



Fear of Covid-19, adjustment, and well-being of the incarcerated in South African correctional facilities

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Abstract

The Covid-19 pandemic had a profound impact on incarcerated individuals, marked by significant fear, various attempts at adjustment, and considerable effects on their general well-being. Fear of Covid-19 was widespread in correctional facilities. The study used a quantitative approach and exploratory design. The study was carried out within the South African corrections community, specifically in three centres. Respondents were sampled using a probability sampling method. In a cross-sectional survey, a total of 149 incarcerated individuals completed self-administered questionnaire of the Outcome scale 45.2 (OQ-45.2), well-being and fear of Covid-19 scales. Of these respondents, 121 were males, 27 females, and 1 chose not to respond to this question. We used correlation and simple linear regression analysis. On average, 34.3 years old, ranging from 18 to 70 years ($n = 149$). These results revealed that fear of the coronavirus better predicts adjustment. The results showed a significant regression model, $F(2,127) = 7.340$, $p < .001$. More specifically, this means the model only explains 11% and 89% is explained by other factors not included in the model. Furthermore, the model revealed that fear of coronavirus ($\beta = .176$, $t = 3.388$, $p < .001$) significantly predicted the adjustment. The results also revealed that well-being ($\beta = .230$, $t = 1.243$, $p = .216$) does not significantly predict adjustment. The disruption of rehabilitation and educational programmes further impacted incarcerated individuals' sense of purpose and long-term well-being. Overall, the Covid-19 pandemic was deeply unsettling.

Keyword: Adjustment, Covid-19, fear, incarcerated, South Africa, well-being

Introduction

South Africa, is one of the developing countries where most of the country's healthcare systems are not sufficiently developed to deliver good service to all citizens, Covid-19 hit hard (Mbunge, 2020). Multiple factors, including poor mental healthcare and infrastructure, no or limited job opportunities, and food security (Murphy et al., 2021; Rosemberg et al., 2021; Vose et al., 2020), have impacted the sphere of incarcerated individuals during Covid-19. This need to be assessed and explored. It is also essential to assess how the incarcerated coped during this pandemic with limited resources and how the well-being of incarcerated individuals is taken care of by the government in South Africa (Bauer et al., 2021; Nyashanu et al., 2020).

Being unsure about life leads to high stress levels, affecting incarcerated individuals' adjustment (Alemayehu et al., 2019). It is more likely that incarcerated individuals experience anxiety, stress, hopelessness, and depression during Covid-19, which negatively impact their psychological adjustment (Desai et al., 2021; Sorge et al., 2021; Testoni et al., 2021).

Reker and Wong (1984); Steptoe et al. (2012) maintain that psychological and physical well-being correlate and form part of an individual's general well-being holistically. In addition, people who earn nothing or have no source of income are associated with experiencing negative emotions Steptoe et al.

(2012), even more so when they are in a confined environment such as correctional centres. Supported by Banati et al. (2020); Pothisiri and Vicerra (2021) reported that the well-being of youth and older adults in low- and middle-income countries was affected during Covid-19. For example, incarcerated individuals in low-income countries such as South Africa are from different socioeconomic backgrounds. They depend on beneficiaries of social grants for financial support. Covid-19 exposed incarcerated individuals to socioeconomic challenges such as hunger because government departments were at times slow in processing grants, which led to a lack of social support (financial) (González-Riera et al., 2024; Suhomlinova et al., 2023). As a result, incarcerated individuals are more vulnerable during the pandemic (Corburn et al., 2020; Machado et al., 2024), affecting their well-being and those of other minority populations.

Research using different research design approaches on the impact of Covid-19 has been published in the United States of America (USA), Europe and the East, as well as elsewhere in the world (Akiyama et al., 2020; Chin et al., 2021; Saloner et al., 2020). Covid-19 affected most low- to middle-income countries economically (Djankov & Panizza, 2020; Wainwright et al., 2023). It is more likely that incarcerated individuals were also affected by not doing the informal jobs they usually do in correctional centres, such as helping with farming and vocational activities (woodworking, sewing, hair salons, carpentry, carpentry, car wash and tailoring). These informal or piece jobs play a role in the rehabilitation of incarcerated individuals (Anyanwu et al., 2018; Banga & te Velde, 2020; Mhlanga-Gunda et al., 2023; Simon, 2005).

