies implementing a retrospective design, three studies utilised a relatively small sample (Meaden et al 2004 (n=45), Paget et al 2007 (n=32), Mirza et al

2003(n=62)) and gathered outcomes from only one AOT team[1]. The impact of small sample sizes on the generalisability of these studies is thrown into sharp relief by the samples reported in the other retrospective studies. For example, (Keown et al (n=450,000), Glover et al 2006 used routine observational data for clients from 229 local health authorities which totalled over 22 million). Accordingly, the conclusions reported by Meaden, Paget and Mirza are of insufficient power to dispute the conclusions of the large studies. Therefore, the studies by Meaden, Paget and Mirza should only be used with respect to confirm the conclusions of the larger studies.

With respect to inclusion criteria, there was some variation as to whether studies included out-patient data. For example, Keown et al included only clients who had used inpatient services over a specified time whereas Glover et al used wider inclusion criteria of including all adult clients of mental health for which data was available. Accordingly, studies reporting data from out-patient and in-patient services are likely to provide a more accurate description of Mental Health Service usage.

Of the level 3 studies implementing a prospective design only one study utilised a relatively small sample (Macpherson et al 2007 n= 79). Furthermore this study only sampled clients from one AOT, and approached all clients from that AOT to participate. The authors admit that some clients (7%) had been with the team for less than six months so there may be disparities around how much AOT care each client had received. This is significant within the context that it may be the case that those within the first few months of AOT care may be within a 'stabilisation' period of care and may

[1] In addition, it should be noted that the data reported by Paget (2009) was follow-up data to Meaden (2004). Accordingly, this study should not be interpreted as reporting unique outcomes.

show poorer outcomes (McGrew et al 1995). The rest of the level 3 studies that used a prospective design included much larger samples. The studies by Commander et al (2005 & 2008) included a sample of 250 participants who had been newly taken on by AOT teams.

The PLAO studies also included large samples (Priebe et al 2004 n=580; Priebe et al 2003 n=580; Fakhoury et al 2007 n=446). These studies included all clients who were registered with an AOT and unlike the study by Macpherson et al (2007), they took steps to control the potentially confounding effect of the length of time a client had been with a team. To do this, "newer" patients were oversampled in comparison to established patients. This oversampling was needed as new patients being referred to AOTs is not a frequent occurrence. Hence the researchers had to go back to the AOTs at different set time points to recruit any newly referred patients. This increased the sample size of newer patients within the full sample making the sample more representative. Within these studies the cut off point for what was a new patient (< 3 months) and what was established (> 3 months) seems to have been subjectively defined by members of the research group however. It seems that the Commander et al studies (2005 & 2008) overcame the issue of the length of treatment by following a group of participants from their inception into the service.

Team characteristics

Given that there is some debate as to whether UK and north American AOT treatments are comparable (Mcgovern & Owen 1999) it is crucially important that outcome studies include detailed descriptions of the treatment protocol and utilised treatment fidelity

measures as part of the research design[2]. Six studies within this group used some form of measure to ascertain fidelity to the ACT model. Macpherson et al (2007) used the Dartmouth Assertive Community Treatment Scale (DACTS, Teague et al 1998) to measure treatment fidelity and reported high levels of fidelity for the team researched. Mirza et al (2003) quote an Index of Fidelity of Assertive Community Treatment score of 53.2% for the service they investigated. Meaden et al (2004) report high levels of fidelity for the team they researched using a scale devised by McGrew, Bond, Dietzen and Salyers (1994). The three remaining studies all from the PLAO group used the same method (Priebe et al (2003), Priebe et al (2004), Fakhoury et al (2007)). The method used in these studies represents a very comprehensive approach and is outlined in Wright et al (2003). This group of studies, along with demographic data, used the following measures to assess fidelity; The Team Organisation Questionnaire (developed specifically for the study), the DACTS (Teague et al 1998), and The International Classification of Mental health Care (ICMHC). Twenty four teams were included in this study and varying levels of fidelity were found. Only four teams were rated as high fidelity, three teams were rated as having low fidelity, and seventeen were given the lowest rating of 'ACT-like'. A mix of voluntary sector and statutory sector teams were included, with voluntary sector teams having lower levels of fidelity.

[2] Another issue that may be of relevance to treatment fidelity is at what point in a teams 'lifespan' that research took place. One could argue that newly formed teams may not be well practiced in the model. Thus taking baseline data with these teams and then following up at a later point may be likely to result in results indicating effectiveness as teams may get 'better' at the model over time. Of the studies in this group, six studies within this group included teams that had been recently set up (Commander et al 2005 and 2008, Glover et al 2006 and the PLAO studies (Fakhoury et al 2007, Priebe et al 2004, and Priebe et al 2003)). In the Commander studies all baseline data was taken with teams recently set up. In the study by Glover et al (2006) 26% of teams were established during the duration of the study. In the PLAO studies the mean age of the teams investigated was 39.7 months, with a range of 4 to 120 months. Finally in one study within this group (Keown et al 2007) data on 'team age' is unclear.

Three studies within this group used less formal methods to determine treatment fidelity. In the two studies by Commander et al (2005 & 2008) the authors report that the teams involved were set up according to the PACT model (Programme for Assertive Community Treatment; Stein & Santos 1998) with high fidelity. They then go on to describe how the teams involved contained properties consistent with the AOT model, but no formalised measures were used. Purely on face value it does appear that the teams seem to have good fidelity to the ACT model. In the study by Glover et al (2006) model fidelity was assessed, they do not go into detail about how this was done but it involved looking at the characteristics of the teams. They divided the AOTs studied into those narrowly defined (AOTs with 7 days a week 24 hour care) and those broadly defined (AOTs with no 7 days a week 24 hours care).

Three studies within this group did not report any form of assessing fidelity (Paget et al 2009, Keown et al (2007), and Schneider et al (2006)). In the study by Paget et al (2009) the sample from the Meaden et al (2004) was followed up. Thus it may be the case that fidelity had been assessed in the past with the team concerned so it was not assessed again.

Measurement of Hospital use

The majority of studies within this group measured some aspect of hospital usage as an outcome variable. The only study that did not was Commander et al (2008) which focused on quality of life.

It could be argued that it is useful if studies differentiate between formal and informal admissions, as a reduction in formal admission may be seen as an indicator of greater concordance between service and service-user with regard to treatment options. Indeed Priebe et al (2003) state that informal admissions may allude to engagement and treatment compliance. In the Commander et al (2005) study the number of bed days and admissions were totalled and summed. In the study by Glover et al (2006) bed days and admissions were also collected, but they did not differentiate between formal and informal admissions. Conversely In the study by Macpherson et al (2007) the number of formal and informal admissions were collected over a six month period but bed days were not.

In the studies by Paget et al (2009), Meaden et al (2004), Mirza et al (2003), Keown et al (2007) the average (mean) number of bed days and admissions were collected. The advantage of this approach is that a sum of hospital usage over a period of time could just indicate more pronounced usage over a given period. Thus when comparing different periods of time (e.g. pre AOT and post AOT) using averages may give a more accurate picture. One negative aspect of the studies by Meaden et al, Paget et al and Mirza et al is that they did not differentiate between formal and informal admissions.

In relation to the PLAO group of studies different approaches to the measurement of hospital usage were taken by each of the studies. The most comprehensive approach was taken by Priebe et al (2003) which collected both the number of admissions and the number of bed days. In the studies by Priebe et al (2004) and Fakhoury et al (2007) admissions were collected but bed days were not. All of the studies within the PLAO group differentiated between formal and informal admissions.

A less in depth approach to the measure of hospital usage was taken in the survey study by Schnieder et al (2006). Rather than reporting bed days they reported the percentage of service users who had been in hospital for more than 6 months. Similarly in respect to individual admissions specific outcomes are not given. Rather coding was used (never admitted, admitted once, twice, three or more) and a percentage is given for the AOT users who had been admitted once or twice. It would have been beneficial to have had a breakdown of information and to know what percentages were in each coding category. Similarly the authors do not cross-reference between their data on length of stay and number of admissions. Thus it is not clear whether those who spent longer in hospital also had more admissions. Finally the authors also do not differentiate between formal and informal admissions.

With regard to bed days as a variable to measure effectiveness, Meaden et al (2004) make a valid point. They state that it is presumed that bed days can be seen to represent duration of illness but that in reality this may not be the case. They point to the fact that in some cases clients are kept in inpatient settings whilst awaiting accommodation issues to be resolved. Thus bed days as a variable may not purely be a measure of duration of illness.

Blinding

All studies within this group were non-blind.

Level 2b studies: Evidence obtained from at least one other well-designed quasi-experimental study

Three studies were rated at 2b level (Wane et al 2007, Davidson and Campbell 2007, and Minghella et al 2002)

Design issues

The study by Wane et al (2007) utilised a within subject control design. Data for a cohort of AOT clients were compared two years prior to induction to the AOT and one year post. The two-year pre AOT period was split into two separate years. The study by Minghella et al (2002) represents an uncontrolled study comparing and contrasting two voluntary sector AOT teams in London. The authors admit that the outcomes between the two teams cannot be directly compared due to uncontrolled design. This study gathered data on acceptance of a client to a team, and then followed this up one year later. Davidson and Campbell (2007) utilised a longitudinal quasi-experimental design due to allocation being determined by team (AOT vs. CMHT). Data from clients and key workers was collected at 3 time points (baseline, nine and eighteen months). Hospital use data was collected for eighteen months pre and eighteen months post the baseline.

The one-year post AOT timeframe for data collection was utilised by all studies at the 2b level (with the Davidson & Campbell 2007 study going up to 18 months). This fits with the evidence cited earlier (Latimer 1999) regarding a length of time long enough to exhibit change within AOT settings. Unlike the studies by Wane et al (2007) and Davidson and Campbell (2007), Minghella et al did not collect any pre AOT data. This is

unfortunate as it may have added to the author's conclusions about the various impact of the teams investigated

Sampling

In the study by Davidson and Campbell (2007) 60 participants were recruited via a referral method. However not everyone who participated did so at the same level. The majority of participants participated fully (allowing both themselves and their key workers to be interviewed, n = 41) with some clients declining to be interviewed themselves but allowing their key worker to be interviewed (n= 19). Additionally this study had an AOT group and a CMHT group. The AOT group was larger (n=34) than the CMHT group (n=26). On a positive note participants were sourced from multiple teams. A similar number of participants were recruited by Minghella et al (n = 79). The sampling method utilised entailed any clients being accepted by the two teams in the study being invited to take part. No exclusion criteria were utilised. Finally in the study by Wane et al (2007) the first 42 patients on a particular AOT's caseload were included. There is uncertainty regarding why this number of participants (and hence this sampling method) was chosen as the study does not mention a test of power or any practical constraints that may have limited recruitment. Additionally for some of the outcomes investigated in this study not all participants were included (with regard to the FACE health and social assessment measure, only 34 participants had data pre and post AOT). To summarise, studies within this grouping utilised mid to small sample sizes, and there were issues around having complete data for all participants in some of the studies.

Team characteristics

In the studies by Wane et al (2007) and Minghella et al (2002) the DACTS (Teague et al 1998) was used to assess fidelity. Wane et al found that the team they investigated had high fidelity. In the study by Minghella et al (2002) two different models of AOT were assessed. Both teams partly adhered to the ACT model, but both teams exhibited significant deviations from the ACT model (on the measure one team scored 53% and the other scored 65%). One important deviating factor for both teams was the absence of medical input. The final study in this group, Davidson and Campbell (2007) did not assess fidelity.

With respect to the age of the team being investigated, within this group only the study by Davidson and Campbell (2007) investigated teams recently established but no dates are given. Data on team age is not available in the Minghella et al (2002) study.

