Pilot intervention into depression among older adults in prison

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Executive Summary

Introduction

The UK has an ageing population (United Nations, 2007). In parallel, people aged 60 and over are now the fastest-growing age group in the England and Wales prison estate (Department of Health, 2007). There is currently no existing national policy for the management and care of older prisoners. The cost of healthcare is significantly higher for older prisoners than their younger counterparts and studies have suggested that older prisoners have different healthcare needs to younger prisoners. Hayes (2010) found that depression was the major mental illness affecting older prisoners, and that those aged 50-59 had even higher rates than those aged 60 and over (48% vs 26%).

A number of reasons have been put forward for why older prisoners may be more depressed. Crawley and Sparks explored the experiences of older people in custody and have described a phenomenon they call ‘institutional thoughtlessness’ (2005). They suggested that prison staff are often unaware of the specific needs of older people, and thus do not address them. In addition to the physical demands of prison life, older prisoners are also at risk of bullying and intimidation (Ware, 2001).

Much of the literature describing the needs of older prisoners is descriptive and although many recommendations have been made, no research has outlined specific service models, nor have they trialled an intervention.

The Collaborative Care Approach to the treatment of depression has achieved some degree of success in UK and US community primary care settings (Gillbody, Bower, Fletcher, Richards & Sutton, 2006). A large meta-regression analysis (Bower, Gilbody, Richards, Fletcher & Sutton, 2006) indicated that the key aspects of the Collaborative Care Approach in significantly improving the symptoms of depression were; 1) recruitment to the intervention by systematic identification, 2) case managers having a specific mental health background and, 3) regular supervision for case managers. This approach has been successfully adapted for use with older adults in the US (Unutzer et al., 2001, 2002) and more recently in the UK (Chew-Graham, 2007).

The success of interventions demonstrated in both primary care and institutional settings indicate that comparable approaches may be applicable and effective in prisons. However, given the lack of a national strategy for the care of older prisoners, new approaches need to be introduced carefully and with as much attention to the process as to the results. It can be difficult to translate health care interventions from the community into prison (e.g. the introduction of specialist mental health in-reach services; Steel et al., 2007). This feasibility study represents the first attempt to address depressive symptoms amongst elderly prisoners, and to evaluate the process by which it was introduced.
**Study aims**

This research took the form of a pilot intervention which incorporated a process evaluation to assess the practical implications and viability of implementing an intervention based on the Collaborative Care approach (see Gillbody et al., 2006 for a review). In line with MRC frameworks the study was classified as a Phase II trial necessary to ensure the intervention could be feasibly administered and to generate estimates of the effect size and recruitment necessary for a larger trial to succeed. The MRC define this as a crucial step prior to establishing a full randomised controlled trial. This research attempted to identify three distinct, but inter-related aims:

1. To explore the feasibility of adapting, for use in the prison environment, an intervention used in community settings for older adults with depression.
2. To determine the extent to which a medium-length intervention could effectively address symptoms of depression in older adults in prison.
3. To establish the power required for a full randomised control trial of the intervention.

**Method**

An intervention was adapted for use within a prison environment from the trial of Collaborative Care for older adults with depression in primary care community settings (Burroughs, 2008; Chew-Graham et al., 2007) and McCurran et al’s (1999) nursing home intervention. Prisoners were screened for depression, and randomised into experimental and control groups. The experimental group received the intervention in a 12-week period staggered over 12 months. The control group received treatment as usual. Efficacy was assessed by regular assessments of depression and functioning. Feasibility of carrying out this intervention was assessed in a process evaluation. Semi-structured interviews provided data on factors promoting or inhibiting the introduction of the intervention. Staff diaries documenting the amount of time spent on the intervention in their working week was used to examine the feasibility of providing the intervention in addition to regular duties.

**Results**

This study originally attempted to identify three distinct, but inter-related aims:

1. To explore the feasibility of adapting, for use in the prison environment, an intervention used in community settings for older adults with depression.
2. To determine the extent to which a medium-length intervention could effectively address symptoms of depression in older adults in prison.
3. To establish the power required for a full randomised control trial of the intervention.

It became apparent that following the adaption of the intervention that there were considerable difficulties in implementing the intervention in the prison.
Therefore the results focus on the intervention adaptations and process evaluation.

There were delays in the initial stages of the research which pushed back the intended start date of the research from June 2008 to October 2008. In addition, there were a number of specific difficulties with the set-up of the study in one of the prisons. Three key issues were reported in liaising with the Primary Care Trust; 1) who should be the allocated person to deliver the intervention, 2) how to deal with the intention not to treat control participants, and 3) waiting list procedures. There were also initial problems with training healthcare staff in the principles of research. The research plan had to be simplified to give them only ‘need-to-know’ information. It was also difficult for the on-site researcher who was meant to be blinded to the randomisation as they had to run through the procedure of the first few participants with the healthcare worker who would reveal the allocation.

The research team reported that prison discipline staff were helpful in bringing prisoners to sessions, providing secure rooms and a panic alarm. The team found that the prison regime made it difficult to see prisoners. In addition, the vast majority of participants in the study were participating in programmes such as the Sex Offender Treatment Programme (SOTP) and Enhanced Thinking Skills (ETS). The research team therefore had to negotiate when they saw participants to fit in around these programmes and the prison regime.

However, the most significant problem were disagreements between the research and healthcare team in terms of participant eligibility for the intervention. This problem persisted where the majority of participants screened in were deemed inappropriate for inclusion by the in-reach team.

The problems highlighted above significantly reduced the number of participants who were randomised and subsequently took part in the study. While randomisation still occurred, there were limited participant numbers, due to the numbers no statistical analysis was possible.

