A Comparative Analysis of the Psychological Impact of COVID-19 on Key Workers within the NHS and the Criminal Justice System

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Abstract

The COVID-19 pandemic has become a significant global crisis that requires individuals, organisations and nations to take necessary steps to cope. Those considered frontline key workers in the UK, such as those within the NHS and the Criminal Justice System, have been tasked with dealing with the ongoing pandemic through the provision of care or security of the UK population whilst being subjected to continuous media scrutiny. However, whilst the pandemic and subsequent effects of COVID-19 continue, the psychological impact of key workers involved in these sectors, and their attitudes towards help-seeking during these times, is not presently well understood. This is concerning given the necessity of their roles. The present study explored key workers levels of psychological distress in relation to their ability to handle this distress in terms of psychological capital. Key workers attitudes to help-seeking and help-seeking behaviour was also compared. Further, a regional analysis was also conducted. NHS employees were found to have higher psychological distress and lower psychological capital, whereas an inverse relationship was found in key workers within the criminal justice system. Both NHS and criminal justice system employees displayed similar attitudes to help-seeking, with higher help-seeking attitudes associated with less concern regarding the consequences of accessing these services and the thought that these services would be helpful. Considerations are discussed in terms of how best to preserve mental health and enhance psychological wellbeing for populations of key workers under environmental duress.

Keywords: key workers, distress, psychological capital, help-seeking, COVID-19

Introduction

The COVID-19 pandemic has become a significant global crisis that requires individuals, organizations and nations to take necessary steps to cope. The first UK identified case of COVID-19 was recorded in February, 2020 (Spiterie et al., 2020). By March 11, 2020, the World Health Organization (WHO) had declared a global pandemic (Cucinotta et al 2020). The UK, along with many other countries sought to stop non-essential travel and contact with others and on 20th March, the UK government announced that all schools and indoor entertainment venues, including pubs and restaurants, were to close. Just a few days later, the UK was on “lockdown” and most businesses ceased to trade. What remained was the necessity for ‘key-

workers'; those whose job roles are vital to maintain our healthcare and security systems.

The impact of COVID-19 on the NHS and the criminal justice system (CJS) within the UK has been regularly documented within media sources, with references made to the number of those being treated, the need for personal protective equipment (PPE), and enforcing the government lockdown. However, whilst the effects of COVID-19 continue, the psychological impact of key workers involved in these sectors has not been well considered.

Pandemics generate an untenable demand shock for healthcare (Bohmer et al., 2020; Carvalho et al., 2020) and it became rapidly apparent that despite the NHS being a highly revered healthcare system, it was sorely underprepared to deal with this global pandemic. With some of the lowest ratios in Europe of beds per population (2.5 per 1000) and doctors per population (2.8 per 1000), combined with a lack of experience of recent epidemics, COVID-19 presented an emergent humanitarian crisis for the UK. Additionally, those working in the CJS (e.g. police officers) were required to undertake additional duties such as sanctioning individuals flouting lockdown protocols across the UK, dealing with riots and providing additional security measures where necessary. This comes at a time where figures suggest that police officers employed in frontline policing are at an all-time low (Home Office, 2019).

Along with its high infectivity and fatality rates, the COVID-19 pandemic has caused universal psychosocial impact, such as emotional distress and anxiety (Montemurro, 2020). Those working in high-risk professions, such as the NHS and the CJS, require capacities relating to resilience, hardiness and psychological capital (Janssens et al., 2018). Such capacities are deemed essential in order for these individuals to cope with challenging situations or potentially traumatic stressors (McCanlies et al., 2014), especially when one considers the increased risk for mental health problems (Stanley et al., 2017). Indeed, research has documented that the demands of being a nurse are associated with higher levels of anxiety and depression (Mark & Smith, 2011) for example, whereas police officers are susceptible to secondary traumatic stress (Turgoose et al., 2017). Consequently, the resilience and psychological wellbeing of these key workers is continuously challenged within their day-to-day job roles without the impact of a global pandemic.