Measurement of hospital use

In the studies by Davidson and Campbell (2007) and Minghella et al (2002) both bed days and admissions (voluntary and involuntary) were collected. In the study by Wane et al (2007) bed days and admissions were also collected, but they did not differentiate between formal and informal admissions. However Wane et al divided the bed days variable into 'nights in hospital' and 'time on leave'. The authors state it is common practice for patients to spend time on leave prior to discharge to facilitate a smooth transition back to normal life. Thus the bed days variable in isolation may not be representative. This casts doubts on the validity of the 'bed days' variable as a measure

of illness in all the studies (except for Wane et al) in this review. Overall the measurement of hospital use was consistently better in these studies than in the level 3 studies.

Blinding

All studies within this grouping were non-blind

Level 1a studies – Evidence obtained from a single large randomised trial or a meta-analysis of at least three randomised controlled trials Methodological analyses

Three studies (Killaspy et al (2006), McCrone et al (2009) and Killaspy et al (2009)) were based on data obtained from a large randomised control trial (The REACT study) and were given a level 1a rating.

Design issues

The studies in this grouping can be seen to have higher levels of methodological rigour than the studies at lower levels of grading. Participants were randomised (to either AOT care or CMHT care) whether they agreed to participate or not. Whilst this may raise ethical issues, the authors defend this approach by arguing that if they only used consenting clients then the sample would not be representative (with AOT clients being hard to engage and unwilling to consent to interventions). Additionally randomisation took place before any client interviews in order to avoid bias. Participants were

followed up after eighteen months. Killaspy et al (2009) later followed up this cohort again three years later. Thus in combination of the two studies (Killaspy et al 2006 & 2009) there appears to have been sufficient time post intervention within which to ascertain change.

Sampling

In the studies by Killaspy et al (2006) and McCrone et al (2009) clients were referred into the study by CMHTs (n = 251). Various inclusion criteria were applied including potential participants being with a CMHT for at least 12 months, frequent use of inpatient services and the presence of a severe mental health problem. As a consequence there appears to be have been good matching between the two groups in this study (AOT and CMHT care), with the authors reporting that both groups had similar baseline characteristics. The study did also use a panel (of researchers and clinicians) to decipher whether those who met all criteria but the use of inpatient services could be included. This represents more of a subjective determinant of inclusion however only a small number of participants were recruited in this way (n = 18). Additionally the response rate for the follow up interviews where secondary data was collected in this study was relatively low (68%). In the follow up study carried out by Killaspy et al (2009) follow up rates were good (237 of the original 251 were followed up).

Team characteristics

For all three studies in this group the DACTS measure was used to assess fidelity. For the two teams involved in the REACT study one was deemed to have high fidelity and the other was deemed to have lower fidelity ('ACT like'). Data on team age is not present within the REACT studies but they do state that the teams investigated were representative of teams in London and similar to the teams in the PLAO studies. Regardless of this, in this study participants were randomised to either continue CMHT care or to receive AOT care. One could argue that whilst one group received continuation of care, the other group (AOT) may have had to adjust to a new team and this may be a source of variance.

Measurement of hospital use

For all studies in this group a comprehensive approach was taken, both bed days and admissions were collected (both formal and informal).

Blinding

All of the studies were non-blind.

Overall methodological considerations.

The literature regarding UK based AOTs is currently dominated by observational, non-experimental designs. The general level of methodological rigor is poor with considerable inconsistencies between studies in terms of how key parameters have

been operationalised (e.g., duration of AOT programme). None of the studies attempted to blind raters to outcome and, therefore, expectation biases may be present.

Of particular note is the trial by Killaspy (2006). This is the only study reporting data from a randomised controlled design. Furthermore it utilised a large sample, assessed for treatment fidelity and appropriately operationalised the outcome variable of hospital use.

REVIEW OF THE EVIDENCE

The evidence for AOT within the studies will now be reviewed. As explained earlier, evidence will be reviewed according to the following criteria (I. remaining in contact with services and engagement, II. hospital admissions, III. Clinical and social outcomes, IV. Costs)

I – Remaining in contact with services and engagement

Eight studies reported outcomes for remaining in contact with services and/or engagement.

Wane et al (2007) found a significant effect favouring AOT with respect to client engagement in services when AOT was compared to standard care. Killaspy et al (2006) found that AOT clients were more engaged than their CMHT counterparts. Furthermore evidence for the robustness of engagement over time within AOT was found by Paget et al (2009), who found that engagement scores at two separate time points of AOT care remained stable. Thus one can see that generally when engagement is measured, results for AOT seem to be positive.

However, the clinical significance of increased engagement has been questioned. Meaden et al (2004) and Paget et al (2009) found that overall engagement was not

predictive of clinical outcome (hospital usage)[3]. The term "therapeutic relationship" has in the past been used inter-changeably with engagement and can be seen as a central component of good engagement. Fakhoury et al (2007) found that a more positive therapeutic relationship predicted fewer hospitalisations in new AOT patients but not in established ones. Thus whilst there is some debate about how important engagement may be to outcome, it is a central aim of AOT care and as a whole positive evidence was found in the studies reviewed.

With respect to staying in contact with services, four studies explicitly reported such findings. In the study by Minghella et al (2002) the two teams investigated performed well at one year follow up. They found 86% and 74% client retention rates for the two teams. Only a small proportion of clients who were not in contact with the two teams declined contact (three clients). Other reasons for clients not being in contact included clients being referred on to other teams, and deaths. In the study by Priebe et al (2003) (one of the PLAO group of studies) at nine month follow up only eight clients (1.4%) were deemed impossible to engage. The strongest evidence is provided by the REACT study (Killaspy et al 2006). At eighteen months, they found that a significantly fewer number of AOT (2%) clients were lost at follow up in comparison to those in the CMHT group (8%).

One study reported negative findings in relation to maintaining contact with services. In the survey study by Schneider et al (2006) it was found that in comparison with CMHT clients, assertive outreach service users were significantly more likely to be rated as

[3] Whilst engagement as a whole was not predictive of outcome, both of the studies concerned did find that some specific engagement factors did predict outcome (e.g "quality of client-therapist interaction" in Meaden et al (2004) and "collaboration with treatment" in Paget et al (2009)).

'poor' on three dimensions of maintaining contact with services (cooperation with help offered, adherence to medication and keeping appointments). However, it should be noted that AOT services are designed for persons with poor engagement and it should therefore come as no surprise that there is a difference between AOT and CMHT service in the engagement scores of their service users. Further, such a difference in engagement score should not be interpreted as suggesting that AOT is ineffective in engaging users as this selection bias may account for any apparent difference between services.

Overall, the preponderance of evidence suggests that AOT facilitates and maintains engagement and retention of contact with service.

II – Hospital admissions

The outcome of hospital admission represents one of the best reported outcome areas. The current evidence base does not present a coherent description of the impact of AOT on hospital admissions.

Meaden et al (2004) found a significant difference between admission rates pre and under AOT care, with admissions falling under AOT care. Similarly Paget et al (2009) in the follow up study to Meaden et al found that admission rates and bed days (length of stay) significantly reduced as the length of AOT care increased. Mirza et al (2003) found significant reductions in bed day usage for patients under an AOT team (37% reduction per month and 45% reduction per admission). Davidson & Campbell (2007) found a significant reduction in the number of bed days for a group of AOT clients at follow up

(51% reduction). Wane et al (2007) found significant reductions in the number of admissions, the number of bed days, the number of nights in hospital and the amount of time spent on leave after one year of AOT care. Finally Commander et al (2005) found that participants were significantly less likely to be admitted in the two years they were under AOT care and that they also spent a significantly shorter time in hospital.

Involuntary admissions, by their very nature, suggest a disagreement between service user and service provider in terms of appropriate treatment in response to an increase in symptoms. Unfortunately, few studies report different outcomes with regard to voluntary or involuntary admissions. Two studies did allow this level of analysis. Davidson and Campbell (2007) found a significant decrease in the number of involuntary admissions at follow up (64% reduction in AOT patients compared to a 44% reduction for CMHT clients). Similarly, Commander et al (2005) found that compulsory admissions decreased significantly for AOT clients at two year follow up (35% of clients were admitted involuntarily under AOT care, compared to 62% when not under AOT care.). Accordingly, whilst there are many studies within the body of research that report that UK AOT's are effective at reducing hospitalisation, the precise meaning and importance of this finding is ambiguated by the poor operationalisation of this outcome in the existing literature.

Along with the evidence for AOT being effective in reducing hospitalisation, there were also studies that did not find AOT to be as effective at such reductions. In the study by Keown et al (2007) changes in admissions and compulsory detentions were reviewed following the introduction of crisis resolution and AOT teams. They observed that whilst crisis teams were successful in reducing some admissions (short stays for men

and women, and long stays for women) this pattern was not repeated in AOT teams. They found that a large proportion of AOT clients continued to spend long periods in hospital. On similar lines, the observational study by Glover et al (2006) examined whether national implementation of crisis resolution teams and assertive outreach teams was associated with comparable reductions in admissions. They found that generally admissions fell during the period they investigated (1998 to 2004). Crucially however, the introduction of AOTs was not associated with this overall reduction in admissions. The authors do acknowledge however that AOTs care for small populations so their impact on total admissions may be negligible. Minghella et al (2002) found significant increases in the amount of bed days at follow up for both of the AOT teams they investigated. The number of bed days increased by 115% for one team and by 102% for the other. Conversely the number of admissions did not increase for either team. Killaspy et al (2006) found that at eighteen months follow up no significant differences were found in inpatient use between AOT and CMHT groups. In a follow up study a further eighteen months later, allowing more time for change (Killaspy et al 2009), these finding were repeated. Thus along with the positive evidence outlined above, there also appears to be evidence against UK AOT's being effective in reducing hospitalisation (which includes the only RCT study; Killaspy et al 2009).

Taken as a whole, the evidence for the effectiveness of UK AOT in reducing hospitalisation can be seen as inconclusive, and at best, mixed. Some studies suggest that AOT may exert a beneficial effect upon admissions and the length of time in hospital. However there are three caveats, which need to be considered when reviewing this evidence. Firstly, the effect of the regression to the mean may contribute to any reductions in admissions. The regression to the mean effect may be of particular

importance for studies that had higher baseline levels of admissions (for example, the baseline level of admissions in the Commander et al (2005) sample was 83%). The second caveat is that there may be specific biases on whether a client is admitted to inpatient treatment. If a bed is not available a client may continue to be treated by the AOT team until one becomes free. By the time a bed has become available there is the possibility that the client's symptoms have reduced and they no longer require hospitalisation. All the studies reviewed do not provide adequate information regarding biases on the admission rates reported.

The final caveat is the observation that admissions and bed days may not in themselves be a negative outcome. In some cases an admission may be planned as part of a treatment or relapse prevention plan and that voluntary admissions may be seen as a sign of treatment compliance and engagement, especially in a person who had previously been sceptical of mental health services. Accordingly, it may be useful to differentiate between voluntary and involuntary admissions.

III Clinical and social outcomes

A variety of clinical and social outcomes were investigated. In the two studies by Commander et al (2005; 2008) mixed results were found. Commander et al (2005) found little difference in symptom profile and severity in AOT clients two years after baseline (as measured by the 19 item Brief Psychiatric Rating Scale). They also found no difference in relation to risk behaviour (including substance misuse and risk to others) and social functioning (as measured by FACE). Indeed, Commander et al (2005) found a

worsening in activities of daily living at follow up. In the later study, Commander et al (2008) reported a significant increase in both objective and subjective measures of quality of life. They found that the weekly disposable income of service users increased; there were a higher proportion of service users who were living in supported accommodation; and there were improvements in social networks. On more subjective measures improvements were found in the area of finances, health and leisure/participation.

Similar to Commander et al (2005), Wane et al (2007) also reported outcomes on the FACE. They found that both the Mental Health and Social circumstances sub-scales of the FACE showed improvement at follow up. The change in the mental heath subscale in this study contrasts with the lack of symptom change in the Commander et al study. It should be noted that, in comparison to Commander et al (2005), that the outcome reported by Wane et al(2007) were derived from a much smaller sample and as such may be subject to selection biases.

