PRISON SERVICE
JOURNAL

January 2018 No 235

REHABILITATIVE CULTURE

Implementation of a Cognitive Behaviour Therapy programme in Primary Care Mental Health—an Outcomes Study

Charlotte Foulds *and* ***Jennifer Hogan*** *are assistant psychologists for the Dorset Healthcare University NHS Foundation Trust,* ***Ashlea Jeffs*** *and* ***Ruth Fenner*** *are assistant psychologists at Devon Partnership Trust.* ***Lucy Snell*** *is a psychology student at Bournemouth University.* ***Dr Amanda Leather*** *is a forensic psychologist, and* ***Mike Hennessy*** *is a consultant clinical and forensic psychologist, both are clinical supervisors at Dorset Healthcare University NHS Foundation Trust.*

Over recent years there has been an increasing drive to provide more psychological interventions in primary mental health care in prisons. Prisons in Devon and Dorset have employed assistant psychologists under supervision from clinical and forensic psychologists to develop and implement a session limited CBT (Cognitive Behavioural Therapy) based programme for low level anxiety and mood disorders. This article reports on the initial set of data exploring the effectiveness of that intervention.

Mental healthcare in prisons

Historically, all health care in prisons was provided by HM Prison staff.[1] HM Inspectorate of Prisons[2] reported the urgent need for increased provision for those with mental health problems. As such, in 2001 funding was made available[3] to implement the National Service Framework standards[4] found within the Care Programme Approach (CPA) in the prison population. At the time, this was considered to be the much needed 'cavalry… marching over the hills and into prisons' to address the overwhelming problem of mental disorder in prisons.[5]

However the scale of un-met need found was larger than expected, with the proportion of those in prisons with complex and enduring mental health needs being higher than would be found in the general population.[6] In response to this, the focus was predominantly on those conditions that have been treated primarily with medication in line with the medical model,[7] leaving a notable and significant lack of talking therapies or other biopsychosocial therapeutic interventions available for those with a primary mental health need.[8]

Five years on from the initial introduction of Mental Health In-Reach Teams (MHIRTs), a report[9] found that of those reporting a psychiatric history on arrival to prison, less than 50 per cent went on to have a further secondary mental health screen. Furthermore, less than 30 per cent were subsequently referred to MHIRTs, which was limited to clinical activity focused on assessment and liaison/ support. There was little opportunity for face to face intervention,[10] signifying the continued gap in provision for those with mental health problems.

Improving Access to Psychological Therapies (IAPT) was introduced in 2007 following recommendations by Lord Layard and David Clark[11] to improve community mental health services. This had a focus on increased, equal and timely access to psychological therapies to all. Following successful preliminary reports,[12] IAPT began to widen and adapt its programme to ensure diverse, socially excluded and under-represented groups within society were also able to access timely and appropriate, evidence-based talking therapies.[13]

1. National Offender Management Service (2014). *Health care for offenders*. Prison Service Instructions 23, 2014.
2. HM Inspectorate of Prisons (1996). *Patient or Prisoner? A New Strategy for Health Care in Prisons*. London: Home Office.
3. Reed. J. (2003). *Mental health care in prisons*. The British Journal of Psychiatry, 182, 287–288.
4. Tyrer, P. (1999). *The national service framework: a scaffold for mental health.* British Medical Journal, 319, 1017.
5. Narey, M. (2002). *Lecture: A good prison lets inmates challenge the system*. British Institute of Human Rights, Kings College London.
6. HM Inspectorate of prisons. (2007). *The mental health of prisoners: A thematic review of the care and support of prisoners with mental health needs*. London.
7. World Health Organization. (1992). *The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines*. Geneva: World Health Organization.
8. MIND (2013). *We still need to talk: a report on access to talking therapies.* London.
9. HM Inspectorate of prisons. (2007). *The mental health of prisoners: A thematic review of the care and support of prisoners with mental health needs*. London.
10. Shaw, J., Senior, J., Lowthian, C., Foster, K., Clayton, R., Coxon, N., & Hassan, L. (2009). *A national evaluation of prison mental health in-reach services.* Offender Health Research Network.
11. Layard, R. (2006). *The depression report: A new deal for depression and anxiety disorders (No. 15)*. Centre for Economic Performance, LSE.
12. Cohen. A. (2008). *IAPT: A brief history.* Healthcare Counselling & Psychotherapy Journal, 11, 8–10.
13. Department of health (2011) *No health Without Mental Health: A Cross-Government Outcomes Strategy.* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/138253/dh_124058.pdf [accessed 23rd May 2017]