Employees from both the NHS and the CJS are often exposed to traumatic events that produce emotional and cognitive reactions (Alexander & Klein, 2009; Collins & Gibbs, 2003). The effects of psychological distress are associated with several factors such as age, education and personality (Boey, 1998; Burnard et al., 2000; Wong et al., 2001). Coping, a multidimensional concept, defined as a person's cognitive and behavioural efforts to manage internal and external demands of the person-environment transaction, is a factor that has been identified as a protective factor against psychological distress (Wong et al., 2001). Coping styles are divided into two categories; 1) positive, characterised by positive thoughts and solutions under stressful conditions; and, 2) negative, displaying negative appraisals when confronted with stressful situations. Previous studies have suggested that an association exists between these styles and the ability to cope with psychological distress, such that

those with a positive style manage distress better (Horney et al., 2011; Wong et al., 2001).

Coping represents a person's cognitive and behavioural efforts and through the process of coping, resources are vital for individual coping styles. Such resources include physical, psychological and environmental components. At present, psychological capital (PsyCap) is a positive psychological factor affecting individual coping styles. PsyCap is defined as a positive state of mind during the growth and development of an individual (Luthans et al., 2004). It has previously been found that those scoring higher on PsyCap are more likely to develop positive coping styles (Ding et al., 2015), develop resistance to certain mental health conditions such as depression (Liu et al., 2012, 2013a, 2013b; Shen et al., 2014), have increased work performance (Sun et al., 2012), job satisfaction (Wright et al., 2007), and importantly, a greater resistance to psychological distress (Tugade et al., 2004). Collectively, these previous studies have indicated that PsyCap may be an important protective factor against psychological distress. Help-seeking, a behaviour of actively seeking help from others (Rickwood et al., 2005), is also important to prevent psychological distress leading to the manifestation of further psychological issues (Deisenhammer et al., 2007).

To the authors knowledge the psychological impact of the pandemic has not been explored on those in key worker roles within the UK. This is necessary for several reasons. First, such key workers are primarily responsible for providing the healthcare and treatment to those infected by coronavirus and for maintaining peace and order in an otherwise uncertain time. As such their front-line experiences deserve closer exploration and could provide further understanding regarding the distress and help-seeking knowledge among these crucial populations. Second, given that COVID-19 is expected to remain with us for some time (Gulland, 2020), understanding of this topic is of paramount importance. Finally, whilst we are through the first peak, there are ongoing concerns about future waves of Covid-19. Indeed, the impact of the pandemic is changing daily and the UK government is currently bringing in new Tier systems which enforce variable levels of lockdown on different regions of the country. Consequently, further pressure on the role that key workers play is unavoidable. As such, understanding the various psychological impacts of Covid-19 on different key workers is essential in ensuring that the demand for resources is met in maintaining their health and wellbeing, so that the UK is well equipped to continue with its battle against this pandemic.

The current study aimed to explore the psychological impact of COVID-19 on key workers operating within the NHS and the CJS. Specifically, the project aims were threefold: 1) to understand the relationship between PsyCap and psychological distress during the pandemic on key workers operating within the NHS and the CJS; 2) to explore whether regional differences exist in key workers level of psychological distress. 3) to explore whether help-seeking attitudes differ between key workers from different employment sectors.

Methods

Design

The project was conducted in accordance with the Declaration of Helsinki and received approval from ethics committees at our respective universities. A mixed methods design was utilised. Data was collected over a period of one month from May 2019-June 2019.

Participants

A snowball sample of 241 respondents completed the survey (54 males, 187 females; 20-66 years old; mean age 43.98). All were residents in the British Isles working within the NHS (n=146) or the Criminal Justice System (n=122). Regional distribution of participants can be found in Table 1.