A mixed picture in relation to social and clinical outcomes was also found by Minghella et al (2002). In this study clinical outcome was assessed by two measures (Health of the Nation Outcome Scale (HoNOS version 4; Wing et al 1998) and the 19 item Brief Psychiatric Rating Scale (BPRS) (Overall & Gorham 1962). In one of the teams investigated in this study significant changes were found for three of the subscales of the HoNOS (physical impairment, symptoms, social problems) but not in the remaining behavioural subscale. In the other team investigated only the social problems subscale showed improvement. Both of the teams showed no improvement in scores on the BPRS. Along with clinical functioning the study also assessed social functioning (via the

Life Skills Profile (LSP) (Rosen et al 1989) and the Adapted quality of Life Interview (AQOLI) (Ford 1995)). In one of the teams in this study clients showed improvements in four of the five social functioning scales (LSP). Concerning quality of life, significant improvement was only found in the financial domain of the AQOLI. In the other team in this study significant improvement was only found in one subscale of the LSP (responsibility) and one subscale of the AQOLI (living situation).

Finally, clinical and social factors were also investigated in the only RCT study reviewed (Killaspy et al 2006). They used a host of measures to cover a variety of outcomes, including substance misuse, quality of life, risk issues, medication compliance amongst others. Crucially, no significant difference was found between the AOT group and the CMHT on any of the social and clinical outcomes measured. Killaspy et al did however find that user satisfaction was significantly higher in the AOT group.

Overall the preponderance of evidence points to UK AOT performing more consistently in improving social outcomes than clinical outcomes. Crucially however much of the positive evidence emanates from observational or quasi-experimental designs.

IV Costs

This was the least researched outcome in the existent literature, with only two studies reporting data on costs. Minghella et al (2002) reported the costs related to service use of the two teams they investigated (the Tulip team and the Impact team). They calculated the costs of assertive outreach care by calculating service expenditure and activity and applied the figures to the number of contacts completed. They found that

after one year, the cost of the Tulip clients' contacts with nurses and psychiatrists significantly increased. This was consistent with overall community costs in the area. For 'Impact' clients there were significant reductions in the cost of contact with social workers. No other significant changes in costs were found for this team. As in the case for the 'Tulip' team, overall community costs also increased for the 'Impact' team. Overall the 'Impact' team was found to be more expensive than the 'Tulip' team (mean cost per client; Tulip = £3817; Impact = £6259). This finding is not unexpected as the Impact team contained a larger and more diverse team of workers. However the difference between the costs of the teams were eliminated when costs of contact with other services (e.g. day-care, in-patient care) were included. In the second study that reported cost data, McCrone et al (2009) as part of the REACT study, reported a cost effectiveness analysis of the two teams that took part (AOT and CMHT). This study seems to have utilised a more comprehensive approach than the Minghella el al study outlined above. Service costs were calculated by combining the data on service use with nationally applicable unit costs. These unit costs include data on staff salaries, overhead costs and take the time spent with clients as well as time spent on other activities into account. McCrone et al acknowledged that informal care represented a hidden cost and this was factored in where appropriate.

As Killaspy et al (2006) had found higher levels of user satisfaction in their arm of the study, McCrone et al included this in their analysis. McCrone et al also measured satisfaction to determine how much it would cost to achieve a one-unit improvement in satisfaction. McCrone et al found that worker costs (based on patient contacts with staff) for the ACT team were significantly higher than usual care at 18 month follow up (a difference of £1,272). Similarly over the same time period In-patient use costs were

higher for the AOT team (by £3,161) but this was not statistically significant. No other significant differences between the teams were found, and overall the costs of AOT were not significantly different from usual care. Concerning satisfaction (as measured by a scale devised by Gerber and Prince (1999), where higher scores indicate greater satisfaction), AOT clients were found to be significantly more satisfied than CMHT clients (a difference of 7.6 on total satisfaction score, AOT = 79.4/126, CMHT = 71.7/126). Although satisfaction was found to be higher in the AOT group, it was found that this difference would need to be valued very highly for it to be cost effective (one unit of satisfaction would need to be valued at £473).

CONCLUSIONS AND FUTURE DIRECTIONS

The existent literature is mainly derived from non-experimental or quasi-experimental studies. These studies are relatively short in length, and utilised small sample sizes within newly established AOT teams. Significantly there was also a lack of the use of blinding in all of the studies included.

These methodological issues are compounded by the observation that the one randomised controlled trial in this area (Killaspy et al 2006), that addressed many of the methodological weakness identified in other studies, did not find evidence favouring AOT.

There appear to be two significant issues that future research in this area needs to consider. Firstly, researcher and clinicians need to agree treatment protocols and service specifications that can be universally recognised as AOT. Secondly, trialists need to take steps to ensure treatment fidelity within trials. Due to a failure of the existent literature to identify treatment protocols and assess treatment fidelity it is not possible to evaluate the impact of variations in treatment delivery.

Further, the existent literature shows considerable variation in the selection of appropriate control or comparison conditions. Some studies have compared AOT teams to each other (e.g. Minghella et al 2002), whilst other studies have compared AOT with other modes of service delivery (e.g., CMHT; Killaspy et al 2006). This variation in control or comparison conditions results in difficulty comparing the conclusions of the different studies as the different efficacy of the comparisons conditions may mask

treatment effects. Accordingly, it is recommended that trialists define "standard care" within this area of research.

The effect of AOT care on hospital use is a mixed picture. Whilst some studies have reported positive findings, none of these are RCTs. Additionally when one considers only involuntary admissions, the evidence for AOTs in relation to hospital use is less compelling. Crucially the one RCT on AOT provides evidence against the models effect on hospitalisation. As it represents a more stringent design one could argue that it should be weighted more heavily when coming to a conclusion. As mentioned above, the way that hospital use has been used in some of the studies may be too reductionist.

Future research may be aided by defining hospital use more clearly, and considering its possible positive impact in more detail. Future research may also benefit from better contextualising this variable by providing data on the demand for hospital beds also. It is clear that when investigating AOTs involuntary admissions need to be separated from voluntary admissions. It could however be argued that this is also not precise enough. For example a client may have many voluntary admissions under AOT care. This may appear as a positive outcome and indicate that the AOT is good at engagement. However this may be typically how this client is admitted, and the AOTs role in engendering informal admissions may be less marked. One way to overcome this issue is to try and show if there has been a change in admission patterns as a result of AOT care. Future research could adopt a ratio approach in comparing formal and informal admissions over time. Thus for a given client changes in formal and informal admissions could be tracked over the course of AOT treatment to better isolate it's effects. There are also those who would argue that whether the admission is voluntary or involuntary, it is still

a case of a client becoming unwell or relapsing. Accordingly, the appropriateness of hospital admission becomes problematic in the context of an AOT service. Given that focus of AOT's is to engage and care for severely ill clients then an increase in admissions subsequent to AOT may reflect a positive outcome (in the sense that a previously disengaged individual is now receiving appropriate levels of care). Accordingly, it is not the number of admissions per se which determines the effectiveness of AOT but rather the appropriateness of admissions and the change in status of admission.

The current literature provides inconclusive findings on social and clinical outcomes. This is exemplified by studies of quality of life, with some studies reporting improvement and others finding no effect. The variability of findings is also exemplified by the study by Minghella et al (2002) as different results were found from both of the teams researched. The two teams in this study could be seen as quite different to each other and this may have been a factor in what was found. More widely, variations in treatment fidelity may be one factor in the variability of results found across the studies.

Looking broadly at the evidence, one can tentatively put forward the view that there is more support for the AOT model in respect to social outcomes rather than clinical outcomes. Evidence to support this standpoint comes from the fact that the BPRS was used in three of the studies above and it showed no effects in all three. Again crucially much of the positive findings summarised above emanated from observational designs or quasi-experimental designs. The one study with a more stringent design (RCT design utilised by Killaspy et al 2006) found no positive findings in relation to social or clinical outcomes. As stated earlier however, comparing an AOT treatment to an established

CMHT as Killaspy did, may have been a factor in finding no effects. Future research could look at clinical and social aspects in more detail. In comparison for example to hospital use, clinical and social outcomes were not as widely researched. Also often when they were researched they were not the focal point of studies and were secondary aims (for example Minghella et al (2002), and Killaspy et al (2006). Future research dedicated to social and clinical outcome utilising more stringent designs than reviewed here would help to expand the evidence base.

It is difficult to make any firm conclusions in relation to the cost of AOT as only two studies addressed this issue. The balance of the current evidence would suggest that AOT care is no more expensive than standard care. In the Minghella et al (2002) study costs increased for both teams, but this was consistent with overall community costs. Also McCrone et al (2009) did not find that AOT was more expensive than CMHT care. Factored into this is the fact that engaging more people in services as AOTs do, may lead to increased admissions and the costs involved. These findings are encouraging given that AOT is often perceived as an "intensive" service. Nevertheless, more research of costs is required.

Finally, one consistent positive finding was in relation to user engagement and satisfaction. The existent evidence supports the view that AOTs are reaching the people that had previously been overlooked by other service provision models. This improved engagement may manifest itself in improvements in other indices of AOT performance in the long term. Future long-term research aimed at looking at these outcomes in more detail may help to provide more evidence for the model in the UK.

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Volume I - Chapter 2: Empirical paper

The relationship between shame, stigma and engagement for African Caribbean males and White British males in Assertive Outreach Services

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THE RELATIONSHIP BETWEEN SHAME, STIGMA AND ENGAGEMENT FOR AFRICAN CARIBBEAN MALES AND WHITE BRITISH MALES IN ASSERTIVE OUTREACH SERVICES

ABSTRACT

***Background**:* Past studies on Assertive Outreach Teams (AOTs) have shown how increases in engagement may relate to improved outcomes. Studies have also shown how various factors may have an effect on the engagement process. Research has yet to examine what effect the factors of shame, stigma, and ethnicity may have on the engagement process.

***Aim**:* The main aim of the study was to investigate the relationship between shame, stigma, engagement and ethnicity.

***Method**:* Forty clients (20 African Caribbean (AC) & 20 White British (WB)) were recruited from four AOTs. Each client completed three measures (an engagement measure, a stigma measure and a shame measure).

***Results**:* Both ethnic groups had good levels of engagement. WB clients were found to be significantly more engaged than AC clients. WB clients and AC clients did not differ with regard to stigma and shame. A significant positive relationship was found between stigma and shame. Engagement was not found to be related to stigma or shame.

***Conclusion**:* WB AOT clients are more engaged than AC clients. The effects of shame and stigma do not appear to explain this difference and other factors may be implicated.

INTRODUCTION

The Assertive Outreach Model

The Assertive Outreach approach is now established as one of the prominent modes of service delivery to those with serious mental illnesses in the United Kingdom. The Assertive Outreach model, delivered via Assertive Outreach Teams (AOTs), involves the delivery of a broad range of services within one multi-disciplinary team. The approach taken is unlimited intensive case management around everyday activities, with the aim to reduce hospital admission and general quality of life. The approach adopted by UK based AOTs is based on the Assertive community treatment (ACT) model developed in the United States. A meta-analysis of treatment studies on ACT by Marshall and Lockwood (2000) has provided strong evidence for the effectiveness of the model. In comparison with standard care, those receiving ACT were more likely to remain in contact with services, experience less hospital admissions, spend less time in hospital when admitted, more likely to be employed and living independently and more satisfied with care.

AOT's came about as a response to the need to provide services for those with serious mental illness whom services find hard to engage (Sainsbury Centre for Mental Health, 1998). It was believed that AOTs should provide services to those who do not have their needs met by generic community mental health teams. Thus one of the primary aims of AOT's is to engage people with severe and enduring mental health problems. However on reviewing the literature there appears to be a dearth of research looking at clients'

engagement with AOTs and what factors may be involved in this. Engagement is an often used "buzzword" that is used to describe how service users are accessing services, and early studies that addressed engagement with AOTs do not seem to have investigated the concept sufficiently. Such research framed engagement as a unitary concept and took a one factor approach to measurement (E.g. medication compliance (Dixon, Weiden, Torres & Lehman (1997))

Engagement

In recent years there has been a rise in the number of studies investigating engagement with AOTs. What these studies have in common is that they point to engagement being a multifaceted construct, involving various interlinked factors. Engagement may encapsulate factors such as remaining in contact with services, collaborative involvement in treatment, and openness about difficulties (Hall, Meaden, Smith, Jones 2001). As such, measuring engagement may not involve the answering of a single question, but may require a multi-item measure. Hall et al (2001) have developed such a measure via their observer-rated measure of engagement, which is currently being used by AOTs in Birmingham to measure levels of engagement. Gillespie, Smith, Meaden, Jones and Wane (2004) have complemented this measure by developing a self-report version of Hall et al's (2001) engagement measure.