The study included adults in correctional centres who are at / are at risk during the Covid-19 pandemic. However, as mentioned earlier, specific attention was paid to the elderly incarcerated population. The Association (2013) reported that gerontological researchers and policy makers use 65 years of age as the onset of the elderly age group. However, Bruine de Bruin (2021) and Davies (2020) reported that, according to the Covid-19 restrictions, the age is 60 years and above. Specific attention was given to older or elderly incarcerated individuals.

The whole world, including here in South Africa, had to make immediate adjustments as the pandemic affected the well-being of individuals, from newly born to the oldest (Wilson Fadji et al., 2025). Not only did Covid-19 force the general population to adjust to the new normal, but incarcerated individuals were forced to adjust to restrict rules and confinement even more, which affected their well-being (Muntingh, 2020; Sibisi et al., 2024).

In South Africa, between March and June 2020, among 3,460,932 public sector patients who tested positive for HIV, 22,308 were diagnosed with Covid-19, of whom 625 died (Davies, 2020). Almost all patients diagnosed with HIV are reported to have been diagnosed with Covid-19. Furthermore, incarcerated individuals experienced anxiety and depression, leading to many deaths during the pandemic (Muring'u et al., 2021; Sibisi et al., 2024). Furthermore, they became a high-risk population due to various chronic diseases, which made the immune system not be able to combat the coronavirus. Lastly, failing to adjust to these challenges leads to the well-being of the patients affected (Davies, 2020).

Adjustment to new life situations, in general, has never been easy (Sarkar et al., 2023). There are specific psychological preparations as an individual must be psychologically and emotionally prepared to adjust (Rogers et al., 2024). However, with the Covid-19 pandemic, that was not the case. The pandemic came so quickly and suddenly, with many rules and regulations that were not easy to adjust for everyone, specifically incarcerated individuals. For example, incarcerated individuals are generally used to certain routines in their lives amongst others, having visitors, psychosocial rehabilitation programs, sports, primary care, education, vocational activities, and religious gatherings (Eyamu, 2024; Johnson, 2019; Kipkemboi, 2023; Van Rooyen, 2024). This was not the case with the pandemic, which came as a shock and all had to adjust immediately. Novisky et al. (2023) and Schultz and Ricciardelli (2023) report that in the US, it was no different within the context of correctional facilities, as most incarcerated individuals feared for their health, as most of them were unsure what the new rules would be in the corrections environment when Covid-19 attacked the world.

Vittengl et al. (2020) reported that for people to adjust to given situations, marital and family unit roles are essential. This implies that during Covid-19, incarcerated individuals are more likely unable to adjust to the new normal because there was little or no family unit role to support as no visitors were allowed due to restrictions. Similarly, the role of the family unit is essential for all, especially

incarcerated individuals (Francis-Graham, 2020; Thorpe et al., 2024).

Geldsetzer et al. (2019) highlighted that less active individuals are more likely to suffer from chronic diseases, leading to more depressive symptoms. Therefore, people must exercise to function physically and be in a good state of mental health. Hypothetically, the coronavirus affected the mental health of incarcerated in South Africa. However, insufficient mental health care and infrastructure accommodated the needs of incarcerated individuals during Covid-19 with no place to exercise (Hesselink & Booyens, 2021). The Transactional Model of Stress and Coping (TMSC), proposed by Folkman et al. (1986) and Folkman and Lazarus (1986) was adopted in this study to explore adjustment, well-being, and fear of Covid-19 guided the study. Folkman et al. (1986) argue that problem-focused coping is more effective in situations where individual beliefs can be modified. On the contrary, emotion-focused coping should be used in situations regarded as difficult or impossible to change (Covid-19 restrictions in correctional facilities). This theory implies that incarcerated individuals could not change the new normal brought by Covid-19. However, they had to find meaning in the life of their situation. For instance, they search for meaning in life under difficult and uncomfortable situations (Frankl, 1966).

The Department of Correctional Services, (2005) in the White Paper on Corrections in South Africa states that the provision of recreational activities that are suitable for everyone who is housed in a centre; facilities that can ease the physical demands of incarcerated individuals; and the provision of appropriate medical care for incarcerated individuals must all be integrated into the case management system (Services, 2005).

Research Objectives

This study is guided by the following research objective:

1. To explore how the Covid-19 pandemic impacts the adjustment and well-being of incarcerated individuals

Hypotheses

1. We hypothesised that there is significant adjustment during Covid-19 among incarcerated individuals; and adjustment was correlated with the fear of Covid-19 and the well-being of incarcerated individuals during the pandemic.