Table 1: Regional distribution of participants

Region	NHS	CJS	Total
North	83	4	87
Midlands	43	62	105
South West	13	29	42
South East	29	27	56
Total	168	122	290

Materials

In addition to demographic questions, three psychometric measures were utilised in this study.

The Psychological Capital Questionnaire (PCQ-12) is a 12-item scale measuring an individual's positive psychological state of development characterised by four components: 1) having the confidence to take on and put in the necessary effort to succeed at challenging tasks (efficacy); 2) making a positive attribution about succeeding now and in the future (optimism); 3) persevering towards goals (hope); and, 4) when facing problems and adversity, sustaining and bouncing back and beyond to attain success (resilience). The scale is measured on a 6-point Likert scale ranging from 1=strongly disagree to 6=strongly agree.

The Kessler Psychological Distress (K10) is a 10-item scale used to generate a global measure of distress based on questions exploring anxiety and depressive symptoms over a four-week period. The scale is measured on a 5-point Likert scale ranging from 1=none of the time to 5=all of the time.

The final measure used was the Mental Help Seeking Attitudes Scale (MHSAS); a 9-item scale measuring respondents' overall evaluation of their seeking help from a mental health professional if they found themselves to be dealing with a mental health concern. A higher score on this scale indicates a more positive attitude towards seeking help.

An additional three questions were asked exploring key workers' perceptions regarding their knowledge of the specific services available to them should they need access to help and their perceptions around the consequences of accessing them.

Procedure

Participants accessed the questionnaire via Qualtrics. This information was circulated through social media sites and the author's networks in order to accrue as many responses from relevant parties as possible. After reading the information sheet and providing informed consent, participants completed each of the three measures. The order of the measures was randomised. Following completion of the measures, participants completed the additional questions pertaining to help-seeking. Participants were debriefed and closing the browser ended the study.

Results

The impact of employment sector on psychological factors

Means and standard deviations for respondents PsyCap, subscale and distress scores for respondents across both sectors is displayed in Table 2. Overall, respondents from the NHS scored lower than respondents from the CJS across all factors associated with psychological capital and scored higher in psychological distress.

Table 2: Means (and Standard Deviations) of Psychological Capital, associated subscales and Psychological Distress by Sector

	NHS	CJS	Total
Efficacy	4.06(1.06)	4.20(1.02)	4.12(1.05)
Hope	4.12(0.81)	4.42(0.66)	4.24(0.76)
Resilience	4.41(0.80)	4.71(0.66)	4.53(0.76)
Optimism	3.90(0.87)	4.25(0.80)	4.04(0.86)
Psychological Capital	4.12(0.72)	4.39(0.57)	4.23(0.67)
Distress	24.42(6.99)	21.41(7.50)	23.16(7.35)

A one-way independent groups MANOVA was conducted. The data was analysed using one-way independent groups MANOVA followed by discriminant function analysis. There was a multivariate effect of sector, $V = 0.059$, $F(2, 287) = 9.075$, $p < .001$, $\eta_p^2 = .059$. The MANOVA was followed up with a discriminant function analysis and indicated one discriminant function. The function explained 100% of the variance (canonical $R^2 = .244$), and significantly differentiated the Sector groups, $\Delta = .941$, $\chi^2(2) = 17.6$, $p < .001$. The correlation between the dependent variables and the function indicated that psychological capital loaded negatively ($r = -.605$) and distress loaded positively ($r = .616$). The function appears to discriminate the sector of employment of respondents suggesting there are differences between them. The direction of loading on the function shows NHS ($r = .214$) and CJS ($r = -.294$) sectors have opposite effects, such that NHS employees had higher distress and lower psychological capital compared to CJS employees, who displayed lower distress and high psychological capital. See Figure 1.

Figure 1: Standardised Mean Score of Distress and Psychological Capital for Sector Group

Further independent groups t tests with a bonferroni correction looked to determine whether there were any significant differences between the four subscales of the PsyCap ((1) Self-efficacy; (2) Hope; (3) Optimism; (4) Resilience) for respondent's psychological distress by sector of employment. CJS employees had significantly higher mean Hope ($t(283.624) = -3.38, p = .001$), Resilience ($t(288) = -3.37, p = .001$) and Optimism ($t(288) = -3.488, p = .001$) scores than those in the NHS.