Prisoners were recruited from two prisons and screened using the GDS. Sixty three prisoners from HMP Wymott were recruited into the initial stages and screened, and further 29 were recruited from HMP Risley. The average age of the group (n = 92) was 62.6 years old (range; 51-76 years). In terms of ethnicity, a large majority (n = 85, 92%) of the recruited prisoners were white British males. Of the remaining seven prisoners were assessed as white ‘other’ (n = 2; 2%), black Caribbean (n = 2, 2%) and black African (n = 2, 2%) and the final recruit was white Irish (n = 1, 1%). Almost half of the prisoners (46%) were single during the period over which the study was conducted. Among the remaining prisoners, 30% were married, 17% divorced and 7% had been widowed.

The majority had either received their sentence already (67%), or were held on an indeterminate sentence of Imprisonment for Public Protection (14%). Sixteen (17%) of the prisoners were on a life sentence, and the remaining 76 had an average sentence of 6.3 years and months. Eighty-seven (94%) had committed a type of sexual offence, with the most common offence being conviction for indecent assault of a child (26%). The Multi-Agency Public Protection Arrangements (MAPPA) for each prisoner were recorded. Half of the prisoners had not been
referred to MAPPA and therefore did not have a classification. Of the remaining prisoners, 33% were at level one and subsequently ‘normal’ agency risk management procedures had been followed, and 11% were level 2, meaning that they represented a ‘high or very high risk of harm’. The final 7% of prisoners were attributed level 3, the ‘critical few’ offenders who presented an ‘exceptionally’ high risk of harm.

A total of 86 prisoners were screened using the GDS (Yesavage, et al., 1988) prior to being assigned to the control and treatment groups. Scores above 5/30 are classified as ‘indicative of probable depression’. The mean score for the whole group on the GDS was 7.9 (range 0-26, S.D. = 6.1). Sixty-nine prisoners were excluded from the study following the GDS: 39 had a GDS of below 5; 22 were subsequently excluded after the in-reach team requested the increase cut-off; 8 had a GDS of above 10 but the in-reach team still deemed them unsuitable due to very mild depression. The remaining 13 were then randomised into control (n = 10) and treatment (n = 3) groups. The Mini Mental State Examination (MMSE) was conducted with the 13 participants to assess cognitive function. The group scored a mean of 26.9 (range 15-30, S.D. = 4.3) which is considered within the normal range.

Following randomisation the Global Assessment of Functioning (GAF; Frances et al., 1994) and GDS were completed. The assessments were repeated at 2, 4, 8 and 12 weeks. Both the control group and the treatment group demonstrated a small increase in score on the GAF between each of the five stages of assessment, showing an improvement in depression symptoms.

**Discussion**

In this study, an intervention with demonstrated efficacy for managing depressive symptoms in a sample of community-based older adults was adapted for use in the prison environment. In principle, prisoners and staff found the proposed intervention to be desirable, appropriate and feasible. However, in practice it was very difficult to get the intervention off the ground, and for the evaluation to take place. There appeared to be two reasons for this: the attempt to use existing health care staff in running the intervention alongside their current clinical responsibilities, and access to the prison for researchers.

The study showed improvements in depressive symptoms and global functioning amongst the prisoners who received the intervention. However, improvements of a similar scale were also seen in the control group. A recent study into the effect of the prison environment on mental health also showed overall improvements in psychopathology for prisoners over time (Hassan et al., 2011). This may represent a period of coming to terms with being in prison and of settling into the regime, supported by the focus group findings that older prisoners’ mental health needs were strongly related to custodial needs. Unfortunately due to the small numbers included, it was not possible to make group comparisons.

To conclude, with an aging prison population, where the rates of depression are high, there is a dearth of intervention studies. In contrast, a number of studies have demonstrated the success of treatments for depression in community nursing home settings. This feasibility study represented the first attempt to address
depressive symptoms amongst elderly prisoners. Based on the findings of the study we would suggest that before a larger trial could be conducted the feasibility study would need to be repeated, attempting to solve the problems highlighted in this study. The main issue being, having a better definition of depression in prison, clearly this study identifies that older prisoners with depression have much more severe symptomology on the GDS than community samples and even when using the cut-off of 10 which denote depression prison in-reach services themselves have a higher threshold.

Findings from this study will be published in relevant peer review journals and a copy of the report will be made available to the research sites involved.
1 Introduction

1.1 Literature review

The UK has an ageing population; the proportion of people over 60 is rising whilst the number of children and working adults is decreasing (United Nations, 2007). In parallel, people aged 60 and over are now the fastest-growing age group in the England and Wales prison estate (Department of Health, 2007). In the last ten years, the number of sentenced prisoners over 60 has grown by almost 250% (908 in 1998 to 2201 in 2008; Ministry of Justice, 2008). This rise may be due to demographic changes in the general population, such as longer life expectancy (Wheeler, Connelly & Wheeler, 1995) and to tougher sentencing (Morgan, 1997).

There is currently no existing national policy for the management and care of older prisoners. The cost of healthcare is significantly higher for older prisoners than their younger counterparts and several studies have suggested that older prisoners have different healthcare needs to younger prisoners. In a comprehensive survey, Fazel et al., (2001) reported that 30% of prisoners aged 60 and above exhibited depressive disorder, in comparison to rates of between 6%-26% for older adults in community nursing homes (Ames, 1994). Similarly, Hayes (2010) found that depression was the major mental illness affecting older prisoners, and that those aged 50-59 had even higher rates than those aged 60 and over (48% vs 26%).

