

# Workability and mental well-being among therapeutic prison officers.

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- Background** Previous research has examined how age and health can shape workability (WA). This study seeks to explore how a lack of WA (inability) may affect the health of the employee.
- Aims** To explore the effects of work inability on mental wellbeing among therapeutic prison officers.
- Methods** An anonymous cross-sectional study of prison officers was conducted in a Category B English prison using the Work Ability Index and General Health Questionnaire-28
- Results** Fifty-seven officers (59%) participated and of those 95% achieved GHQ caseness. Officers with poorer WA reported significantly higher GHQ scores. Work inability for mental demands had significant associations with anxiety ( $\beta = -0.58$ , 95% CI -4.21 to -1.88, particularly sleep loss; Pearson's  $r = -0.66$ ).
- Conclusions** Our findings present clear associations between poor WA and its impact upon mental wellbeing. The results of this study may help to focus on areas for intervention such as improving WA and promoting mental wellbeing.
- Key words** Mental wellbeing; occupation; prisons; work ability.

## Key Points

- Ninety-five percent of self-selected officers in a single category B prison reported high levels of mental health symptoms (GHQ caseness). Sleep problems were most common.
- There was a strong and significant association between workability and mental wellbeing, as poor workability was associated with higher GHQ scores.
- The assessment of workability should be applied to other psychologically demanding workplaces in the UK, especially prisons and other secure facilities.

## **Introduction**

Workability (WA) can be defined as a worker's capacity to manage job demands in relation to their mental resources [1]. Different interactions between health, aging and lifestyle have been shown to affect WA [2]. Few studies have explored how work inability in relation to job demands may affect the mental health of the worker. WA has rarely been explored in psychologically demanding environments such as prisons [3], with no previous studies exploring predictors of WA and mental wellbeing in UK prisons. Prisons are now not only concerned with security but also increasingly with therapeutic rehabilitation. This is especially true of Therapeutic Community Prisons (TCPs), where prison officers undertake therapeutic work alongside their custodial duties with prisoners who have severe personality disorders and complex needs. The few studies that have investigated the working lives of prison officers in the UK [4, 5], have shown that psychological engagement with offenders and the mental demands of the job can lead to high levels of workplace stress. Therefore monitoring the WA of officers in a TCP may be important for maintaining their mental wellbeing and their ability to perform their roles as well as to preserve the goals of the establishment. The aim of the study was to explore the self-reported WA and mental wellbeing of officers in a UK TCP.

## **Methods**

Ethical approval was obtained from the academic ethics committee at Birmingham City University (May 2012). All prison officers working at the category B TCP were invited by the researchers to take part in the study. Questionnaires measuring WA and mental wellbeing were subsequently distributed to officers by the lead researcher and completed in the officers' own time. The Workability Index (WAI) [6], assessed physical and mental demands of work; the presence of diagnosed diseases; work-limitations due to illness; sick days; WA prognosis;

and mental resources. Mental wellbeing was measured using the General Health Questionnaire 28-item version (GHQ-28) [7]. Scoring was based on the binary method in order to provide identification of caseness if individuals scored above a threshold of 4. Caseness indicates a threshold whereby, if such respondents presented in general practice, the need for clinical intervention should be assessed [8]. Questionnaires were collected from the prison by the researchers; there was a non-response rate of 41%. The lack of data from non-responders makes it impossible to draw conclusions on sample representiveness. Multiple linear regression was used to determine which WA variable(s) was the best predictor(s) of mental wellbeing and to calculate 95% confidence intervals (CIs). Pearson's correlation was used to identify which items of WA had the most significant relationship with GHQ sub-scales. ANOVA was used to reveal any significant mean differences in explanatory and outcome variables between workability groups.