Methodology

Research Design

The study used a quantitative approach, and exploratory design consists of collecting and analysing quantitative data. The sequence of data collection and analysis and the stage/stages in the research process are quantitatively analysed, and the results were integrated into the South African context (Ivankova et al., 2006). we investigated how the Covid-19 pandemic impacted the adjustment and well-being of incarcerated individuals in South African correctional facilities.

Setting

The study was carried out within the South African Corrections community, specifically at three centres, namely Kgoši Mampuru II Correctional Centre, Polokwane Correctional Services and Atteridgeville Gender Responsive Female Correctional Centre. The Kgoši Mampuru II Correctional Centre and Atteridgeville Gender Responsive Female Correctional Centre are in Pretoria in the Gauteng province. Generally, Gauteng province has a diverse population; therefore, it is more likely that these centres have a diverse population. The Polokwane Correctional Services is in the Limpopo province.

Security measures in correctional settings

In correctional centres, security is a priority. For example, cellphones are allowed when entering the centre. Therefore, as researchers; we used self-administered questionnaires, no details of the researchers were included in the questionnaires and no cameras were allowed. Data was collected in a group of 10 to 15 incarcerated individuals, to ensure the safety of the Respondents and researchers, the classroom was searched first. The researchers were searched before entering the correctional centre premises, then escorted to the Centre Director's office for introduction, then to the room or class where we introduced the study to incarcerated individuals. The correctional official who accompanied the researchers was requested to sign a confidentiality agreement form. However, confidentiality was granted as

correctional officers do not have access and link to the collected data and no identification of respondents was included during the data collection phase.

Sampling method

Respondents were sampled using a probability sampling method (Vehovar et al., 2016; Yang & Banamah, 2014). The sample was stratified according to its correctional centres, (Kgoši Mampuru II Correctional Centre, Polokwane Correctional Services and Atteridgeville Gender Responsive Female Correctional Centre); sub-groups were presented, for example, different ages, gender, and race (see table 1). All potential respondents had the same opportunity to be part of the study. Yamane's formula was used to ensure that an appropriate sample was sampled in the study (*95 confidence level and $n=0.5$ are assumed).

Recruitment process

To avoid perceived coercion, we advertised the study through clinical and counselling psychologists, social workers, chaplains, and educators working at the three identified centres. The clinical and counseling psychologist assisted during the recruitment process by communicating with Unit Managers because incarcerated individuals were supposed to come in ground of 10 to 15. The Unit Managers ensured that security measures were observed. Respondents were informed that the study was purely for research purposes and that it would not by any chance have an influence on their sentences and would not contribute positively or negatively to their parole. Those who were willing to participate in the study were informed that participating in the study was voluntary. Therefore, all those who qualify have the chance to be part of the study according to the inclusion criteria. All security protocols were observed.

Instruments

The questionnaire used in the study included the following: biodemographic information (age, gender, marital status, religion, vocational employment, education, type of crime, and duration of imprisonment). We use the Outcome scale 45.2 (OQ-45.2) and the Well-being and fear of Covid-19 scales.

Outcome Questionnaire 45.2 (OQ-45.2)

The study used the Outcome Questionnaire 45.2 (OQ-45.2) scale (Lambert et al., 1996). This scale measures general psychological adjustment. The Outcome Questionnaire 45.2 (OQ-45.2) is a six-item self-report measure developed as a shorter alternative to the most used instrument for overall distress and functioning, the Outcome Questionnaire-45 (OQ-45.2). The scale is repeated when administered and produces a total distress score and three subscale scores: Symptom Distress, Interpersonal Relations, and Social Role Performance. Each item is rated on a 5-point scale (0 = never, 1 = rarely; 2 = sometimes; 3 = frequently; 4 = almost always), with higher scores indicating endorsement of pathology (Lambert et al., 1996) (Lambert et al., 1999). Completion takes approximately 5 minutes. The OQ-45.2 scale has been researched extensively and has demonstrated good concurrent and construct validity across a wide range of patient populations, adequate internal consistency, test-retest reliability, and sensitivity to change over short periods. The OQ-45.2 scale demonstrated good internal consistency with Cronbach's alpha .87-.93. The scale has been used in multi-cultural and diverse populations (Cruz et al., 2020; Peterson, 2015). Therefore, it is reliable and valid for the population of the study. In the current study the Cronbach's Alpha was .87.