The impact of region on psychological factors

The data was analysed using one-way independent groups MANOVA followed by discriminant function analysis.

There was a multivariate effect of region, $V = 0.052, F(6, 572) = 2.56, p = .019, \eta_p^2 = .026$. The MANOVA was followed up with a discriminant function analysis and indicated two discriminant functions. The first discriminant function explained 75.8 per cent of the variance (canonical $R^2 = .198$), and the second discriminant function explained 24.2 per cent of the variance (canonical $R^2 = .114$). Together, the two discriminate functions significantly differentiated the Region groups, $\Delta = .948, \chi^2(6) = 15.19, p = .019$, but when the first function was removed, the second function did not significantly differentiate the Region groups, $\Delta = .987, \chi^2(2) = 3.72, p = .156$.

The correlation between the dependent variables and the function indicated that Psychological capital ($r = .994$) and Distress ($r = .772$) loaded positively on the first function. This function discriminates employees from the South West region from Midlands and South East. The direction of the loadings on this function show that South West ($r = .409$) loads in a positive direction, and Midlands ($r = -.151$) and South

East ($r = -.167$) load in a negative direction suggesting there is an opposite effect for this function. Inspection of the plot this would suggest that South West respondents have higher Psychological Capital and higher Distress scores compared to Midlands and South East respondents.

Distress ($r = .757$) also loaded positively on the second factor, with Psychological Capital ($r = -.426$) loading negatively. The second function discriminated respondents in the Midlands from the South East. The direction of the loadings on this function shows that South East ($r = .210$) loads positively, and Midlands ($r = -.108$) load negatively. Inspection of Figure 2 shows that respondents from the Midlands have lower Distress scores and display higher Psychological Capital compared to South East respondents.

Figure 2: Standardised Mean Score of Distress and Psychological Capital for Region Group

Respondents Attitudes to Mental Health Help-Seeking

The analysis looked to determine the relationship between respondents Mental Health Seeking Attitudes Scale (MHSAS) scores, for both of the sector groups, against three factors: 1) respondents awareness of mental health services within their sector (Awareness); 2) the perceived helpfulness of these services (Helpfulness); 3) the perceived consequences of accessing these mental health services. All variables were not normally distributed ($p < .05$ in all cases). Pearson's Correlations were conducted to determine associations.

For respondents within the NHS; those more aware of the mental health services available to them ($r(168) = .237$, $p = .001$) and thought these services helpful ($r(168) = .38$, $p < .001$) were higher in help-seeking attitude. Further, those concerned about

the consequences of accessing these services had lower help-seeking attitudes ($r(168) = -.266, p < .001$).

CJS employees believing mental health services available to them to be helpful were also higher in help-seeking attitude ($r(168) = .292, p = .001$) and those concerned about the consequences of accessing these services also had lower help-seeking attitudes ($r(168) = -.193, p = .033$). However, no relationship was found between CJS employee's awareness of services and help-seeking attitudes ($r(168) = .165, p = .07$).

Discussion

The COVID-19 pandemic continues to cause universal psychosocial impact, restricting individuals' freedom of movement and placing a paramount burden on those working in the NHS and the CJS. Categorised as key workers, those in both sectors are dealing first hand with the consequences of the ongoing virus. The current study aimed to explore the psychological impact of COVID-19 on key workers within the NHS and the CJS in order to understand the relationship between psychological capital and distress and to explore any differences in help-seeking attitudes between the two sectors.