The importance of engagement to beneficial outcome within AOTs has been shown in past studies. The REACT study of AOTs in North London (Killaspy, Bebbington, Blizzard, Johnston, Nolan, Pilling & King 2006) found that service users of AOTs were better engaged and more satisfied with services. Meaden, Nithsdale, Rose, Smith and Jones

(2004) in light of the multifaceted nature of engagement outlined above, found that some aspects of engagement were more important in relation to outcome than others. Outcome was measured as hospital usage (fewer admissions and bed days), and it was found that the aspects of engagement that were most crucial to this were perceived usefulness of treatment, quality of client-therapist interaction and openness. The sample investigated by Meaden et al (2004), has since been followed up in a recent study by Paget, Meaden and Amphlett (2009). They also found that certain aspects of engagement predicted hospital use better than others. Crucially they also found that in comparison to past bed days, engagement was a better predictor of future bed days.

Various factors have been identified in the literature that may have an effect on the engagement process itself. One factor that has been identified is having an "integrative recovery style" (Hall et al 2001). An "integrative recovery style" is used to describe service users who want to make sense of their experiences. Hall et al (2001) found those service users who had an integrative recovery style were better engaged with AOTs. Furthermore Tait, Birchwood, & Trower (2003) found that an integrative style at three months after acute psychosis has been shown to predict engagement with services at six months. Another factor that has been found to effect engagement is the presence of a collaborative relationship. Gillespie et al (2004) found that service users who were rated as being actively involved in their care, and hence within a collaborative relationship with the staff they were seeing, were more likely to be better engaged. Additionally Meaden et al (2004) found that service users who had good relationships with their care co-ordinators spent less time in hospital.

Accordingly from the above, one can deduce from the literature that there is some evidence supporting the position that engagement may have a beneficial effect on outcome in AOT populations. Additionally there is also evidence that there are various factors that may have an effect on the engagement process itself. This study will aim to build on the past studies of engagement in AOT populations by investigating engagement further. A factor that has not been researched in past studies of AOTs is the possible role of stigma and shame on the engagement process

Shame and Stigma

Stigma has been identified as a factor that can have an effect on whether service users access services. Its role in service users delaying, avoiding or disengaging from treatment has been widely investigated (e.g Bambauer and Prigerson 2006; Dinos et al 2004). Corrigan (2004) has defined stigma as the avoidance of the label of mental illness and the harm that this label brings. He states that stigma is related to people not accessing mental health services, or failing to fully participate once they have begun accessing services. Furthermore Mak, Poon, Pun & Cheung (2007) in a meta analysis of stigma and mental health have stated that the higher the level of stigma, the stronger the impact it may have on one's mental health. What the relationship between stigma and mental illness is seems complex and Kliem, Vauth, Adam, Stieglitz, Hayward and Corrigan (2008) state that it is not yet fully understood. Despite this, stigma around mental health is very much prominent on the current national agenda. For example on January 29th 2009 a 2 year program called "time to change" was launched in England designed to reduce stigma and discrimination against people with mental health problems.

Whilst stigma has been widely recognized to be a factor in accessing services, the role of stigma in the specific engagement process has never been systematically evaluated. As such one of the research aims of this study is to investigate the relationship between stigma and engagement.

A factor that is linked to stigma is that of shame. Lewis (1992) defines shame as an intense negative emotion to do with the self in relation to standards, responsibility and attributions of global self-failure. Lewis (1995a) states that shame is elicited when one experiences failure relative to a standard (derived from oneself or others), one feels responsible for the failure, and believes the failure reflects a damaged self. Shame can be seen to come under the umbrella of stigma and has been cited as one of the emotional responses to stigma. There is a wealth of literature on the idea that stigma causes shame (Eg, Turner, Dofny & Dutka 1994, Wehmeyer 1994). For example Scheff (1998) has argued that the emotion of shame is central to stigma and that the shaming process can have powerful and hurtful consequences for stigmatized persons. Gilbert & Andrews (1998) have gone on to state that if shame is the emotional consequence of stigmatization, then it must exist across a large number of people, and may at least in some part have a role within the psychopathology that occurs with stigmatization. Shame as an emotional response to stigma is further advocated by Major and O'Brien (2005) in their stress-coping model of stigma. In this model shame is seen as one of the two involuntary emotional responses to stigma (the other being social anxiety). Evidence in support of shame as an involuntary response as outlined in this model has been provided by Rusch et al (2009)

Whilst there are many studies on what effect stigma may have on how people access and use services, studies specifically looking at what role the emotion of shame plays in service use are sparse to non existent. This may be because the role of shame is encapsulated within the studies on stigma. One of the aims of this study is to investigate what role shame might have on the engagement process. This study will also investigate further the relationship between shame and stigma.

Ethnicity

The question remains with regard to how ethnicity interacts with the three factors of engagement, shame and stigma outlined above.

The literature on engagement in AOT has yet to investigate what role ethnicity may play in the engagement process. There is a wealth of evidence to support the position that black clients are less likely to seek mental health treatment than white clients (e.g, Snowden 1999; Ojeda and McGuire 2006). Furthermore there is local anecdotal evidence in support of these findings. In the most recent Birmingham and Solihull NHS trust service delivery diversity report (2008), African Caribbean (AC) clients are the largest ethnic minority group seen by AOTs (35 %), with the second biggest ethnic minority group being Pakistani (8%), and White British (WB) clients making up 39%. Furthermore the number of AC clients seen by AOTs dwarfs the numbers of AC clients seen in other areas of service delivery in the trust (AC clients make up just 8% of Community Mental Health Team caseloads, whilst WB clients make up 65%).

Thus one can deduce that if low levels of engagement are one of the criteria for accessing AOTs, that on face value, AC clients in the main can be said to be less engaged than their WB counterparts. This study will seek to provide research evidence of this statement by investigated how ethnicity and engagement are related.

As highlighted earlier, the role of stigma in the use of services has been widely researched, and one consistent pattern that is evident is the racial and ethnic disparities in how stigmatised mental health service users feel. Alvidrez, Snowden, Rao and Boccellari (2009) state that ethnic differences in service use persist when specific issues such as insurance and transportation are accounted for. They state that this suggests that attitudinal factors such as stigma may be playing a role. Away from the mental health arena, there is evidence to suggest that within the general population, black people have more stigmatized attitudes towards the mentally ill than white people (e.g. Corrigan and Watson 2007). With respect to mental health services, stigma has been found to be a significant barrier for black clients in qualitative studies (e.g. Alvidrez et al 2005). There is less strong evidence from quantitative studies, where stigma is only seen to have a part role in ethnic disparities in service use (e.g. Alvidrez 1999, Ojeda and McGuire 2006). One theory on why black service users may feel more stigmatized is provided by Faye (2005). Faye states that stigma is a big factor in why ethnic minorities may not access services, but that this stigma is of a double nature. He states that it is the dual factors of the stigma of mental illness, coupled with the stigma of being part of an ethnic minority group that impede the accessing of services

This study will seek to build upon past research on ethnic differences in relation to stigma by investigating ethnic differences in the experiences of stigma within an AOT population.

Literature on racial and ethnic differences concerning the experience of shame within mental health settings is less prevalent than that on the experiences of stigma outlined above. As stated earlier, this may be because shame is also addressed in the studies that are focused on stigma. Greenwald and Harder (1998) state that (within the general population) cultural differences in relation to shame exist and these are linked to different cultural values. They argue that western 'individualistic' cultures stress the importance of individual achievement and competition and thus produce aggressive, status seeking people. Other non-western cultures (e.g. Japan) however promote an ethos of uniformity, cooperation, and conformity. In these cultures there are less struggles for individual rank. Greenwald and Harder state that some cultures may shame the excessively competitive individual, whilst other cultures may shame those who are insufficiently competitive. Additionally the stress coping model of stigma (Major and O'Brien 2005) outlined earlier may also point to ethnic disparities in the experience of shame. In this model shame is an involuntary reaction to stigma. As has been outlined earlier, studies support the position that ethnic minority service users may feel more stigmatized. If this is the case then one could logically expect ethnic minority clients to also feel more ashamed (as an involuntary emotional response).

Due to the lack of evidence in relation to shame and ethnicity in the literature, how shame may differ with respect to ethnicity within AOT populations will be investigated in this study.

Summary of research aims and hypotheses

This study will investigate the relationship between shame, stigma, engagement and ethnicity in assertive outreach services.

Aim 1

To investigate the relationship between engagement and ethnicity. It is hypothesized that WB clients will be more engaged than AC clients.

Aim 2

To investigate the relationship between shame, stigma and engagement. It is hypothesized that shame and stigma will be strongly positively correlated. It is also predicted that significant negative relationships will exist between shame and engagement and stigma and engagement.

Aim 3

To investigate the relationship between shame, stigma and ethnicity. It is hypothesized that AC clients will have higher levels of shame and stigma than WB clients.

METHOD

Participants

Forty participants (20 African Caribbean (AC), and 20 White British (WB), number derived from a test of power) were recruited from four Assertive Outreach teams within Birmingham. With each team having a capacity of 80 patients, the possible population the sample was drawn from was 320 patients. Inclusion criteria were that all participants must be male, either African Caribbean or White British, and must have been with Assertive outreach for a minimum of 1 year. Male clients were chosen as they make up more of the AOT caseload and it was believed that sampling male clients would make it more likely that the sample size needed would be obtained.

Sampling

Information regarding the study was circulated to the teams involved. Clinicians from the teams then assisted in highlighting clients who in their knowledge may be interested, and these clients were then directly approached by the researcher to see if they would like to take part in the study. All those who took part received 5 pounds for participating.

Measures

Engagement measure (self report version)(Gillespie et al 2004) – This measure is a self report version of Hall et al's (2001) observer-rated measure. It is an eleven item measure where the client rates engagement with their care coordinator (or mostly involved staff member) on six dimensions using a five-point Likert scale. The measure has been shown to have good internal (alpha = .80, n=25) and concurrent reliability (r = .49, p < .05).

Experience of Shame Scale (ESS) (Andrews et al 2002) – this is a 25 item questionnaire that assesses various areas of shame including: shame of personal habits, shame about ones manner with others, shame about personal ability, and shame about body image amongst others. Participants respond with how they have felt in the past year, and each item is rated on a four– point scale, ranging from 1 – not at all, to 4-very much. The scale has been shown to have high internal consistency (Cronbach's alpha =.92) and test retest reliability over 11 weeks has been found to be good (r (88) =.83).

The Stigma Scale (King et al 2007) – this is a 28 item measure of stigma derived from interviews with service users. It has a three factor structure, the first concerns discrimination, the second concerns disclosure, and the third is related to potential positive aspects of mental illness. The scale has been shown to have good internal consistency (Cronbach's alpha =0.87)

Procedure

For those who agreed to take part informed consent was obtained. Participants completed all the measures in one sitting. Due to literacy issues in some clients, the

researcher facilitated the filling in of questionnaires. Clients with literacy skills completed the questionnaires themselves. Demographic data (age, primary diagnosis, time under AOT) was then gathered from the NHS computer system (EPEX).