A number of reasons have been put forward for why older prisoners may be more depressed, many coming from qualitative work in this area. Crawley and Sparks explored the experiences of older people in custody and have described a phenomenon they call ‘institutional thoughtlessness’ (2005). They suggested that prison staff are often unaware of the specific needs of older people, and thus do not address them. Because this group have not been identified as one needing special consideration (like ‘vulnerable prisoners’ at risk of bullying, or young offenders), staff’s desire to treat all prisoners equally has potential adverse consequences. In particular this related to physical ability, with staff expecting older people to move as quickly as younger prisoners, often up and down numerous flights of stairs. Certainly, the prison environment was designed with young people in mind, and the regime is also geared towards training for employment and education. Those who have retired from work are often locked in their cells during the day with little to occupy them (HM Inspectorate of Prisons, 2004).

In addition to the physical demands of prison life, older prisoners are also at risk of bullying and intimidation (Ware, 2001). Aday (1994) further described this group as experiencing ‘family conflict, fear of dying in prison and suicidal thoughts’. Despite this, there is little specialist provision of health care services supporting this group. Whereas in the community, older people would be referred to ‘care of the elderly’ medical services or old age psychiatry, in prison they only have access to the same health care as younger prisoners. Thus, there is little appreciation of the differences in experiences and treatment for conditions affecting the elderly. This may include inappropriate referral (if low mood is seen as a ‘natural part of
aging’) and treatment (a number of psychiatric medications are contra-indicated in older people) (Baldwin, Chiu, Katona & Graham, 2002). Indeed, HM Inspectorate of Prison’s (2004) thematic review found inadequate health care provision specific to the elderly with under-identification of morbidity across the prison estate of England and Wales. If older prisoners are more affected by mood disorder (see below) and take less part in prison life, it is easy to see how their needs could be ignored and their symptoms untreated. Increasing awareness of this population’s profile of needs would be an important first step in addressing them.

Much of the literature describing the needs of older prisoners is descriptive and although many recommendations have been made, no research has outlined specific service models, nor have they trialled an intervention. In contrast, a number of studies have demonstrated the success of treatments for depression in community nursing home settings. A review by Snowden, Sato & Roy-Byrne, (2003) reported positive outcomes amongst this group from non-pharmacological approaches such as structured activities and psychotherapy. In the US, McCurren, Dowe, Rattel & Looneyl (1999) co-ordinated an intervention involving a nurse who provided training and support for voluntary workers and devised treatment plans (including therapeutic intervention) for nursing home residents. Each plan for treatment was tailored individually to the residents according to their performance on assessments conducted throughout the trial. Although the study lacked a control group, it did show that intervention was both feasible and effective based on improved scores on the Geriatric Depression Scale (Yesavage, 1988).

Work has also taken place in nursing home settings targeted towards people with dementia. Studies have highlighted the success of approaches where nursing home staff were trained to administer an intervention. Proctor et al., (1999) ran a randomised clinical trial where a hospital outreach team conducted training and educational seminars for care staff. Care planning was the key focus of training and the trial was judged to be effective on the basis of improved outcomes achieved by residents. Specifically, significant improvements were found using the AGECAT organic (cognitive) and depression scores at six-month follow-up. Turner (2005) reviewed 26 studies examining staff liaison and individual therapeutic interventions for behavioural symptoms in people with dementia in residential settings. There was insufficient evidence to produce firm guidelines on intervention and the recommendation was made that more research should be conducted prior to targeting clinical resources. These findings suggest a need for evidence from pilot studies before large-scale changes are made to service delivery.

The Collaborative Care Approach to the treatment of depression has achieved some degree of success in UK and US community primary care settings (Gillbody, Bower, Fletcher, Richards & Sutton, 2006). Although the principles of this approach have been adopted differently across a variety of interventions, there are three key principles which have been applied in most intervention plans: close liaison between primary and specialist mental health care services; case management of patients diagnosed with depression; and, comprehensive collation and sharing of information about progress. A large meta-regression analysis (Bower, Gilbody, Richards, Fletcher & Sutton, 2006) indicated that the key aspects of the Collaborative Care Approach in significantly improving the symptoms of depression
were; 1) recruitment to the intervention by systematic identification, 2) case managers having a specific mental health background and, 3) regular supervision for case managers. This approach has been successfully adapted for use with older adults in the US (Unutzer et al., 2001, 2002) and more recently in the UK (Chew-Graham, 2007).

In this latter study, 105 people aged 60 or over were randomised to a control group or an intervention using the Collaborative Care Approach. Using a defined protocol, community psychiatric nurses facilitated a programme of self-help techniques, education, and appropriate referral to other agencies. Self-help techniques were adapted from the Self-Help for Anxiety and Depression manual (SHADE; Lovell, 2000). Those receiving the intervention had significantly lower depression scores than the control group, and qualitative research showed that this was a feasible and acceptable approach to this population.

The success of interventions demonstrated in both primary care and institutional settings indicate that comparable approaches may be applicable and effective in prisons. However, given the lack of a national strategy for the care of older prisoners, new approaches need to be introduced carefully and with as much attention to the process as to the results. It can be difficult to translate health care interventions from the community into prison (e.g. the introduction of specialist mental health in-reach services; Steel et al., 2007). This feasibility study represents the first attempt to address depressive symptoms amongst elderly prisoners, and to evaluate the process by which it was introduced.

1.2 Study aims

This research took the form of a pilot intervention which incorporated a process evaluation to assess the practical implications and viability of implementing an intervention based on the Collaborative Care approach (see Gillbody et al., 2006 for a review). In line with MRC frameworks the study was classified as a Phase II trial necessary to ensure the intervention could be feasibly administered and to generate estimates of the effect size and recruitment necessary for a larger trial to succeed. The MRC define this as a crucial step prior to establishing a full randomised controlled trial. This research attempted to identify three distinct, but inter-related aims:

4. To explore the feasibility of adapting, for use in the prison environment, an intervention used in community settings for older adults with depression.
5. To determine the extent to which a medium-length intervention could effectively address symptoms of depression in older adults in prison.
6. To establish the power required for a full randomised control trial of the intervention.
2 Method

2.1 Overview

An intervention was adapted for use within a prison environment from the trial of Collaborative Care for older adults with depression in primary care community settings (Burroughs, 2008; Chew-Graham et al., 2007) and McCurran et al’s (1999) nursing home intervention. The intervention followed clinical guidelines on treatment for depression (Baldwin et al., 2002). It was recognised that prisoners are a very different population to participants in the above studies and care needs to be taken in consulting prison professionals as to what is likely to be feasible and effective. Hence, the first stage of the project was to hold focus groups with older prisoners and staff groups to determine the background to depression amongst older adults in prison, and perceived feasibility of various strategies for addressing these. Based on this, a treatment manual was be drafted which defined the intervention.