The results indicated that NHS employees have higher psychological distress and lower psychological capital. This is concerning given that previous research has found that individuals in key worker roles such as nurses were able to manifest a positive psychological state (Shen et al., 2014; Wang et al., 2012; Zhou et al., 2017). The findings of the current study suggest that the burden of the pandemic may be creating a work environment straining NHS key workers' inherent psychological state, resulting in this inverse relationship and as such lower protection from psychological distress. Interestingly, employees in the CJS experienced an inverse relationship, such that their level of psychological distress was lower with a higher level of psychological capital. Previous studies have evidenced that police officers high in hardiness are more resistant to distress experienced within the role (Andrew et al., 2008; Antonovsky, 1990). This is evident in the significantly higher scores CJS employees displayed in hope, optimism and resilience on the subscales of the PsyCap.

Both NHS and CJS employees displayed similar attitudes to help-seeking, with higher help-seeking attitudes associated with less concern regarding the consequences of accessing these services and the thought that these services would be helpful. This is a logical finding and one that makes sense in the context of previous research regardless of the sector of employment. There is evidence that student nurses are reluctant to seek help for conditions such as stress (Kernan & Wheat, 2008) and may hold negative attitudes towards seeking psychological help (Cankaya & Duman, 2010) and negative attitudes towards those with mental health difficulties (Halter, 2004; Llerena, Caceres & Penas-Lledo, 2002; Schafer et al., 2011). It has also been found that healthcare workers help-seeking decisions are often influenced by concerns regarding confidentiality and stigma (Hassan et al., 2009) and a general fear regarding the opinions of their colleagues and superiors (Farrell, 2001). Such findings also exist within CJS workers, with police officers more likely to conceal any issues rather than disclose them with professionals (Amaranto et al., 2003) for fear of impact on job

prospect and promotion. This litany of negative attitudes among key workers explains the fear of consequences when thinking about accessing services. In the current climate where levels of distress may only continue to rise and the pandemic shows no sign of stopping, prioritising the breakdown of barriers and stigma associated with accessing help is a necessity.

The present study provides useful insights into the psychological impacts of the current global pandemic on the levels of distress among key workers in both healthcare and criminal justice settings in the UK. To the authors' knowledge, it is one of the first studies to be conducted of this nature, in that comparable analyses has been conducted between two of the most critical key worker sectors presently. However, the study is not without its limitations. Regional differences were analysed within the current study. However, data was collected at a time of national lockdown. As such the results obtained may not be representative of the current situation, where local lockdowns are in effect depending upon rate of transmission. Data collection and analysis on a regional scale during times of local lockdown measures could yield greater insight into the how the pandemic affects the psychological capital and distress of key workers during these time periods. Future research may choose to focus more on the regional differences in psychological distress experienced by key workers as the UK moves towards a more regional reaction to the pandemic.

However, the study has provided a valuable insight into the psychological impact of the pandemic on key workers within the NHS and the CJS and has several implications. Firstly, the results demonstrate the importance of providing appropriate resources to key workers both within the NHS and the CJS in order to effectively deal with the ongoing pandemic. Mental ill health is responsible for 72 million working days lost and cost £74-£99 billion each year (Stevenson & Farmer, 2017). The present study has highlighted the important link between lower psychological capital under increased psychological distress in key workers and this places this population at risk. The increased psychological distress experienced during the pandemic has also exponentially increased the demand for mental health services, with increased symptoms of depression, anxiety and stress-related disorders (González-Sanguino. Et al., 2020; Li et al., 2020; Cao et al., 2020). Healthcare workers have specifically reported negative consequences as a result of exposure to stress (Du et al., 2020; Lai et al., 2020; Tang et al., 2020). For those under greater distress, such as key workers, further awareness around and increased accessibility to support available and a greater push to reduce the stigma around seeking help is imperative.

In conclusion, the findings pose a serious question regarding sustaining and providing appropriate resources for key workers in the NHS and the CJS. With the pandemic set to continue for the foreseeable future, it is important to understand the psychological impact this is having on key workers. Furthermore, future investigation is needed to understand how best to normalise the access to services for mental wellbeing.

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