Well-being scale

The well-being scale is a 14-item measure of psychological, physical, and general well-being (Reker & Wong, 1984). Six items measure psychological well-being, and eight items measure physical well-being. The composite set of items is an index of general well-being. Respondents rate each item on a 7-point Strongly Agree to Strongly Disagree Likert scale. A score of one for each item reflects a high level of well-being. The possible range of scores is 6 to 42 for psychological well-being, 8 to 56 for physical well-being and 14 to 98 for general well-being. The internal consistency of each dimension of the well-being scale reported the coefficients of .82 and .78 in psychological and physical well-being dimensions, respectively. The consistency of the overall well-being index reached .91. The scale is valid

and reliable for a South African population as administered by Geffen et al. (2019). In the current study the Cronbach's Alpha was .50.

Fear of Covid-19

Fight, flight or freeze is the response that follows when there is a threat stimulus that triggers fear in the brain (Ahorsu et al., 2020). However, fear is a healthy human emotion that protects individuals from potential danger (Tannenbaum et al., 2015). The unpleasant mood is harmful to people's wellbeing. Fear negatively impacts incarcerated individual's mental health, which increase uncertainties among incarcerated population. Incarcerated individuals reported not being able to adjust during Covid-19 because of poor healthcare system in South African correctional facilities. In the current study the Cronbach's Alpha was .86.

Data collection

Quantitatively data are required to demonstrate differences statistically (Yamane, 1967), which requires the use of the adjustment well-being and fear of Covid-19 scales for data collection. Respondents handed the scales. It was explained to them that there are no right or wrong answers. This gave them comfort and confidence for the respondents to answer genuinely and honestly the scales' items. The researchers explained to respondents if they do not understand the scales' items, and we generalised how incarcerated individuals adjusted during Covid-19 and assess the well-being.

Data analysis

Quantitative data was captured and statistically analysed utilizing the Statistical Package for Social Sciences version 27 (SPSS-27). Frequencies, descriptive statistics, and reliability indices were determined. Correlation analysis was used. Statistical techniques were used to examine causal relationships between two or more variables (adjustment well-being and fear of Covid-19). Lastly, a simple linear regression analysis was used controlling for demographic variables and survey data used in the study. Fear of Covid-19 was impacted by the adjustment of incarcerated individuals and also with their well-being (Kaufmann & Schering, 2007).

Ethical consideration

To ensure that ethical principles and procedures were followed, the study was presented to the Higher Degrees Scientific Committee of the Department of Psychology, then submitted to the College of Human Sciences Research Ethics Committee (CREC) for ethical clearance reference number CREC-90513258_CRECHS_2022. After ethical clearance was obtained, the proposal was submitted to the Research Committee of the Department of Correctional Services for permission to conduct the study in correctional centres as gatekeepers of the study. As a researcher, the first author explained to the respondents that being part of the study is voluntary (Steinberg, 1977). Therefore, all phases of the study will ensure anonymity, confidentiality, and privacy (Boruch & Cecil, 2016; Novak, 2014). Information sheets explaining the objectives and purpose of the study were distributed to the respondents. After that, consent was obtained from the respondents. Finally, the respondents issued and signed by respondents.

Results

Analysis of Demographic Variables

Table 1.

Demographic Characteristics of Respondents (N = 149)

Variable	Category	n	%
Gender	Male	121	81.2
	Female	27	18.1
	No Response	1	0.7
Age	-	149	Mean = 34.3, Ranging = 18–70)
Ethnicity	Black South African Nationals	149	100

Variable	Category	n	%
Marital Status	Single	124	83.2
	Married	21	14.1
	Divorced	4	2.7
Religious Affiliation	Christianity	113	75.8
	African Religion	20	13.4
	Islam	8	5.4
	Judaism	2	1.3
	Atheism	4	2.7
	No Affiliation	2	1.3
Education Level	No Formal Education	12	8.1
	Primary School	11	7.4
	Secondary School	80	53.7
	Tertiary Education	41	27.5
	No Response	5	3.4
Duration of Imprisonment	5 Years or Below	51	34.2
	6-10 Years	34	22.8
	11-15 Years	23	15.4
	16-30 Years	30	20.1
	No Response	11	7.4