Prisoners were then screened for depression, and randomised into experimental and control groups. The experimental group received the intervention in a 12-week period staggered over 12 months. This included four face-to-face sessions of approximately one hour each. The intervention involved case management with specialist psychological, physical and practical support by a member of prison health staff trained in elderly care. The control group received treatment as usual. Efficacy was assessed by regular assessments of depression and functioning. Feasibility of carrying out this intervention was assessed in a process evaluation. Semi-structured interviews provided data on factors promoting or inhibiting the introduction of the intervention. Staff diaries documenting the amount of time spent on the intervention in their working week was used to examine the feasibility of providing the intervention in addition to regular duties.

2.2 Prison establishments

Recruitment took place in two prison establishments in the North West of England; HMP Risley and HMP Wymott. These prisons housed over half of all older prisoners in the North West region, largely because they run Sex Offender Treatment Programmes.

HMP Wymott is a male category C training prison with an operational capacity of 1144. It has specialist facilities for vulnerable prisoners and a wing dedicated to prisoners aged 60 and over. HMP Risley is also a category C training prison with an operational capacity of 1095. Risley has an integrated Vulnerable Prisoner regime.

2.3 Intervention design

An intervention was adapted for use within a prison environment from two previous interventions. McCurran et al., (1999) determined the efficacy of an intervention
strategy for depression using a geropsychiatric nurse in conjunction with trained older adult volunteers in the role of mental health professionals. The geropsychiatric nurse performed comprehensive evaluations on those assigned to the experimental group, formulated treatment plans, and provided therapeutic interventions, augmented by the services of the trained volunteers. The nurse monitored individual resident responses to interventions via the Volunteer Peer Counselor Activity Log and individual conferences with volunteers. A psychiatrist was available for consultation.

In Chew-Graham et al., (2007) intervention a collaborative care approach was used. The intervention was delivered by a community psychiatric nurse (CPN) based in primary care who liaised closely with primary care professionals and acted as a care coordinator for depression management with regular access to advice from an old-age psychiatrist according to a defined protocol. The CPN reviewed patients’ progress with the old-age psychiatrist every 4 weeks; if the CPN had concerns about a patient, their discussions were more frequent. The protocol did not define how often the CPN liaised with the GP (by post, e-mail, telephone, or face to face) regarding a trial patient, but the CPN did send a written report to the GP after each patient’s initial assessment and after assessments at 4 weeks, 8 weeks, and at the end of the intervention at 12 weeks. In between, the CPN liaised with the GP in person if changes in medication were required or if there were concerns about concordance or risk. The intervention included education about depression, advice about antidepressant medication, a manualised facilitated self-help intervention (SHADE; Lovell, 2000), and sign-posting to other services, particularly voluntary agencies. The intervention lasted for 12 weeks and consisted of six face-to-face sessions in each patient's home and five sessions delivered via the telephone.

Prisoners are a very different population to participants in the above interventions and care needed to be taken in consulting prison professionals as to what is likely to be feasible and effective. Therefore three focus groups were held with older prisoners and prison staff to learn more about the issues associated with depression amongst the older adults in prison and to discuss the feasibility of various strategies for intervention. Each focus group consisted of six people. In the focus groups, both the primary care (Chew-Graham et al., 2007) and nursing home (McCurran et al., 1999) interventions were described and the groups were encouraged to provide feedback regarding the acceptability of these approaches. Specifically, participants were asked how the two approaches might need to be merged to address the needs of older prisoners with depression in the prison environment.

Where audio-recordings were available, focus groups were transcribed and subjected to thematic analysis. The framework developed by Miles & Huberman (1994) involving a three-stage process of data reduction, data display and conclusion drawing and verification was followed. A constant comparative method was used to selectively reduce the data (Glaser & Strauss, 1967). This involved generating themes through comparing and contrasting responses in an iterative process. Initially, a detailed micro-analysis of focus group transcripts and field notes is undertaken, followed by a macro-level analysis concentrating on developing and refining thematic categories. Following this process, themes were
presented visually as a thematic network in order to illustrate more clearly the emerging patterns and inter-relationships between thematic categories and to facilitate conclusion drawing (Attride-Sterling, 2001). Finally, in order to guarantee the ‘confirmability’ and validity of findings, transcripts were revisited during the final stages to verify emerging conclusions and ensure that categories were accurately reflective of the data. Several individuals were involved in the analytic process in order to confirm findings, generate new insights and to ensure the conclusions drawn were credible and defensible.

From this process components of both models were combined and included in the adapted prison models and a manual developed. Similarly, prison specific adaptations were made including timings and location of sessions etc. to fit in with the prison regime.

2.4 Intervention pilot

2.4.1 Sample

All prisoners aged 50 years old and over at both prisons were approached to take part in the study. Recruitment took place either in a private setting in the healthcare centre or on the person’s residential wing. Potential participants were initially approached by a member of the healthcare team who briefly described the study and asked if they would like to meet the study researcher. If they were agreeable, the health professional then introduced the researcher. To ensure informed consent, the researcher provided clear information about the study, what participation would involve, and answered any questions the participant might have. All participants were informed that participation was voluntary and that if they decided not to take part there would be no impact on the care or treatment they received. Also if they decided to withdraw from the research element of the study they would still continue with the intervention.