## **Results**

Questionnaires were completed by 57 prison officers, ranging in age from 21 – 69 years ( $M = 44.8$ ,  $SD = 10.9$ ); 38 (67%) were male. WAI scores ranged from 26 – 48 ( $M = 40.2$ ,  $SD = 5.8$ ), and total GHQ scores ranged from 4 - 60 ( $M = 28.1$ ,  $SD = 12.2$ ). Based on the binary scores of the GHQ-28, 95% of the sample possessed caseness. Mental wellbeing (outcome variable) was regressed with all WA items; a highly significant model emerged ( $F = 7.07$ ,  $P < 0.001$ ) and explained 60% of the variance in overall mental wellbeing. Two WA variables predominated in the model; mental demands ( $\beta = -0.51$ ,  $t = -2.49$ ,  $P < 0.05$ ) and work impairment due to illness ( $\beta = -0.32$ ,  $t = -2.03$ ,  $P < 0.05$ ). Pearson's correlations between mental demands and work impairment due to illness and GHQ sub-scales showed somatic symptoms and anxiety correlated ( $p < 0.001$ ). Table 1 shows the linear regression between mental demands and work impairment due to illness as predictor variables with somatic symptoms ( $F = 15.38$ ,  $p < 0.001$ )

and anxiety ( $F = 27.56, p < 0.001$ ) as outcome variables. Work inability for mental demands had significant associations with anxiety, particularly “sleep loss” ( $r = -0.66, p < 0.001$ ). Poorer mental wellbeing was associated with increased work impairment, ANOVA (Table 2) showing a significant mean difference in GHQ scores ( $F = 9.20, p < 0.01$ ) and sleep loss scores ( $F = 11.39, p < 0.001$ ) between WA groups. Poor WA, particularly for mental demands, was associated with higher GHQ scores and a greater prevalence of sleep problems.

## **Discussion**

In a sample of prison officers working in a TCP, extremely high levels of (self-reported) psychological symptoms were found in comparison to other studies looking at mental wellbeing among public uniformed occupations. Poor WA was associated with mental wellbeing (particularly somatic symptoms and anxiety). Inability to cope with mental demands and increased work impairment due to illness were found to collectively account for over half of the variance in overall mental wellbeing. As self-report questionnaires were used to collect data about mental wellbeing and WA, common method variance (CMV) may be a concern. CMV cannot be completely ruled out in this study, so care should be taken when interpreting the results.

This study is the first to explore WA in a UK TCP and in comparison with other prison population studies [10, 3], the response rate (59%) was above that usually encountered. A limitation of the study was its cross-sectional design, precluding any definitive conclusions to be made on the relationship between WA and mental wellbeing. Larger confirmatory studies are needed to further test the hypothesis raised by this study to better understand the aetiology of psychological difficulties in this unusual occupational group. Based on the results of this study, those officers who have poor WA in relation to mental demand may be

at a significantly greater risk of mental health problems. Measuring WA can highlight at-risk officers and interventions might be focused on those poorer WA groups, for example, improving WA by developing better follow-up training to cope with the mental demands of the role and promoting better wellbeing such as sleep hygiene and improved health surveillance services.

**Table 1.** Multiple linear regression analysis of mental demands and work impairment with somatic symptoms and anxiety as outcome variables.

	GHQ Somatics				GHQ Anxiety			
	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>
Mental Demands	-1.92	0.67	-0.36**	-2.86	-3.06	0.59	-0.58***	-5.21
Work Impairment	-2.30	0.82	-0.36**	-2.81	-1.54	0.71	-0.24*	-2.16
R <sup>2</sup>	39***				53***			

\*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p < 0.001$

**Table 2.** GHQ and “sleep loss” scores among workability groups.

	<b>WA groups</b>			
	Excellent <i>n</i> = 12	Good <i>n</i> = 20	Moderate-Poor <i>n</i> = 19	<i>P</i>
Global GHQ <i>M (SD)</i>	18.08 (5.9)	28.10 (12.2)	36.33(7.5)	< 0.01
Sleep Loss <i>M (SD)</i>	0.17 (.39)	1.00 (.89)	1.78 (.83)	< 0.001

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