Respondents

In a cross-sectional survey, a total of 149 incarcerated individuals completed all principal variables (i.e., dependent, and independent variables). Of these respondents, 121 identified themselves as male, 27 identified themselves as female, and 1 participant chose not to respond to this question. They were, on average, 34.3 years old, ranging from 18 to 70 years. The majority of our respondents were black South African Nationals (n = 149). Of most of our respondents, 124 reported to be single, 21 were married and four (4) reported to be divorced. Moreover, respondents, we asked about their religious affiliation, out of 149 respondents, 113 reported being affiliated with Christianity, 20 reported being affiliated to African Religion, eight (8) Islam, two (2) Jew, four (4) Atheist and two (2) respondents not affiliated with any religion. Furthermore, respondents were asked to indicate their level of education, twelve (12) indicated having no formal education, eleven (11) indicated primary school education, 80 indicated secondary school education, 41 indicated tertiary education and five (5) respondents did not indicate level of education. Finally, respondents were asked about the duration of imprisonment, out of 149

respondents, 51 respondents have been sentenced to five years and below, 34 reported to be sentenced to 6-10 years, 23 reported to be sentenced to 11-15 years, 30 reported to be sentenced 16- 30 years and eleven (11) students did not answer the question.

Preliminary Analysis

Table 2.

Means, standard deviations, reliability coefficients, and intercorrelations of the main variables (n = 149)

	1	2	3
M	2.29	3.16	2.07
SD	0.69	1.13	0.32
A	.87	.86	.50
1. Outcome Adjustment	-		
2. Fear of Coronavirus	.304**	-	
3. Well-being	.150	.155	-

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Table 2 shows the descriptive statistical measurement for the dependent variable, Adjustment, and our two independent variables, Fear of Coronavirus and Wellbeing. Fear of coronavirus has the highest mean score, followed by adjustment and well-being. These results imply that fear of the coronavirus better predicts adjustment. In addition, the results show that wellbeing measure yielded low reliability, hence, its results should be interpreted with caution.

Hypotheses Testing

The correlation statistic shows that there is no significant correlation between adjustment and wellbeing and fear of coronavirus and well-being. However, there was a significant moderate positive correlation between fear of the coronavirus and adjustment. Therefore, we proceeded with caution to test the hypothesis that both fear of coronavirus and wellbeing predict adjustment.

Table 3.

Regression coefficient of fear of coronavirus and well-being on adjustment (N=130)

Variable	B	SE	t	P	95% CI
Constant	1.263	.397	3.180	.002	[.477, 2.049]
Fear of Coronavirus	.176	.052	3.388	<.001	[.073, .279]
Well-being	.230	.185	1.243	.216	[-.136, .597]

Note: CI confidence interval

A simple linear regression analysis was performed to test whether fear of coronavirus and well-being could predict adjustment using the Statistical Package for Social Sciences version 27 (SPSS-27). Adjustment was entered as a dependent variable and fear of coronavirus and well-being as independent variables. The results showed a significant regression model, $F(2,127) = 7.340$, $p < .001$. This indicated that the fear of the independent variables of coronavirus and wellbeing has a significant impact on adjustment. Moreover, the $R^2 .089$ depicts that the model explains 89% of the variance in adjustment. More specifically, this means the model only

explain 11% and 89% is explained by other factors not included in the model. Furthermore, the model revealed that fear of coronavirus ($\beta = .176$, $t = 3.388$, $p < .001$) significantly predicted adjustment. The results also revealed that wellbeing ($\beta = .230$, $t = 1.243$, $p = .216$) does not significantly predict adjustment. Therefore, only fear of coronavirus is a significant predictor of adjustment (Table 3).