2.4.2 Inclusion/Exclusion Criteria

Participants were excluded if they were under 50 years old and had a score of below six on the Geriatric Depression Scale (GDS).

All participants were screened for symptoms of depression using the GDS (Yesavage, 1988). The GDS is a 30-item set of ‘yes/no’ response questions. This makes the scale suitable for use with cognitively impaired individuals, which is important given that the assessment is based on self-report. A low threshold of depressive symptoms was used and any participant scoring more than six out of thirty went forward for randomisation. This wide definition of depressive symptoms was used so that results could be compared between all levels of severity, not only including severe depression but also including those who may have had more social/custodial needs. Scores over 10 are more commonly used to denote depression, but this cut-off has been shown to give a sensitivity of only 84% (Yesavage, 1988), therefore it was decided to use the lower cut-off of six. A further assessment of cognitive ability was made using the Mini Mental State Examination (Folstein, Folstein & McHugh, 1975). A score below 23 has been shown to indicate
2.4.3 Procedure

Eligible participants were then randomised into a control group and an experimental group. A member of staff at the prison was used to randomise the participants so that the research team were blind. The Global Assessment of Functioning (GAF; Frances et al., 1994) was administered prior to the 12 week intervention period. The GAF is a numeric scale (0-100) which is used to subjectively rate the social, occupational and psychological functioning of adults. A score at the severe end of the scale (1-10) represents a severe and persistent danger of hurting self or others. Those at the mild end of the scale (91-100) are judged to function well in terms of day-to-day living. The GAF was administered again at 2, 4, 8 and 12 weeks after the intervention had commenced.

Control participants completed the same assessments as the experimental group.

The experimental group received the devised intervention over a period of 12 weeks staggered across 12 months. The treatment comprised four sessions, each lasting one hour, and consisting of case management delivered by a member of prison health staff trained in elderly care. Prisoners received specialist practical, psychological and physical support.

The prisoners randomly allocated to the control group were treated according to normal prison protocol. Those who scored highly on the depression assessments were referred to a member of primary care staff within the prison. The health care departments were provided with up-to-date best practice guidelines for the treatment of depression in primary care, and also with a summary of available psychotropic medication suitable for older adults with depression.

2.5 Process Evaluation

In the process evaluation, prisoners from the experimental and control groups, staff delivering the intervention and other front–line discipline and health care prison staff was interviewed using a qualitative schedule, designed for the study.

The process evaluation had a number of elements. Semi structured interviews provided data on factors promoting or inhibiting the introduction of the intervention. Where audio-recordings were available, interviews were transcribed and subjected to thematic analysis. A constant comparative method was used to selectively reduce the data (Glaser & Strauss, 1967).

Fidelity to the treatment manual will be undertaken by independent assessment of tape–recorded therapy sessions, as well as assuring that no therapy was provided in contact sessions with the control group. Staff were asked to complete a diary documenting the amount of time spent on the intervention in their working week. This was used to examine the feasibility of providing the intervention in addition to regular duties. The number of prisoners engaged by the intervention was noted as dropout during the study.
3 Results

This study originally attempted to identify three distinct, but inter-related aims:

4. To explore the feasibility of adapting, for use in the prison environment, an intervention used in community settings for older adults with depression.
5. To determine the extent to which a medium-length intervention could effectively address symptoms of depression in older adults in prison.
6. To establish the power required for a full randomised control trial of the intervention.

It became apparent that following the adaption of the intervention that there were considerable difficulties in implementing the intervention in the prison. Therefore the results focus on the intervention adaptations and process evaluation.

3.1 Intervention Adaptation

Within the focus groups prisoners were encouraged to discussed reasons for depression amongst the older age group, which seemed mostly related to custodial factors and being away from family and social support groups. The prison where focus groups were held contained a high number of sexual offenders, and older prisoners were over-represented amongst this group. The nature of the offence was thus an important issue for the population, with many maintaining their innocence, and suffering from loss of contact from their families. Several repeated that they were imprisoned at some distance from their (themselves elderly) partners or families, and for whom visiting was difficult. They also had issues with the prison regime, feeling it was geared towards younger prisoners and that it was a very noisy environment for them. They found the overall premise of the intervention acceptable, and felt it was worthwhile to assist those who had problems with their mental health whilst in prison. Within the community interventions telephone calls were used to keep in contact with the participants. The prisoners felt a ‘flying visit’ by staff would be appropriate to briefly check how they were getting on and see if there were any major problems. Prison staff felt the intervention was feasible with the resources outlined, and several commended addressing the specific needs of the older population. Based on the responses gleaned in these focus groups, a manual was then compiled to define the intervention (see Appendix 1).

Members of staff were identified by governors and health care managers at each participating site to run the intervention. The staff were then trained in the intervention by a specialist nurse in elderly care who had also run the community-based intervention described in Chew-Graham et al. (2007). They also received regular clinical supervision from a consultant forensic psychiatrist.

As part of the intervention, each prisoner initially met the treatment provider and discussed goals for treatment and professional boundaries. Over a two-week period, prisoners were assessed to determine their main concerns, personal history, history of mental health problems and their current strategies for coping
with their difficulties. Based on the outcomes of the assessment, history and current problems were documented, and a care plan was collaboratively compiled and agreed with the prisoner. Techniques were taken from the SHADE manual (Lovell, 2000) as appropriate, including relaxation, problem solving and behavioural activation. Cognitive and exposure therapy, as described in the SHADE manual, were not used in order to limit the intervention to techniques which could be used with limited involvement from staff. Other optional features of the intervention included education and awareness about depression, discussion of anti-depressants, as well as motivation to attend work, education or gym sessions. Finally, a decision was made about appropriate referral to other internal or external agencies, including the prison GP, mental health inreach, and use of the Samaritans phone or the prison listening service.