Over the years it has become increasingly recognised that there is also a higher psychiatric morbidity within the prison population than the general population,[14] with up to 90 per cent of prisoners likely to have a mental health problem. A significant proportion of these experience common mental health difficulties, such as mild to moderate depression or anxiety.[15] The Howard League[16] produced a report to highlight the marked prevalence of self-harm and suicide in prisons, which continues to rise, signifying a crucial need for further intervention.

It is therefore essential to have psychological interventions in custodial environments to cater for the high demand of challenging and vulnerable patients. HM Inspectorate of Prisons[17] and the Department of Health[18] suggested an increase in primary mental health services for offenders with depression and anxiety.

CBT is widely implemented in both the community and the prison service; however when implemented in custodial environments, interventions must be tailored to the prison population.[19,20] On average prisoners have a lower level of education than the general population,[21] are more likely to engage in inappropriate behaviour[22] and have fewer opportunities to access activities which can enhance feelings of well-being. Despite these barriers, there is significant research suggesting CBT is effective with offenders.[23,24,25]

Category C prisons in Dorset (Guys Marsh and Portland) and Devon (Channings Wood and Dartmoor) house male offenders that are often nearing the end of their sentence or assessed as a lower risk. Accessing CBT based interventions for depression and anxiety, and so addressing the mental health inequalities of offenders, is an important component for successful resettlement in to the community and for reducing recidivism.[26,27]

'Six session' structured interventions were developed for both anxiety and low mood. These were delivered by the assistant psychologists at four Cat C prisons in the South West of England: HMPs Guys Marsh, Portland, Channings Wood and Dartmoor, from February 2016- February 2017. It was delivered on a 1:1 basis with additional hand-outs and homework tasks.

This study aims to evaluate the outcomes of the CBT based interventions service provided by assistant psychologists.

Research question

Are CBT-based interventions for reducing anxiety and low mood within a prison environment effective, and how do they compare to community IAPT recovery rate guidelines?

Methodology

For the purpose of this report terms such as 'offenders', 'prisoners' and 'patients' will be used interchangeably, but will all refer to those incarcerated for a criminal offence and who are in need of psychological intervention.

Participants

Participants were from across the 4 Category C establishments referred into primary care mental health services. All were male adults. They receive a triage assessment by a mental health nurse and are then allocated to the appropriate intervention in the multi-disciplinary team meeting. Once allocated for CBT, a further assessment took place between the assistant psychologist and the patient, to assess suitability and motivation to engage.

The reasons for unsuitability are divided into five subcategories. The subcategory of 'detox' relates to those on a detox from opiates or alcohol; 'settled' refers to patients who did not meet the symptom criteria for

14. Singleton. N., Meltzer. H., Gatward. R., Coid. J. & Deasy. D.. (1998). *Psychiatric morbidity among prisoners: Summary report*. London: Government Statistical Service.
15. Parsonage, M. (2009). *Diversion: A better way for criminal justice and mental health*. Sainsbury Centre for Mental Health.
16. The Howard League for Penal Reform. (2016). *Preventing Prison Suicide*. London.
17. HM Inspectorate of prisons. (2007). *The mental health of prisoners: A thematic review of the care and support of prisoners with mental health needs*. London.
18. Department of Health (2009). *Improving Access to Psychological Therapies: Offenders—Positive practice guide*. London: The Stationery Office.
19. Feucht, T., & Holt, T. (2016). *Does Cognitive Behavioral Therapy Work in Criminal Justice? A New Analysis From CrimeSolutions. gov*. National Institue of Justice Journal, 277.
20. National Institute for Health and Care Excellence. *Mental health of adults in contact with the criminal justice system (NICE guideline 66)*. London, NICE; 2017.
21. Department of Health (2009). *Improving Access to Psychological Therapies: Offenders—Positive practice guide*. London: The Stationery Office.
22. HM Inspectorate of prisons. (2007). *The mental health of prisoners: A thematic review of the care and support of prisoners with mental health needs*. London.
23. Clark, P. (2010). *Preventing future crime with cognitive behavioural therapy*. National Institute of Justice Journal, 265, 22–25.
24. Pearson, F. S., Lipton, D. S., Cleland, C. M., & Yee, D. S. (2002). *The effects of behavioral/cognitive-behavioral programs on recidivism*. Crime & Delinquency, 48, 476–496.
25. Lipsey, M. W., Landenberger, N. A., & Wilson, S. J. (2007). *Effects of cognitive-behavioral programs for criminal offenders*. Campbell systematic reviews, 6, 27.
26. *National Offender Management Service (2008). Strategic plan for reducing re-offending 2008–11*. London.
27. HM Government (2006). *A Five Year strategy for protecting the public and reducing reoffending*. London: The Stationary Office.