Data analysis

Data was found be normally distributed and suitable for parametric analysis. In relation to research aims 2, 3 and 6, Pearson's correlation was used (to investigate the relationship between shame and engagement, stigma and engagement, and shame and stigma respectively). In relation to research aims 1, 4 and 5, independent t-tests were used (to determine significant differences between ethnic groups on engagement, shame, and stigma respectfully)

RESULTS

Descriptive statistics

The sample

The demographic and clinical characteristics of AC and WB clients are presented in Table 1. The majority of participants in both groups had a primary diagnosis of schizophrenia (AC participants = 75%, WB participants = 70%). In relation to time spent under AOT, most participants had been under AOT care for more than 5 years (AC participants = 70%, WB participants = 85%). Finally both groups contained clients of similar age (AC mean age = 42, WB mean age = 43.7).

Table 1- Participants - socio-demographic and clinical characteristics

	WB Participants	AC Participants
Variable	Sample (n = 20)	Sample (n =20)
Mean age (years)	43.7, range = 21-60	42, range = 24-57
Time under AOT (No. %)		
> 5 years	17 (85%)	14 (70%)
3 – 5 years	3 (15%)	3 (15%)
< 3 years	0 (0%)	3 (15%)
Diagnosis (No. %)		

Schizophrenia	14 (70%)	15 (75%)
Bipolar disorder	3 (15%)	3 (15%)
Schizo-affective disorder	0 (0%)	2 (10%)
Other (including personality disorder)	3 (15%)	0 (0%)

Questionnaire scores

The average outcomes on the questionnaire measures, in comparison to the findings of past studies utilizing the same measures, are outlined in Table 2 below. The scores derived from Andrews et al (2002) and King et al (2007) were from non AOT populations (Andrews et al = University students, King et al = range of psychiatric diagnoses). The scores derived from Gillespie et al (2004) were from an AOT population.

On average WB participants scored higher on the Engagement measure and the stigma scale. AC participants scored slightly higher on the Experience of Shame scale. All scores were lower than averages found in previous studies except for WB participant's scores on the Engagement measure. Hall et al (2001) state that a score of above 33 on their observer rated engagement measure indicates a good level of engagement. If we utilize this rating criteria for the Engagement scores gathered in this study (on the self rated version of the Engagement measure), both AC and WB clients can be seen to have a good level of engagement.

Table 2– Average measure scores in comparison to past findings

Measure	WB Participants	AC Participants	Past finding
Engagement Measure	Mean : 45.6 (SD: 4.5) (Range:36-53)	Mean : 38.7 (SD: 7.4) (Range:23-53)	Mean: 44.9 (Gillespie et al 2004)
Experience of shame scale	Mean: 43.25 (SD: 12.1) (Range:25-63)	Mean: 44.45 (SD: 12.5) (Range:25-69)	Mean: 55.58 (Andrews et al 2002)
Stigma Scale	Mean: 59.65 (SD: 14.4) (Range:41-79)	Mean: 53.45 (SD: 13.6) (Range:29-77)	Mean: 62.6 (King et al 2007)

Inferential statistics

Aim 1- The relationship between engagement and ethnicity

In order to examine the relationship between engagement and ethnicity a between subjects t-test was undertaken. A significant difference was found between ethnic groups in relation to engagement, with WB participants being significantly more engaged than AC participants (*t = 3.5, df = 38, p=0.01).* This is illustrated in Figure1.

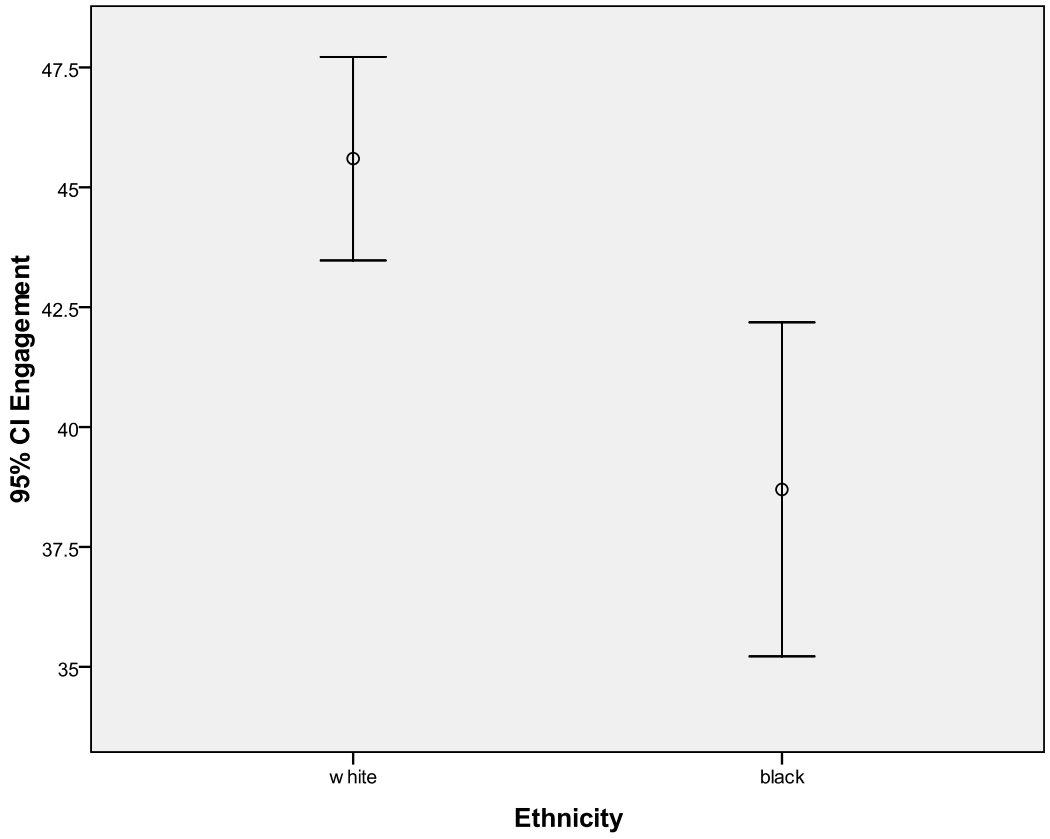


Figure1 – The relationship between engagement and ethnicity

Aim 2 – The relationship between shame stigma and engagement

In order to examine the relationship between shame, stigma and engagement Pearson's r correlation was calculated. In relation to shame and engagement, although the correlation was in the direction predicted in the hypothesis, (negative relationship), it was not significant (*r=-1.75, p =0.280).* Similarly with regards to stigma and engagement the correlation was in the direction predicted (negative relationship) but it was also not significant (*r= -.030, p= 0.853*). Finally in relation to the relationship between shame and stigma, in accordance with the hypothesis, a significant positive relationship was found (*r=-0.551, p = .01).*

Aim 3 – The relationship between shame/stigma and ethnicity

In order to examine the relationship between shame/stigma and ethnicity between subjects t-tests were undertaken. A significant difference was not found between ethnic groups in relation to shame (*t =- 0.308, df = 38, p= 0.760).* This is illustrated in Figure 2.

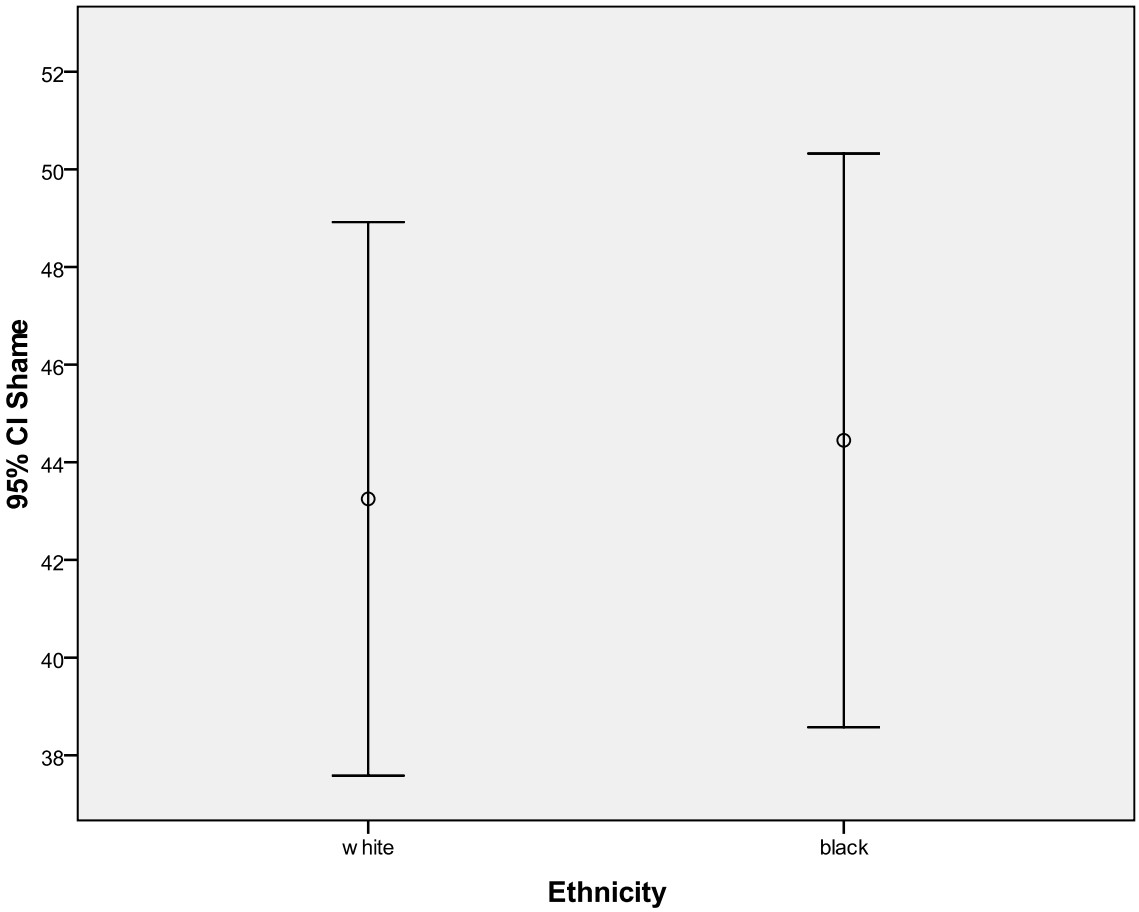


Figure2 – The relationship between ethnicity and shame

Similarly a significant difference was not found between ethnic groups in relation to stigma (*t =- 1.395, df = 38, p= 0.171).* This is illustrated in Figure 3.