3.2 Process Evaluation

3.2.1 Issues during study set-up

There were delays in the initial stages of the research which pushed back the intended start date of the research from June 2008 to October 2008. This was largely due to the centralised prison administration department, responsible for prison security clearances. Initial paperwork was lost and had to be submitted twice. Before the research team could enter the prison they had to complete the mandatory prison security training. There was a delay in waiting for this to be arranged. One of the most significant issues in the early stages was the lack of prison keys for the healthcare staff. Consequently the staff had to rely on pooled keys being made available for use on specific days. This issue was resolved within the first six weeks of the project. Once these issues were overcome, the healthcare staff at both prisons were supportive of the research.

In addition to the difficulties reported above, there were a number of specific difficulties with the set-up of the study in one of the prisons. Three key issues were reported in liaising with the Primary Care Trust; 1) who should be the allocated person to deliver the intervention, 2) how to deal with the intention not to treat control participants, and 3) waiting list procedures. The PCT firstly questioned whether their primary care graduate mental health worker (PCMHW) had sufficient time to manage their current caseload and to deliver the research intervention. Discussions surrounding this issue were ongoing for two months, before it was finally agreed that the PCMHW would deliver the intervention. The team were unhappy about the increase in workload as they may need to see the same prisoner twice, once for routine clinical purposes and again for research. The research team stated that the treatment group would receive treatment as usual as well as the intervention. At the time this study was funded and in set-up the process was not clear as to how to access excess treatment costs and service support costs. Today this process is much clearer and the Comprehensive Local Research Networks provide researchers with help and advice. Were these available at the set-up of this study then many of the problems of getting the PCT on board might have been reduced. There was a major issue initially in terms of agreeing the pathway of care for screened participants. It was initially hoped that a number
of suitable participants would be screened into the study and then passed over to the PCMHWs to begin the intervention. However, participants screened for the research project could not bypass prisoners already on the waiting list to see the PCMHWs and were themselves placed on the waiting list managed by the mental health team. This raised a number of issues. A long waiting list could lead to deterioration or resolution of the prisoner’s difficulties. They may also be transferred out to another establishment or released from custody. In an effort to overcome this, the research team checked the estimated date of release whilst screening new people to ensure that they were not due for release within the next six months. There were also initial problems with training healthcare staff in the principles of research. The research plan had to be simplified to give them only ‘need-to-know’ information. It was also difficult for the on-site researcher who was meant to be blinded to the randomisation as they had to run through the procedure of the first few participants with the healthcare worker who would reveal the allocation.

3.2.2 Issues arising during the study

The research team reported that prison discipline staff were helpful in bringing prisoners to sessions, providing secure rooms and a panic alarm. The team found that the prison regime made it difficult to see prisoners. Although most prisoners were retired and remained on the wings, many attended workshops and officers felt that it was too dangerous for the research team to see participants in the workshop setting. In these instances, research staff reported that it was difficult to see the proposed number of six participants per day. In addition, the vast majority of participants in the study were participating in programmes such as the Sex Offender Treatment Programme (SOTP) and Enhanced Thinking Skills (ETS). The research team therefore had to negotiate when they saw participants to fit in around these programmes and the prison regime.

However, the most significant problem were disagreements between the research and healthcare team in terms of participant eligibility for the intervention. A low threshold of depressive symptoms on the GDS was used and any participant scoring more than six out of thirty went forward for randomisation. This wide definition of depressive symptoms was used so that results could be compared between all levels of severity, not only including severe depression but also including those who may have had more mild depression. Scores over 10 are more commonly used to denote depression, but this cut-off has been shown to give a sensitivity of only 84%. The prison in-reach team felt that a cut-off of six was far too low and that this would substantially increase the workload of the PCMHWs as these were people who would not be seen by the prison in-reach team as their depression symptoms were not severe enough. It was agreed that the cut-off would be raised to 10 and that the prison in-reach team would assess all the people that the researcher screened in to suitability. They would then pass the referral to the PCMHWs to deliver the intervention. However, when the prison in-reach team assessed the prisoners they stated that the vast majority were not suitable to be seen under normal circumstances by the in-reach team by virtue of their depression being very mild. Only 1 in 4 of those screened in by the
researcher did they feel should go through into the research. This problem persisted where the majority of participants screened in were deemed inappropriate for inclusion by the in-reach team.

The problems highlighted above significantly reduced the number of participants who were randomised and subsequently took part in the study. While randomisation still occurred, there were limited participant numbers, due to the numbers no statistical analysis was possible.

### 3.3 Consort Chart

Figure 1: Consort Chart

- **Recruited**
  - N = 92
- **Screened**
  - n = 86
- **Excluded**
  - n = 8 (in-reach team deemed them unsuitable)
- **Randomised**
  - n = 13
- **Intervention**
  - n = 3
- **Treatment as Usual**
  - n = 10
- **Dropout**
  - n = 6
- **Excluded**
  - n = 61 (GDS < 10)
- **Dropout**
  - n = 4 (3 withdrew; 1 deceased)
3.4 Demographics

Prisoners were recruited from two prisons and screened using the GDS. Sixty three prisoners from HMP Wymott were recruited into the initial stages and screened, and further 29 were recruited from HMP Risley. The average age of the group (n = 92) was 62.6 years old (range; 51-76 years). In terms of ethnicity, a large majority (n = 85, 92%) of the recruited prisoners were white British males. Of the remaining seven prisoners were assessed as white ‘other’ (n = 2; 2%), black Caribbean (n = 2, 2%) and black African (n = 2, 2%) and the final recruit was white Irish (n = 1, 1%). Almost half of the prisoners (46%) were single during the period over which the study was conducted. Among the remaining prisoners, 30% were married, 17% divorced and 7% had been widowed.