Table 1. Number and suitability of referrals received from 1st February 2016 to 20th February 2017

Establishment	No. of referrals	Suitable for CBT	Not Suitable				
			Detox	Settled	Refused	Challenging behaviour	Transferred/ released
Guys Marsh	60	45	4	1	3	1	4
Portland	42	35	1	1	0	0	5
Channings Wood	30	23	5	0	2	0	0
Dartmoor	33	21	3	3	3	0	3

sessions; 'refused' are those patients who declined to engage; 'challenging behaviour' describes those who would not benefit from such an intervention at that time because of violent or disruptive behaviour; and 'transferred/released' are those patients who moved on prior to commencement of CBT. Patients with a diagnosis of a severe and enduring mental illness would also be unsuitable for the intervention if this was their primary problem. However, patients are initially risk assessed by a qualified mental health nurse and this process reduces inappropriate referrals.

A prisoner would be considered suitable for receiving the CBT intervention if they are identified as experiencing symptoms of anxiety or depression, whether through self-report, a structured assessment or the use of psychometric measures and if they express willingness to engage in the required weekly face-to-face sessions and homework activities.

Measures

Consent forms are signed by the patient at the beginning of the intervention.

Data was collected through administration of the Patient Health Questionnaire (PHQ 9) and Generalised Anxiety Disorder (GAD 7). These are standardised measures, routinely used in community IAPT services and are used to monitor clinical outcomes. They are designed to recognise depression and anxiety disorders respectively[28] and have been significantly evidenced as an effective tool for identifying anxiety and low mood in services in the community.[29] The scoring for both measures help professionals to ascertain the severity of the presenting difficulty. On the PHQ 9, scores of 5 to 10 denote mild depression, 10 to 14 moderate depression, 15 to 19 moderately severe depression, 20 to 27 severe and scores of 10 or above indicate 'caseness' for clinical depression.[30] Anxiety symptoms are measured using the GAD 7 measure. Scores of 5 to 9 indicate mild anxiety, 10 to 14 indicate moderate anxiety, 15 to 21 severe anxiety, and scores of 8 or more indicate 'caseness' for an anxiety disorder.[31]

On commencement and after completing the CBT intervention for anxiety or depression, patients were asked to complete a PHQ 9 and GAD 7. A total of 44 patients participated in CBT for 6 sessions. A before and after measurement of anxiety and depression of each participant was taken on a scale, where a problem was subjectively rated according to frequency, 0= not at all to 3= nearly every day.

Analysis

A paired sample t-test or non-parametric equivalent was carried out using SPSS to test the significance of the intervention by comparing the results of the pre and post PHQ 9 and GAD 7 test.

Assumptions for normality were not met with the PHQ 9 or GAD 7 post CBT results, perhaps due to some participants completing a slightly higher or lower number of sessions than the average. As the assumptions for a parametric t-test were not met, a nonparametric equivalent to a dependent samples t-test was used.