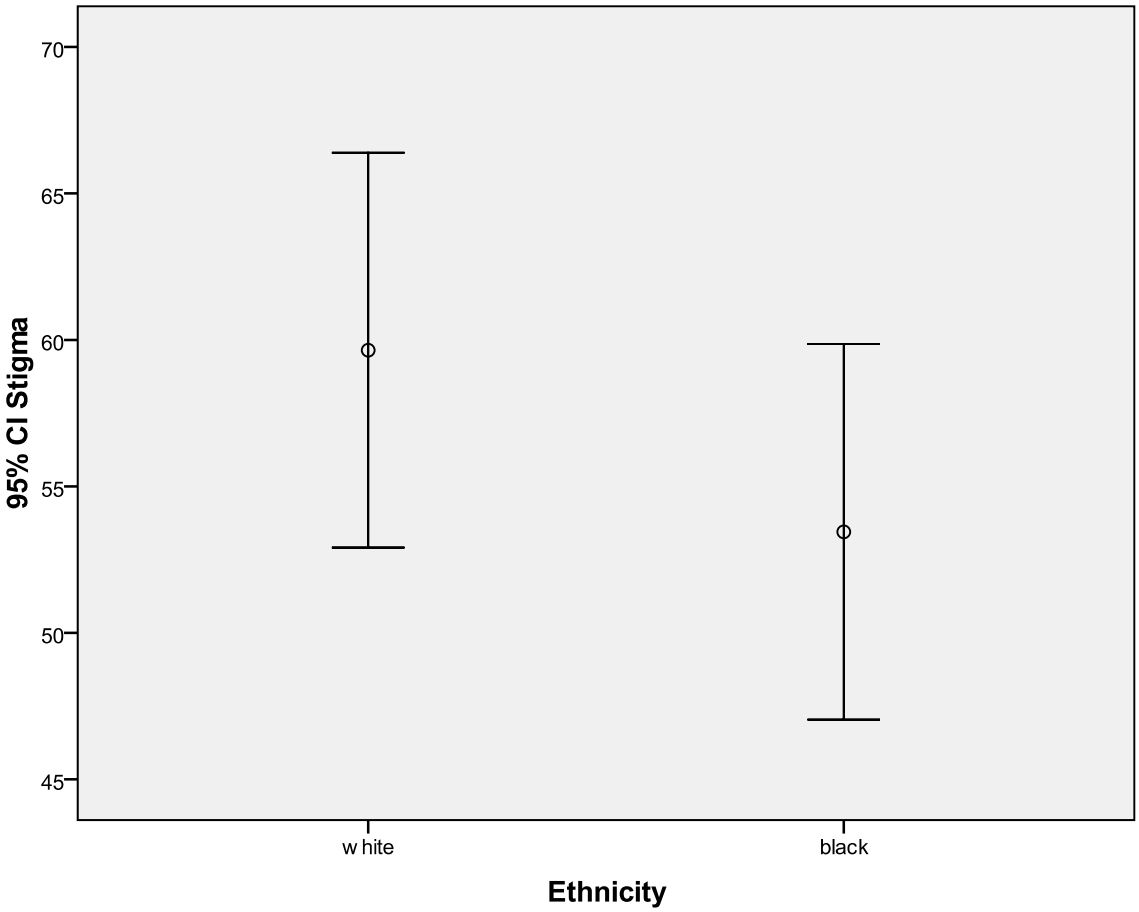


Figure 3 – the relationship between stigma and ethnicity

Analyses of subscales

As shame and stigma were not found to differ as a function of ethnicity, a further stage of analysis was carried out. Independent t-tests were carried out on the sub scales of the shame and stigma measures. The outcome of these analyses were all insignificant, and they are presented in Appendix 6.

DISCUSSION

Findings from this study were mixed. Firstly a strong positive relationship was found between shame and stigma. This can be seen to be consistent with the body of evidence reviewed earlier that closely linked these two factors. The most notable and new finding, was that white AOT clients were more engaged than black clients. This study hypothesized that this would be the case, and that shame and stigma would be factors in this difference. However shame and stigma were not found to differ between the groups, or relate to engagement as expected (that a significant negative relationship would exist between shame/stigma and engagement). Hence whilst white clients are more engaged than black clients, shame and stigma do no appear to be factors in this difference. Not finding that black clients are significantly more stigmatized than white clients is contrary to much of the evidence reviewed earlier (e.g. Alvidrez 1999)

Whilst it was found that both black and white clients reported good levels of engagement, black clients were found to be significantly less engaged than white clients. This is consistent with the body of evidence reviewed earlier, that black clients are less likely to seek mental health treatment than white clients (e.g, Snowden 1999; Ojeda and McGuire 2006). This is also consistent with the local NHS data on service use cited earlier. The majority of clients in BSMHFT AOT services are black, and this study supports the position that one factor in this is the fact that black clients are less engaged. Hence lower levels of engagement with mental health services may necessitate them entering AOT services. Furthermore, the average engagement scores for black clients in this study, as well as being lower than white clients, was also lower than the mixed ethnicity AOT sample utilized by Gillespie et al (2004) (only 12% of the sample

utilized by Gillespie et al was black, which may help to explain why the levels of engagement were higher than the black sample in this study).

The question remains, if stigma and shame are not linked to black clients being less engaged than white clients, than what could be causing the difference. One factor could be the length of time with the service. If one refers back to table 1, the white sample had on average spent longer under AOT than the black sample. Thus having more time to become accustomed to the AOT team and practice principles may have led to better ratings of engagement for white clients.

Another factor that has been found to relate to service use, and may help to explain the differences in engagement in the two groups studied is self-efficacy. Low self-efficacy has been found to lower adherence and engagement in pharmacological and psychosocial interventions in schizophrenia (Tsang, Fung & Corrigan, 2006). The existence of ethnic differences in self-efficacy has been advocated by Buchanan & Selmon (2008). Additionally ethnic differences in self-efficacy (ethnic minorities having lower self efficacy) have been cited as determinants in self-managing physical health problems such as diabetes (Lanting et al 2008). Accordingly there is the prospect of the possible role of self-efficacy in the ethnic differences in engagement found in this study.

A final factor that may help to explain the ethnic differences in engagement found in this study is recovery style. As stated earlier, an 'integrative recovery style' has been associated with better engagement than a 'sealing over' recovery style (Hall et al 2001). Ethnic differences in recovery style have been described in past studies. For example in a study by Bell and Zito (2005) on a sample of clients with a diagnosis of schizophrenia,

there were significantly more ethnic minority groups found to have a 'sealing over' style than an 'integrative style'. The area of ethnic differences in recovery style is an area where more research is needed, but never-the-less, recovery style may have been a factor in the ethnic differences in engagement found in this study.

Whilst the findings of this study did not support the role of shame and stigma in relation to disengagement, there were some notable findings in the data gathered. The lack of a control group within the current study means that in contextualizing the shame/stigma scores found we must turn to past studies. Referring back to Table 2 one can see that the average levels of shame and stigma found in this study were lower than those found in previous studies. This is of interest as the studies in question used a non-clinical sample (Andrews et al 2002) and a less severely ill clinical sample (King et al 2007). One would expect that an AOT sample of clients with severe and enduring mental illnesses would have higher levels of shame and stigma than the samples without such levels of psychopathology.

Whether these levels of shame/stigma can be attributed to successful aspects of AOT treatment, or inadequacies in measurement methods is open to debate. We can turn back to the stress-coping model of stigma (Major & O'Brien 2005) for an explanation for why the levels of shame and stigma may not have been as high as expected. In this model, in parallel with an emotional response to stigma (e.g. shame) a person also uses cognitive coping responses. It is the combination of emotional response and cognitive coping that influence global outcomes. It may be the case that in the sample assessed in this study, participants had enlisted appropriate coping strategies in dealing with stigma and preserving self-esteem. One notable coping strategy is that of comparing

oneself primarily to in-group members (for AOT clients = other AOT clients). As other in-group members may be similarly disadvantaged, in-group comparisons may be less painful and self esteem threatening than out-group comparisons (e.g. members of the public). The development of such a coping mechanism seems to fit with AOT clients who are often socially excluded, and whose primary social contacts are via AOT organized events (e.g. drop ins, women's/men's clubs). Hence it may be the case that the psychosocial aspects of AOT care may help to promote such a coping mechanism and defend against stigma. Such a coping mechanism may help feeling less stigmatized, but it may come into jeopardy when attempts are made towards broader social inclusion where more out-group comparisons may take place.

In summary it may be the case that stigma has a role in service users not engaging with services initially, but once an individual has become accustomed to being a "mental health" service user and adopted appropriate coping mechanisms, it's effects may decrease. Hence this study by utilizing a sample, which contained a majority of long-term AOT clients, may have sampled those who had developed appropriate coping mechanisms for dealing with stigma. The possibility remains that stigma may have been an initial factor in them disengaging from services in the first place and necessitating AOT care. Future research could investigate this possibility further by comparing newer and long-term AOT clients with respect to stigma and coping.

However in respect to the findings of this study, whether such coping mechanisms were or not in place, the findings do not support the role of shame and stigma in inhibiting engagement with services for the sample investigated.

Limitations and research implications

Due to the quasi-experimental design of this study, cause and effect cannot be established between the factors measured. Additionally the apparently small sample size (n = 40) further limits any conclusions. There may have also been some selection bias in recruiting participants. As stated earlier, with regard to clinical care, AOT clients may be difficult to engage. There is no reason to not assume that this may also be true of research studies. Thus it is plausible that those who were willing to engage in this study represent a subset of AOT clients with higher levels of engagement.

This study could have also benefited from collecting data from care coordinators to complement data collected from participants. Specifically the observer rated engagement measure by Hall et al (2001) could have been utilized. Measuring more specific aspects of engagement such as the number of missed appointments, and not relying entirely on questionnaire measures could also have complemented the data.

The results do show some trends that may benefit from further investigation in a larger population. The main finding of this study (that white AOT clients are more engaged than black clients) requires further investigation. The possible roles of self-efficacy and recovery style in the engagement process appear to be potential avenues in explaining ethnic differences. Future qualitative research may also prove productive. There are currently no qualitative studies focused on engagement in AOT populations. A qualitative study examining the factors related to why white clients may be more engaged could help isolate variables for further quantitative enquiry.

Besides the main finding of this study, expected trends (though not significant) were found between engagement and shame/stigma. Studies utilizing non-correlational designs and larger sample sizes could help to investigate these findings further, with a special emphasis on coping with stigma/shame.

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PUBLIC DISSEMINATION DOCUMENT

The two papers in this volume investigated aspects of Assertive Outreach Teams (AOT) in the UK. AOTs offer services to those with severe mental illnesses whom services find hard to engage and who are at risk of falling out of contact with services

Assertive Outreach in the UK – what is the evidence?

This paper is a literature review. British AOTs are based on the Assertive Community Treatment (ACT) model from the United States. A review of the evidence for the ACT model has already been completed by Marshall and Lockwood (2000). It found favorable evidence for the model. This review however was heavily based on American studies, so the findings may not be representative of AOT in the UK. Also concerns have been raised about how the AOT model has been implemented in the UK and whether it is different to the American ACT model. Thus it would appear that the evidence for the AOT model in the UK needs further scrutiny, and that was the focus of this review.

The paper included all studies based on UK AOT since Marshall and Lockwood's review (post year 2000). The inclusion criteria used was that all studies must measure some aspect of effectiveness of AOT (engagement and remaining in contact with services, hospital use, clinical and social outcomes and costs). Only quantitative studies were included. A search of databases resulted in 18 studies being identified. These were then ranked according to the type of methodology used via criteria taken from the NICE guidelines for schizophrenia. According to this ranking the majority of studies (12)

were of non experimental design, with 3 studies being quasi-experimental and 3 studies being based on randomized control trial (RCT) data. The studies were then analysed on two levels; methodology and what evidence they provided for UK AOT.

With regard to the methodology overall the studies were found to lack methodological rigor. Studies tended to be short in duration and there were inconsistencies in the definition of key variables (especially hospital use). Also none of the studies were blinded to the purpose of the study, so expectation biases may have had an effect on results.

With regard to the evidence for UK AOT the only outcome measure where AOT appeared to perform well was engagement and remaining in contact with services. With regard to the other outcomes it was difficult to come to firm conclusions as there was either not enough evidence, no consensus in the literature, or there were concerns about design issues. However a key finding was that the only RCT studies (the strongest design) included were in the main negative about the effectiveness of UK AOT. The review concludes by stating that no firm conclusions can be made on the evidence currently available, and that more, better quality research is needed.

THE RELATIONSHIP BETWEEN SHAME, STIGMA AND ENGAGEMENT FOR AFRICAN CARIBBEAN MALES AND WHITE BRITISH MALES IN ASSERTIVE OUTREACH SERVICES

This paper presents a study that investigated engagement in AOT teams in Birmingham. It investigated how engagement with AOT teams may be related to factors such as

stigma, shame and ethnicity. Statistics showed that there were more black clients in AOT services than white clients. This study hypothesised that one factor in this could be that they felt more stigmatised/ashamed, hence they were more likely to disengage from services and need AOT care.

The study recruited 40 participants (split into 2 groups; 20 black and 20 white). All were AOT clients and male. All clients completed three questionnaires (one engagement measure, one stigma measure and one shame measure). The outcomes on questionnaires were then compared between the two groups.

Results revealed that both groups had a good level of engagement. However the white clients were significantly more engaged than the black clients. White and black clients were not found to differ on levels of shame or stigma, and these two factors were not found to be related engagement. Shame and stigma were found to be strongly related to each other.

In conclusion the study found that white clients were more engaged than black clients and that shame and stigma were not factors in this difference. Thus there may be other reasons why there are more black clients in assertive outreach services.