The majority had either received their sentence already (67%), or were held on an indeterminate sentence of Imprisonment for Public Protection (14%). Sixteen (17%) of the prisoners were on a life sentence, and the remaining 76 had an average sentence of 6.3 years and months. Eighty-seven (94%) had committed a type of sexual offence, with the most common offence being conviction for indecent assault of a child (26%). The Multi-Agency Public Protection Arrangements (MAPPA) for each prisoner were recorded. Half of the prisoners had not been referred to MAPPA and therefore did not have a classification. Of the remaining prisoners, 33% were at level one and subsequently ‘normal’ agency risk management procedures had been followed, and 11% were level 2, meaning that they represented a ‘high or very high risk of harm’. The final 7% of prisoners were attributed level 3, the ‘critical few’ offenders who presented an ‘exceptionally’ high risk of harm.

3.5 Screening

A total of 86 prisoners were screened using the GDS (Yesavage, et al., 1988) prior to being assigned to the control and treatment groups. Scores above 5/30 are classified as ‘indicative of probable depression’. The mean score for the whole group on the GDS was 7.9 (range 0-26, S.D. = 6.1). Sixty-nine prisoners were excluded from the study following the GDS: 39 had a GDS of below 5; 22 were subsequently excluded after the in-reach team requested the increase cut-off; 8 had a GDS of above 10 but the in-reach team still deemed them unsuitable due to very mild depression. The remaining 13 were then randomised into control (n = 10) and treatment (n = 3) groups. The Mini Mental State Examination (MMSE) was conducted with the 13 participants to assess cognitive function. The group scored a mean of 26.9 (range 15-30, S.D. = 4.3) which is considered within the normal range.

3.6 Baseline Assessments

Following randomisation the Global Assessment of Functioning (GAF; Frances et al., 1994) was completed. The mean score for the thirteen participants was 63.31 (SD = 6.23; range = 51-71). For the control group the mean score was 64.50 (SD = 5.93) and the treatment group 59.33 (SD = 6.65).
3.7 Follow-up Assessments

The GDS was administered at baseline and at 2, 4, 8 and 12 weeks. The mean scores achieved by the control and treatments groups at each follow-up are shown in Table 1.

Table 1. Mean and standard deviations for the control and treatment groups on the GDS at five assessment points

<table>
<thead>
<tr>
<th></th>
<th>Control n = 10</th>
<th>Treatment n = 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>T1</td>
<td>16.4 (4.6)</td>
<td>17 (3)</td>
</tr>
<tr>
<td>T2</td>
<td>11.5 (6.9)</td>
<td>16.7 (6)</td>
</tr>
<tr>
<td>T3</td>
<td>10.4 (7.9)</td>
<td>17 (3.6)</td>
</tr>
<tr>
<td>T4</td>
<td>9.6 (7.1)</td>
<td>14 (3)</td>
</tr>
<tr>
<td>T5</td>
<td>8 (8.4)</td>
<td>15.7 (10.7)</td>
</tr>
</tbody>
</table>

Similarly to the GDS, the GAF was administered once prior to randomisation into group, three further times during the treatment period and finally at the end of the twelve-week period. The control group scored a mean of 64.5 (SD = 5.9) prior to randomisation and the treatment scored a slightly lower mean of 59.3 (SD = 6.7). The mean scores achieved by each of the groups at all five stages are shown in Table 2.

Table 2. Mean and standard deviations for the control and treatment groups on the GAF at five assessment points

<table>
<thead>
<tr>
<th></th>
<th>Control n = 10</th>
<th>Treatment n = 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>T1</td>
<td>64.5 (5.9)</td>
<td>59.3 (6.7)</td>
</tr>
<tr>
<td>T2</td>
<td>66.8 (11.5)</td>
<td>61 (5.3)</td>
</tr>
<tr>
<td>T3</td>
<td>68.7 (11.4)</td>
<td>65 (4.6)</td>
</tr>
<tr>
<td>T4</td>
<td>74.3 (11.4)</td>
<td>68.7 (1.2)</td>
</tr>
<tr>
<td>T5</td>
<td>84.1 (7.2)</td>
<td>80 (11.1)</td>
</tr>
</tbody>
</table>

Both the control group and the treatment group demonstrated a small increase in score on the GAF between each of the five stages of assessment, showing an improvement in depression symptoms.
**4 Discussion**

In this study, an intervention with demonstrated efficacy for managing depressive symptoms in a sample of community-based older adults was adapted for use in the prison environment. In principle, prisoners and staff found the proposed intervention to be desirable, appropriate and feasible. However, in practice it was very difficult to get the intervention off the ground, and for the evaluation to take place. There appeared to be two reasons for this: the attempt to use existing health care staff in running the intervention alongside their current clinical responsibilities, and access to the prison for researchers.

Although discussion took place in the early stages of the project with the prison healthcare team to agree an intervention protocol, it became clear during the study that the intervention was not easily compatible with the existing health care services. In particular, there were issues surrounding the inclusion of prisoners with scores indicating mild depression who would be eligible for the research, but who would not normally be managed under the primary care team. Conflict arose when such prisoners were assigned to the treatment group but this was not deemed appropriate by the health care department. Prior to the study starting it had been agreed with the healthcare staff that the PCMHWs would conduct the intervention; this was seen as being more ecologically valid. However, once the study started the PCMHWs highlighted that there was a significant increase in their workload due to the research. As stated previously at the time of set-up it was unclear how the research team could access excess treatment costs. Access to this could have allowed for backfilling of the PCMHWs time, therefore allowing for additional staff members to be employed to deliver the intervention. Intervention studies today have better access to these funds and this may minimise the impact of research on the NHS. Access to this funding would not eliminate all the issues and future intervention studies need to begin negotiations with the sites involved at a very early stage, during the funding application. There was no drop-out from the intervention amongst those who received it which indicates that it was acceptable to the patient group.