Results

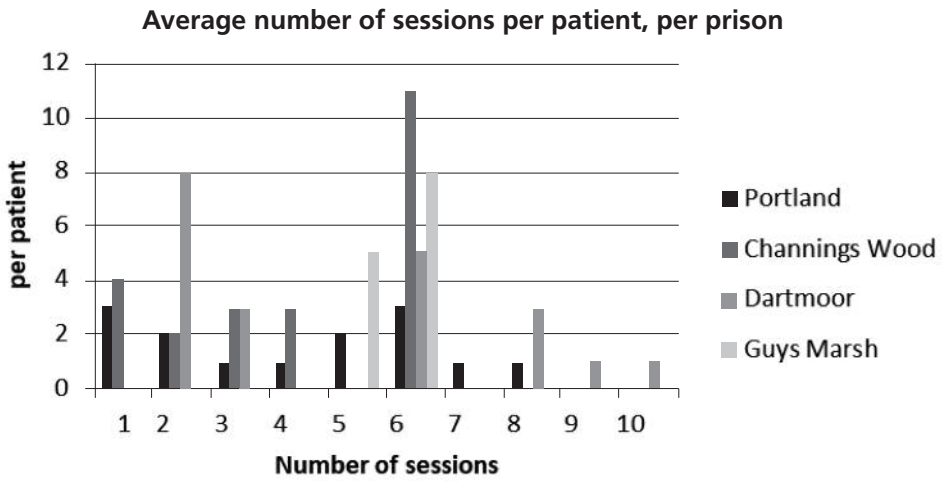
Between 1st February 2016- 20th February 2017, 44 individuals have completed the CBT intervention across the four prisons. Included below is descriptive and statistical analysis of the currently available data.

Graph 1 shows that the average number of sessions across all four prisons was 5.8. A proportion of those who ended treatment within fewer sessions may have done so because their symptoms improved (table 2). Those whose treatment continued past 6 sessions required additional support to consolidate the skills learnt within the intervention.

A Wilcoxon signed rank test was conducted to examine both depression and anxiety as measured by the

28. Spitzer R.L., Kroenke K., Williams J.B.W., Lo B. *A brief measure for assessing generalized anxiety disorder*. Response. 2006;166:1092–1097.
29. National Institute for Health and Care Excellence. *Mental health of adults in contact with the criminal justice system (NICE guideline 66)*. London, NICE; 2017.
30. Spitzer R.L., Kroenke K., Williams J.B.W., Lo B. *A brief measure for assessing generalized anxiety disorder*. Response. 2006;166:1092–1097.
31. Spitzer R.L., Kroenke K., Williams J.B.W., Lo B. *A brief measure for assessing generalized anxiety disorder*. Response. 2006;166:1092–1097.

Graph 1. Average number of sessions across Portland, Channings Wood, Dartmoor and Guys Marsh



PHQ 9 and GAD 7 in pre CBT and post CBT conditions. The results indicate that after the CBT intervention, measurements show a decrease in anxiety/depression (average rank of pre GAD 14.68 vs. average rank of post GAD 8.18, average rank of pre PHQ 14.89 vs. average rank of post PHQ 8.75). The Wilcoxon signed rank test shows that the observed difference between both measurements is significant (GAD 7 $z(43) = -5.376$, $p < .001$; PHQ 9 $z(43) = -4.351$, $p < .001$); this is also shown in table 2.

As both samples are shown to be from the same population, the data indicates good evidence that the CBT intervention caused a significant decrease in anxiety and depression scores.

The differences between the prisons were dependent on the stage at which the individual assistants were in experience and training. Individual prisons also had different regimes impacting on the participant's capability of attending the regular scheduled appointments. These different attendance rates will impact on the overall completion and success rates. This highlights the importance of using well supported and trained staff, and having regimes that allow participants to attend the allotted appointments on a regular basis.

Given that the CBT intervention offered within Dorset and Devon prisons has been modelled on Step 2 provisions within community IAPT services, individual rates of recovery and reliable improvement per patient have also been calculated, based on the IAPT reporting guidelines.[32] This will additionally provide the basis for future comparison of therapeutic outcomes between the service offered within the prisons and those found in the community.

Recovery in this instance refers to those who move from above 'caseness' on the PHQ9 and/or GAD7 at baseline, to below 'caseness' on both measures at the final session. Recovery rates for the total number of patients who received two or more 'treatment' contacts

Table 2. Improvement for patients who have completed treatment (two or more contacts) between 1st February 2016–20th February 2017 across Devon and Dorset Cat C Prisons

Improvement	Channings Wood (n= 15)	Dartmoor (n= 10)	Guys marsh (n= 12)	Portland (n= 7)	Total (n = 44)
			Pre-treatment		
PHQ-9 (mean/SD)	12 (3.5)	15.3 (1.4)	12.9 (10.6)	18 (2.8)	14.5 (5.1)
			Post-treatment		
PHQ-9 (mean/SD)	9.3 (2.8)	6.3 (2.1)	6.4 (1.4)	15.1 (4.9)	9.3 (6.4)
			Pre-treatment		
GAD-7 (mean/SD)	14.8 (4.2)	14.2 (9.9)	13.4 (2.8)	17.3 (2.1)	14.9 (4.2)
			Post-treatment		
GAD-7 (mean/SD)	9.4 (1.4)	4.5 (2.1)	6 (3.5)	14.1 (4.2)	8.5 (5.2)