APPENDICES

APPENDIX 1

INSTRUCTION FOR AUTHORS FOR NOMINATED JOURNALS

(JOURNAL OF MENTAL HEALTH)

APPENDIX 2

MEASURES USED

APPENDIX 3

CONSENT FORM AND INFORMATION SHEET

APPENDIX 4

LITERATURE REVIEW – TABLE 1

APPENDIX 5

TESTS OF NORMALITY

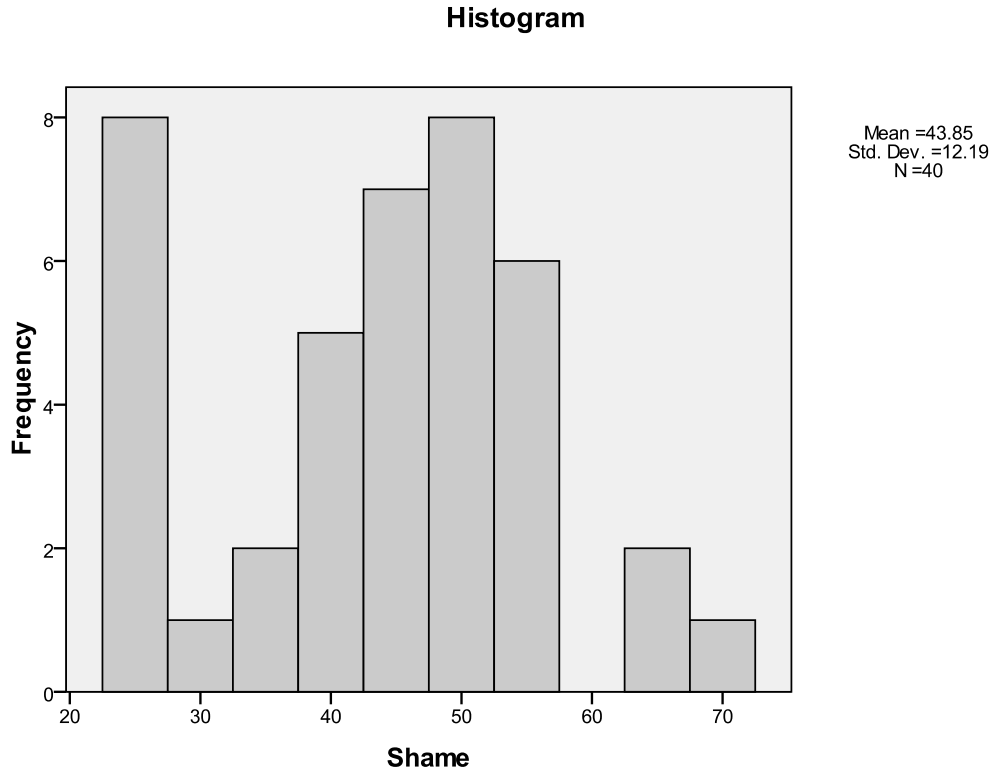
Tests of normality

Variable - Shame

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Shame	.117	40	.184	.941	40	.038

a. Lilliefors Significance Correction

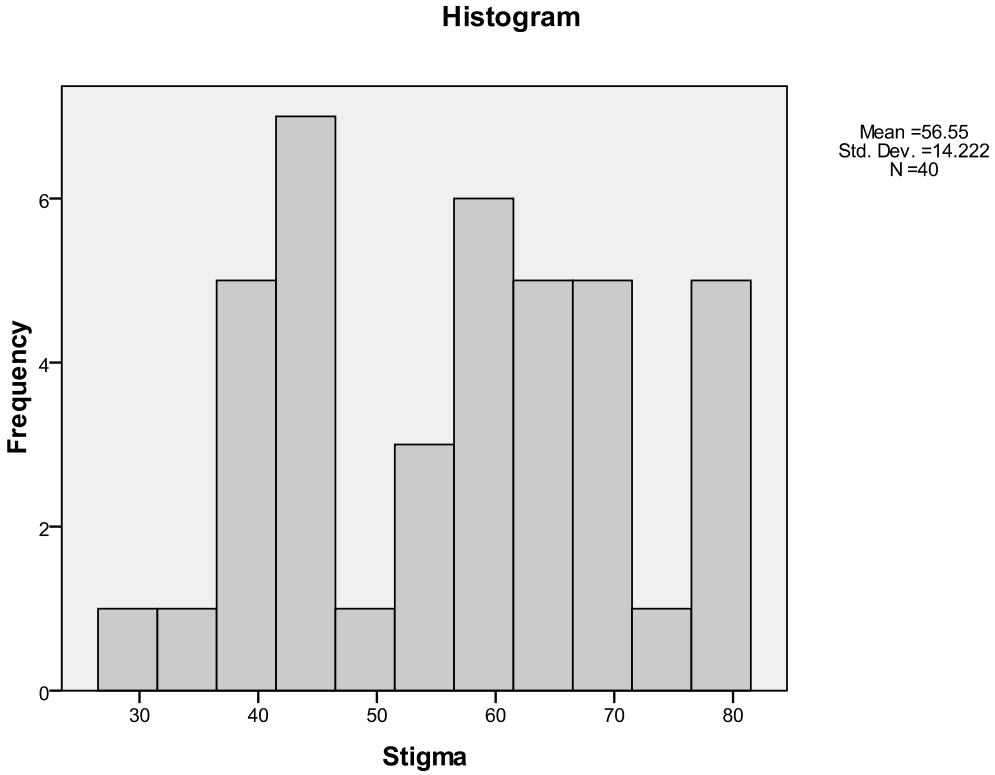


Variable – Stigma

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Stigma	.161	40	.010	.944	40	.048

a. Lilliefors Significance Correction

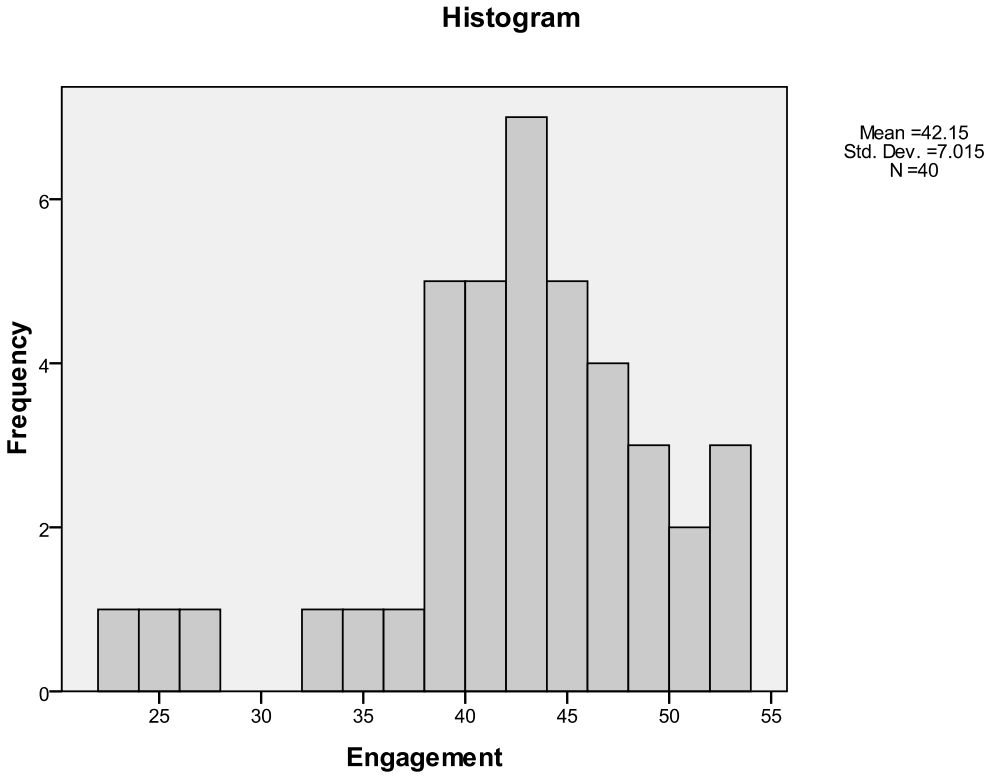


Variable –engagement

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Engagement	.152	40	.021	.929	40	.015

a. Lilliefors Significance Correction



APPENDIX 6

NON-PARAMETRIC STATISTICS AND ANALYSES OF SUBSCALES

Non-parametric analyses

Aim 1- The relationship between engagement and ethnicity

In order to examine the relationship between engagement and ethnicity a Mann Whitney test was undertaken. A significant difference was found between ethnic groups in relation to engagement (*u = 78, Z = -3.310, p= 0.001).*

Aim 2 – The relationship between shame and engagement

In order to examine the relationship between shame and engagement a Spearman's correlation coefficient was calculated. A significant relationship was not found between shame and stigma (*r=-2.11, p = .192)*

Aim 3 – The relationship between stigma and engagement

In order to examine the relationship between stigma and engagement a Spearman's correlation coefficient was calculated. A significant relationship was not found between shame and stigma (*r=-0.28, p = .862)*

Aim 4 – The relationship between shame and ethnicity

In order to examine the relationship between shame and ethnicity a Mann Whitney test was undertaken. A significant difference was not found between ethnic groups in relation to shame (*u = 197.5, Z = -0.68, p= 0.946).*

Aim 5 – The relationship between stigma and ethnicity

In order to examine the relationship between stigma and ethnicity a Mann Whitney test was undertaken. A significant difference was not found between ethnic groups in relation to stigma (*u = 144.5, Z = -0.1504, p= 0.133).*

Aim 6 – The relationship between shame and stigma

In order to examine the relationship between shame and stigma a Spearman's correlation coefficient was calculated. A significant relationship was found between shame and stigma (*r=-0.488, p = .001).*

Analyses of subscales

Experience of Shame Scale (ESS)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
characteroligical	Equal variances assumed	.727	.399	.024	38	.981	.050	2.043	-4.086	4.186
	Equal variances not assumed			.024	37.204	.981	.050	2.043	-4.089	4.189
Behavioural subscale	Equal variances assumed	6.109	.018	-1.345	38	.187	-2.450	1.821	-6.137	1.237
	Equal variances not assumed			-1.345	33.666	.188	-2.450	1.821	-6.153	1.253
Bodily subscale	Equal variances assumed	2.630	.113	.813	38	.421	.800	.984	-1.192	2.792
	Equal variances not assumed			.813	36.302	.422	.800	.984	-1.195	2.795

None of the subscales were found to be significantly different for AC and WB clients (characterological subscale (t = 0.24, df = 38, p=0.981), behavioural subscale (t =1.345, df=33.6, p=0.187), bodily subscale (t = 0.813, df = 38, p=0.421))

Stigma Scale

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Discrimination subscale	Equal variances assumed	.370	.547	1.175	38	.247	3.550	3.020	-2.564	9.664
	Equal variances not assumed			1.175	37.250	.247	3.550	3.020	-2.568	9.668
Disclosure subscale	Equal variances assumed	1.671	.204	1.712	38	.095	3.800	2.219	-.693	8.293
	Equal variances not assumed			1.712	36.308	.095	3.800	2.219	-.700	8.300
Positive subscale	Equal variances assumed	.003	.958	-.567	38	.574	-.500	.882	-2.285	1.285
	Equal variances not assumed			-.567	37.965	.574	-.500	.882	-2.285	1.285

None of the subscales were found to be significantly different for AC and WB clients (discrimination subscale (t = 1.175, df = 38, p=0.247), disclosure subscale (t = 1.712, df = 38, p=0.095), positive subscale (t = -.567, df = 38, p = 0.574))

APPENDIX 7

QUANTITATIVE STATISTICS – RAW DATA

relationship between stigma and shame

Correlations

		Shame	Stigma
Shame	Pearson Correlation	1	.551**
	Sig. (2-tailed)		.000
	N	40	40
Stigma	Pearson Correlation	.551**	1
	Sig. (2-tailed)	.000	
	N	40	40