In line with a number of other studies we have conducted within the NHS, the issue of applying for and receiving the required permissions impact negatively upon timescales and thus research costs and achievements. Over recent years, ethics and governance procedures have been under scrutiny and effort has been put into streamlining the process, notably through the integration of both ethics and governance applications into a single system, the Integrated Research Application System (IRAS). Similarly, initial delays in receiving HM Prison Service permission to conduct the study were experienced. The continuing issues around NHS ethics and governance procedures have been addressed in a very recent report by the Academy of Medical Sciences which recommended the creation of a new Health Research Agency to rationalise the regulation and governance of all health research; a new National Research Governance Service to facilitate timely approval of research studies by NHS Trusts; the provision of access to patient data that protects individual interests and allows approved research to proceed effectively; and the embedding of a culture that values research within the NHS (Academy of Medical Sciences, 2011).
Once approvals had been received actually gaining access to the prisons was problematic. It was clear that when access to prison keys is required, approval from the prison can take a great deal of time and must be factored into any future study. The timing of this project was unfortunate in terms of the large number of staff changes which took place, resulting in long delays and the need for multiple applications for permission. There was also further problems by changes within the research team where the need for additional clearances caused some data to be missed while the intervention was underway.

The study showed improvements in depressive symptoms and global functioning amongst the prisoners who received the intervention. However, improvements of a similar scale were also seen in the control group. A recent study into the effect of the prison environment on mental health also showed overall improvements in psychopathology for prisoners over time (Hassan et al., 2011). This may represent a period of coming to terms with being in prison and of settling into the regime, supported by the focus group findings that older prisoners’ mental health needs were strongly related to custodial needs. Unfortunately due to the small numbers included, it was not possible to make group comparisons.

To conclude, with an aging prison population, where the rates of depression are high, there is a dearth of intervention studies. In contrast, a number of studies have demonstrated the success of treatments for depression in community nursing home settings. This feasibility study represented the first attempt to address depressive symptoms amongst elderly prisoners. Based on the findings of the study we would suggest that before a larger trial could be conducted the feasibility study would need to be repeated, attempting to solve the problems highlighted in this study. The main issue being, having a better definition of depression in prison, clearly this study identifies that older prisoners with depression have much more severe symptomology on the GDS than community samples and even when using the cut-off of 10 which denote depression prison in-reach services themselves have a higher threshold.
5 References


Hayes, A. (2010). The health, social and custodial needs of older men in prison. PhD; University of Manchester.


Ware, S. (2001). Alone, elderly, and still banged up. The Howard League Magazine, 19(2), 8

6 Appendix

6.1 Appendix 1

Elderly Depression Manual

Health care departments will be provided with information on the treatment of depression in primary care. Prescribers will be provided with information on side effects of antidepressant medication. All health staff are aware that the project is taking place.

The researcher will approach all prisoners aged 60+ for inclusion. Will explain about previous research and that if they participate then the researcher will come back and see them a further 4 times and possibly, on the basis of their answers, a member of healthcare staff may come and see them a total of 4 times spread over 12 weeks, but that this may not begin immediately. The researcher will assess the prisoner using GDS and GAF. If they score above 6 on the GDS, they will also complete the MMSE. Each week, the researcher will inform the trial coordinator of any prisoners scoring above 6.

A set of envelopes has already been prepared by an independent researcher, containing allocations to either ‘Intervention’ or ‘Treatment as Usual’ and numbered consecutively. When the trial coordinator is notified of eligible participants, he will open the next numbered envelope to determine their allocation. He will notify the allocations to the practitioner. The researcher must be kept blind of allocations at all times.

Patients allocated to the intervention group will attend five sessions with the practitioner; weeks 1, 2, 4, 8 and 12.

The practitioner will make an appointment to see a patient allocated to the intervention group. During this session, the practitioner will outline the intervention, specify boundaries, describe the main sections of SHADE and discuss goals. They will see the patient again the following week and during this appointment, they and the patient will complete the Initial Assessment form, documenting history and current problems. The practitioner and patient will decide on a course of action, which may include use of specific elements of SHADE, education about depression, discussion of anti-depressants, motivation to attend work/education/gym, sign-posting to other agencies, liaison with GP and/or referral to inreach. Following the session, the practitioner will complete the Post Initial Assessment Data form and inform the trial coordinator of the date of the session.

When the practitioner sees the patient again at 4, 8 and 12 weeks, they will complete the Follow-Up Assessment forms outlining progress and reviewing goals. Between formal sessions, the practitioner will make brief contact with the patient, checking their well-being but not engaging in in-depth discussion unless there is an urgent issue. This will occur during weeks 3, 5, 6, 7, 9, 10 and 11. It is envisaged that the practitioner will be able to see a maximum of two patients per week. The
practitioner will keep a note of the time spent on the intervention per week, including time spent in contact with patients, and in administration.

Participants allocated to Treatment As Usual group will be referred to the prison doctor on the basis of possible depression.

The researcher will see the patient as soon after treatment sessions as possible at weeks 4, 8 and 12 to repeat the GAF. They will also repeat the measure 12 weeks after the intervention is finished.

In order to maintain blindness, participants from each group will be paired. When the practitioner has seen an intervention participant at week 1, they will inform the trial coordinator who will pair them with a treatment as usual participant. The researcher will conduct research interviews for each at a similar time.

The research will continue for a 12-month period, or until the population is exhausted. If recruitment is poor, consideration will be taken to extend the study to those aged 50+, based on emerging evidence of high depression rates for this group. This would require amendments to existing permissions.