32. Department of Health (2011). *The IAPT data handbook. Version 2.0.1*. Available at www.iapt.nhs.uk

Table 3. Improvement rates against community IAPT reporting guidelines

	IAPT recovery rate (%/n)				
	Channings Wood (n= 15)	**Dartmoor (n= 10)**	**Guys marsh (n= 12)**	**Portland (n= 7)**	**Total (n = 44)**
'Caseness' at assessment	100% (15/15)	100% (10/10)	100% (12/12)	100% (7/7)	100% (44/44)
Recovery rate	40% (6/15)	80% (8/10)	58% (7/12)	14% (1/7)	50% (22/44)
Reliable improvement	80% (12/15)	80% (8/10)	92% (11/12)	29% (2/7)	75% (33/44)
Reliable deterioration	7% (1/15)	10% (1/10)	0% (0/12)	0% (0/7)	5% (2/44)

from all four prisons between 1st February 2016 and 20th February 2017 were 50 per cent, as shown in table 3.

Reliable improvement is calculated by examining whether a patient has shown a decrease in one or both assessment measure scores (PHQ 9 and GAD 7) that surpass the measurement error of that questionnaire, where correspondingly neither score has shown an increase beyond the measurement error. For the PHQ 9 the decrease must be 6 or greater and for the GAD 7 the decrease must be 4 or greater.[33] Of all referrals that ended in 2014/2015 received by national IAPT services, 60.8 per cent had reliably improved. This is comparable to 75 per cent of those completing the intervention in the four prisons between 2016 and 2017.

Reliable deterioration refers to where a patient has shown an increase in one or both assessment measure scores (PHQ 9 and GAD 7) that surpass the measurement error of that questionnaire (as above), where neither score has shown a decrease beyond the measurement error. For all four prisons, only 5 per cent (n= 2/44) of patients indicated a reliable deterioration within the time period indicated. These patients completed 6 and 8 sessions respectively.

Discussion

The results demonstrate that the CBT interventions have been successful at offering a session based intervention to the population sample. There is a statistically significant reduction in pre and post-measures for anxiety and low mood.

Of note is that these interventions were internally developed and delivered by assistant psychologists new in to post. The interventions can be further refined and delivered with more confidence as experience and knowledge increase. The efficacy of the service will be discovered further and can be disseminated in order to reveal to the wider population the benefits of CBT for anxiety and depression within prisons.

Dartmoor, Channings Wood and Guys Marsh are male Adult only prisons, whilst Portland is a male Adult/ Young Offenders institution and the results therefore reflect these populations only. Similarly, the prisons covered in this report are all Category C, therefore the results from this report are specific to this classification of prisoners. Psychological interventions within prisons for females are encouraged to be similarly based around the IAPT model, as stated in the NICE guidelines and from the clinical evidence base.[34,35,36,37,38]

The encouraging results direct the service to refine and continue to deliver the interventions and widen the availability to self-referral and workshops. Consideration will also be given to the involvement of other health staff and services and develop the involvement of prison officers through training and engagement in delivery.

Limitations and recommendations to improve services

i. Increase offer of services and improve self-referral process

33. Patient Case Management Information System (2015). *IAPT: Key Performance Indicators 2015 Estimates*. University of York.
34. DeRubeis, R. J., & Crits-Christoph, P. (1998). *Empirically supported individual and group psychological treatments for adult mental disorders*. Journal of Consulting and Clinical Psychology, 66, 37.
35. Chambless, D. L., & Ollendick, T. H. (2001). *Empirically supported psychological interventions: Controversies and evidence*. Annual review of psychology, 52, 685–716.
36. Layard, R. (2006). *The depression report: A new deal for depression and anxiety disorders (No. 15).* Centre for Economic Performance, LSE.
37. Lipsey, M. W., Landenberger, N. A., & Wilson, S. J. (2007). *Effects of cognitive-behavioral programs for criminal offenders*. Campbell systematic reviews, 6, 27.
38. Clark, D. M. (2011). *Implementing NICE guidelines for the psychological treatment of depression and anxiety disorders: the IAPT experience*. International Review of Psychiatry, 23, 375–384.