**. Correlation is significant at the 0.01 level (2-tailed).

Relationship between enagement and stigma/shame

Correlations

		Stigma	Engagement	Shame
Stigma	Pearson Correlation	1	-.030	.551**
	Sig. (2-tailed)		.853	.000
	N	40	40	40
Engagement	Pearson Correlation	-.030	1	-.175
	Sig. (2-tailed)	.853		.280
	N	40	40	40
Shame	Pearson Correlation	.551**	-.175	1
	Sig. (2-tailed)	.000	.280	
	N	40	40	40

**. Correlation is significant at the 0.01 level (2-tailed).

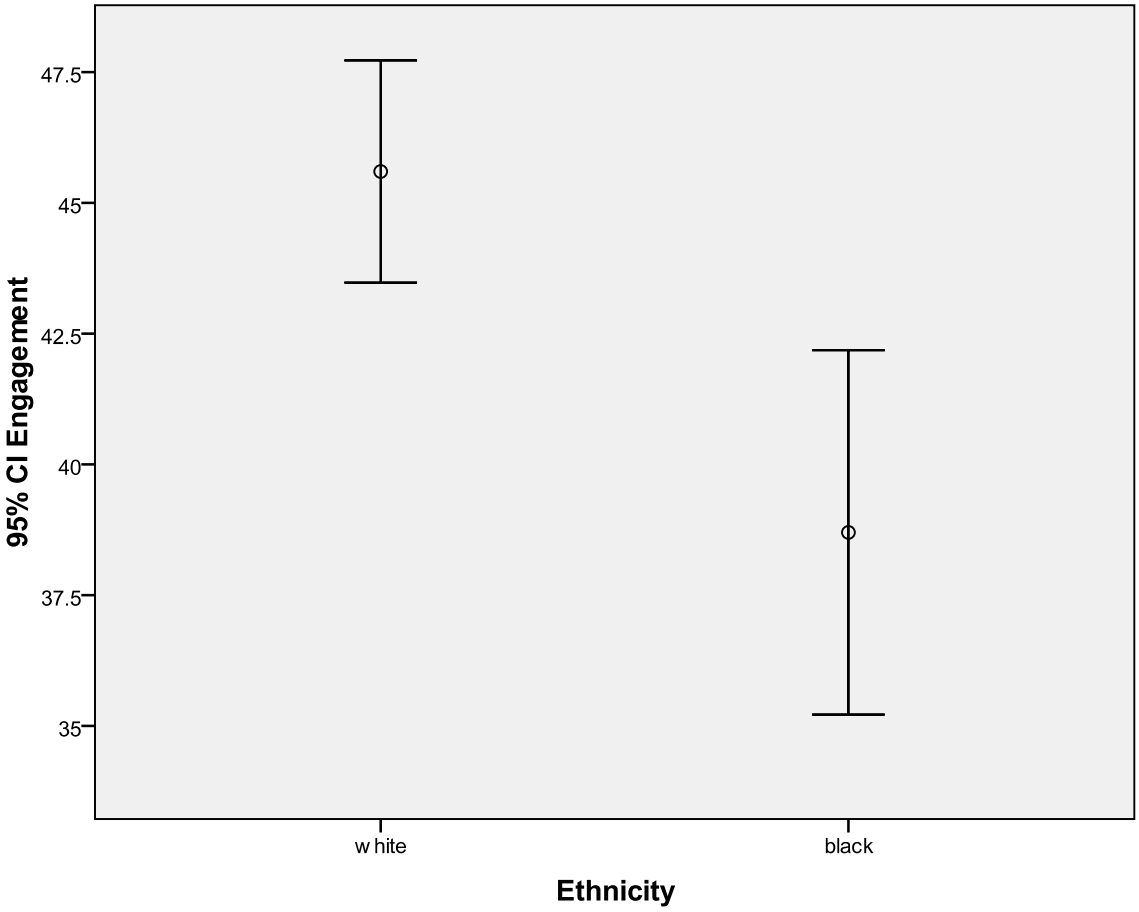
Does engagement vary as a function of ethnicity

Group Statistics

	Ethnicity	N	Mean	Std. Deviation	Std. Error Mean
Engagement	white	20	45.60	4.535	1.014
	black	20	38.70	7.442	1.664

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Engagement	Equal variances assumed	1.406	.243	3.541	38	.001	6.900	1.949	2.955	10.845
	Equal variances not assumed			3.541	31.403	.001	6.900	1.949	2.928	10.872



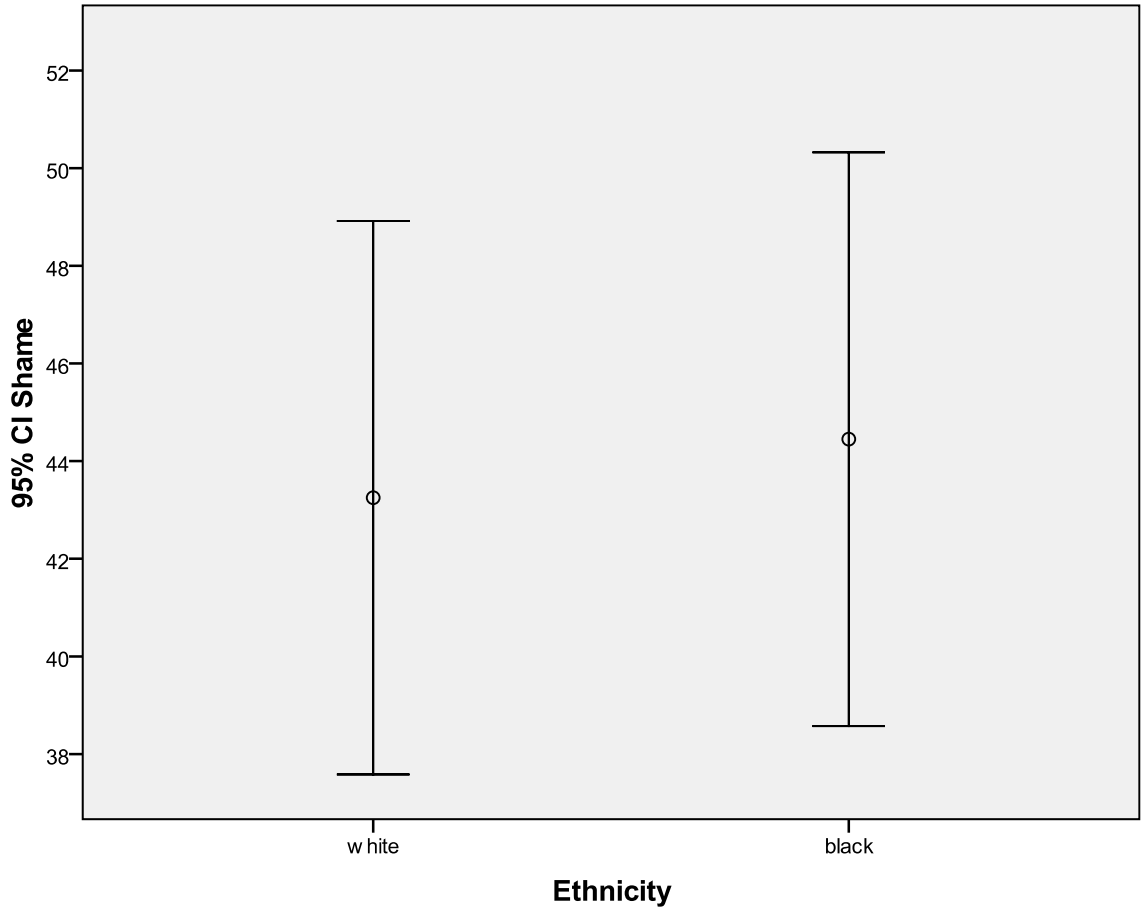
Does shame vary as a function of ethnicity

Group Statistics

	Ethnicity	N	Mean	Std. Deviation	Std. Error Mean
Shame	white	20	43.25	12.109	2.708
	black	20	44.45	12.555	2.807

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Shame	Equal variances assumed	.024	.877	-.308	38	.760	-1.200	3.900	-9.096	6.696
	Equal variances not assumed			-.308	37.950	.760	-1.200	3.900	-9.096	6.696



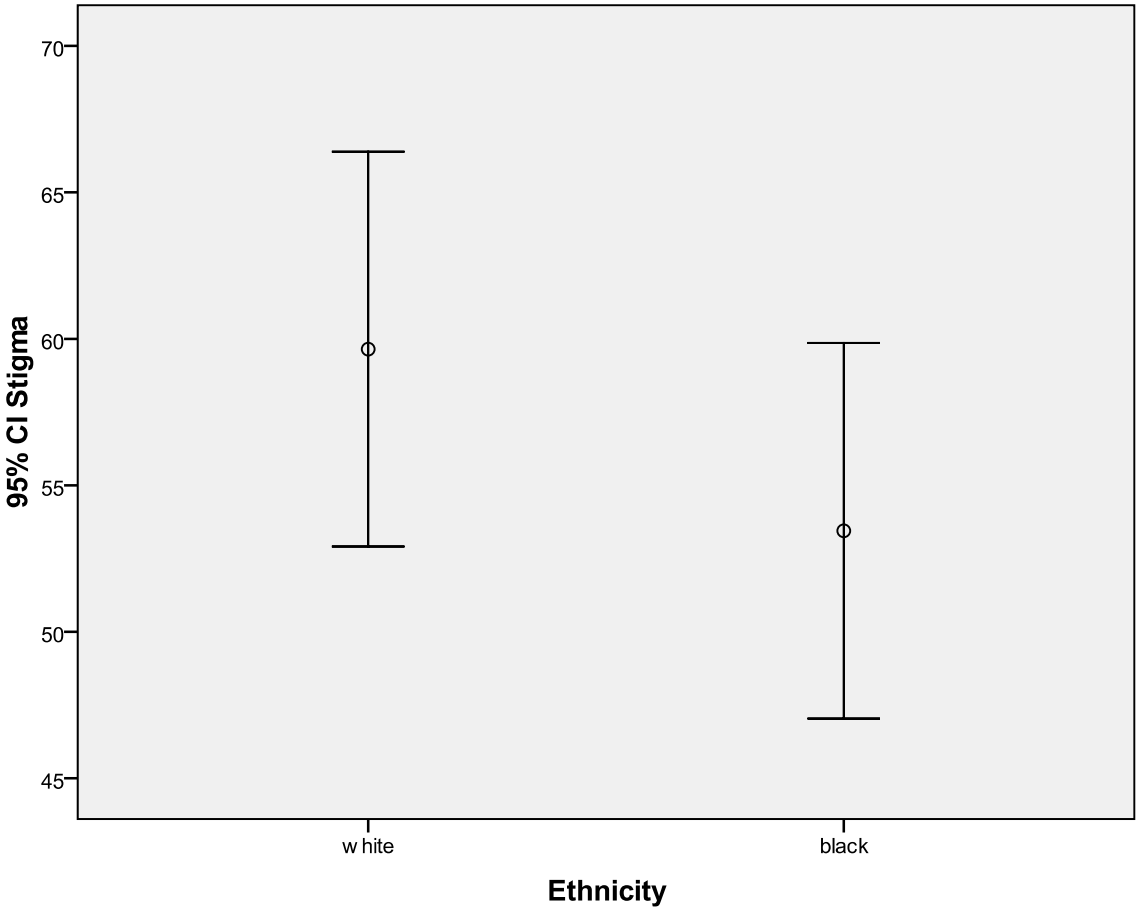
Does stigma vary as a function of ethnicity

Group Statistics

	Ethnicity	N	Mean	Std. Deviation	Std. Error Mean
Stigma	white	20	59.65	14.401	3.220
	black	20	53.45	13.694	3.062

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Stigma	Equal variances assumed	.026	.873	1.395	38	.171	6.200	4.444	-2.796	15.196
	Equal variances not assumed			1.395	37.904	.171	6.200	4.444	-2.796	15.196


70
65
60
55
50
45
95% CI Stigma
w hite
black
Ethnicity

APPENDIX 8

INFORMATION RELAVANT TO ETHICAL REVIEW AND CONDUCT