One of the barriers to services, recognised in a DoH review, was that they were simply not available or not offered.[39] Increasing awareness of the services that are offered and the process of self-referral can empower patients and increase uptake of services. An improved screening may also be achieved through increasing mental health knowledge and awareness of staff who conduct initial assessments.[40]

ii. Engage in collaborative work with the GPs and Primary healthcare regarding those on long term medication for anxiety and mood and with long term health conditions

Predominantly, patients on medications are being identified through mental health referrals and initial assessments where information regarding CBT is offered. However, this requires further development and systematisation alongside the service delivery as a whole so that patients prescribed medications can be identified and assessed on entrance to the prison. This aims to improve overall wellbeing and the efficacy of medication. Further possibilities include reviewing the possibility of collaborative work with primary health care for those with long-term health conditions, which would be in line with developments within IAPT.

iii. Continue to explore effectiveness of the intervention using the PHQ and GAD and goal based outcome.

As the data presented in this report is in its infancy, it is proposed that data collection continues over a longer time scale to improve the validity and generalisability of the results.

iv. Expand the intervention to include Groups

In each of the prions there is the potential to facilitate joint group working with the integrated substance misuse service (ISMS).

v. Environment

Unfortunately at times sessions are missed due to limited prison officer staffing or the prison regime. This means that patients are unable to be escorted to attend their sessions. This reduces the consistency of the intervention, as it may not be possible to deliver weekly sessions. Interruptions to CBT can reduce efficacy and also decrease patient motivation to continue to attend sessions.[41]

vi. Address challenges to increasing access to the service

Awareness training on the early signs and symptoms of anxiety and depression for prison staff could help to reduce barriers to access and improve the referral process.

Summary and conclusions

The purpose of this outcomes study is to evaluate the efficiency of the CBT interventions provided. The results of this evaluation were consistent with previous findings that CBT is effective with offenders.[42] The CBT based intervention was collectively successful across the four prisons in Devon and Dorset with recovery rates being consistent with the government target (50 per cent) and reliable improvement being 75 per cent, exceeding the government target of 60.8 per cent.[43] Furthermore, statistics revealed a significant difference between pre and post intervention, suggesting clinical efficacy.

Collaborative working with health care professionals and prison staff to identify signs of depression and anxiety, and recognise the importance of early intervention may help overcome barriers to access. Amending the referral process, to both include patients prescribed medication for depression and anxiety and through awareness training of staff, would also be advisable to ensure prisoners with mental health needs are identified and appropriately supported.

Overall research has shown that common mental health problems, such as depression and anxiety, are experienced by around half of the prison population[44, 45,46,47]. This intervention has been statistically significant in reducing symptoms of depression and anxiety, as well as in keeping with national government guidelines and expectations.

39. Department of Health (2009). *Improving Access to Psychological Therapies: Offenders—Positive practice guide.* London: The Stationery Office.
40. Bradley, K. (2009). T*he Bradley Report. Lord Bradley's Review of People* with Mental Health Problems or L*earning Disabilities in the Criminal Justice System*. London, Department of Health.
41. Thomas-Peter, B. (2006). *The modern context of psychology in corrections: Influences, limitations and values of 'what works'. In G. Towl (Ed.) Psychological research in prisons*. London: Wiley.
42. Department of Health (2009). *Improving Access to Psychological Therapies: Offenders—Positive practice guide*. London: The Stationery Office.
43. Department of Health. (2008). *IAPT implementation plan: National guidelines for regional delivery*.www.iapt.nhs.uk Available at.
44. Bradley, K. (2009). *The Bradley Report. Lord Bradley's Review of People with Mental Health Problems or Learning Disabilities in the Criminal Justice System*. London, Department of Health.
45. HM Inspectorate of prisons. (2007). *The mental health of prisoners: A thematic review of the care and support of prisoners with mental health needs*. London.
46. Department of Health (2009). *Improving Access to Psychological Therapies: Offenders—Positive practice guide*. London: The Stationery Office.
47. Liebling, A. & Krarup, H. (1993). *Suicide attempts and self-injury in male prisons: a report commissioned by the Home Office Research and Planning Unit for the Prison Service.* London: Home Office.