Discussion

These discussions are motivated by the exposure of incarcerated individuals to Covid-19 in South Africa. Covid-19 showed that the healthcare system, including the healthcare system in the corrections community of South Africa, is not well stocked. Incarcerated individuals were and still are living out of fear and uncertainty regarding Covid-19 (Bauer et al., 2021; González-Riera et al., 2024). Therefore, it is essential to explore how incarcerated individuals adjusted during Covid-19 and how their well-being was affected by Covid-19 through quantitative methods. The results of the study revealed that there is a relationship between the adjustment, well-being, and fear of the Covid-19 of incarcerated individuals during the pandemic. Respondents in the study experienced fear and uncertainties during the pandemic from which interpretations could be made about their adjustment and well-being and the perceived impact of the pandemic. These results are supported by Sibisi et al. (2024); Davies (2020) and Muntingh (2020) who stated that understanding the fear of Covid-19 lived experiences of incarcerated individuals in South African correctional centres is not easy because of overcrowding, poor infrastructure and not having enough human resources to support incarcerated individuals. The pandemic caused mental depression, fear, anxiety, and emotional distress. As a result, most incarcerated individuals fail to cope and function (Ginzburg et al., 2021; Hewson et al., 2020; Katey et al., 2022; Ortiz-Paredes et al., 2022). The functionalist perspective reveals that the relationship between certain parts of society (adjustment and well-being) and how incarcerated individuals function or co-exist in the corrections community lead to fear of Covid-19 because of some services such as visitors and rehabilitation programmes (outdoor and indoor games) were suspended (Eyamu, 2024; Rogers et al., 2024). We adopted the interpretive paradigm, Shah and Al-Bargi (2013) state that interpretive research is concerned with subjective meanings as it seeks to recognize the individuals' interpretation and understanding of the social phenomena. Incarcerated individuals' reality raised from meanings that developed within a historical, social, and community context (corrections). Therefore, incarcerated individuals found subjective meanings during Covid-19, which indicated that they were not able to cope with the restrictions of services and receiving little to no support from government.

The Transactional Model of Stress and Coping (TMSC) indicate that there is a need for incarcerated individuals to cope under uncomfortable conditions such as not have enough masks and sanitizers during Covid-19. This model is supported by Bereswill et al. (2010); Liebling (2017); Maruna et al. (2006), and Cohen (2019), who stated that incarcerated individuals find meaning during unpleasant situations in the correctional environment. Through coping strategies, incarcerated individuals are more likely to find meaning in life. Lastly, experiences of incarcerated individuals during Covid-19 are more likely to fall into these categories; primary assessment (is this a problem?), secondary assessment (can I cope?), stress, coping (problem vs. emotional coping) and reappraisal.

Positive emotions are essential for the well-being of people. Good life experiences improve well-being and create positive energy and attitude towards life. Therefore, the psychological, physical, and general well-being of the incarcerated individual is essential. Covid-19 negatively impacted the well-being of incarcerated individuals. The pandemic reduced the level of well-being among incarcerated individuals, leading to poor mental health and failure to cope. These results are supported by Ryff and Singer (1996); Steger (2018), and Edwards and Van Tongeren (2020), who state that negative emotions, anxiety, hopelessness, and depression negatively affect individuals' well-being. The emotions mentioned above or feelings are related to Covid-19, whether diagnosed with it or not (Ahorsu et al., 2020; Luo et al., 2021). Therefore, the well-being of incarcerated individuals was more likely to be affected by Covid-19.

Based on the Ahorsu et al. (2020) and Luo et al. (2021) incarcerated individuals experienced fear of Covid-19 for various reasons. Several respondents expressed fear of death from Covid-19. Incarcerated individuals felt like they would die, especially seeing staff in white protective clothing, hearing about people dying outside also heightened this fear, especially given the overcrowded conditions in

correctional centres (Machado et al., 2024; Saloner et al., 2020). The lack of space in correctional facilities, which made social separation impossible, contributed to the fear of contracting the virus and dying. Incarcerated individuals noted that correctional centres are typically full of no space. The way authorities and officials behaved also instilled fear (Metcalf, 2021). Correctional officials maintaining distance and placed food far away made incarcerated feel like they were going to die with one mistake. The sight of officials wearing masks and protective gear scared incarcerated individuals, leading them to believe that Covid-19 would lead to their death, without no one knowing (Van Hout, Bigland, et al., 2023). In addition, the inability to see family and the lack of social support during the pandemic was another significant source of fear and distress. Incarcerated individuals were worried about their families outside and felt helpless being isolated (Van Hout & Wessels, 2021). For some, not being able to communicate effectively with the outside world due to restrictions on cell phone use added to their anxiety. Fear of dying without speaking to loved ones was a major concern (Mhlanga-Gunda et al., 2023).

The uncertainty surrounding the disease and its potential rapid progression also caused fear. If someone was diagnosed with Covid-19, it felt like they could die within a week. The lack of clear information and the constant changes in regulations (“ins and outs,” closures, and openings) made it difficult for some to adjust and heightened their fear (Van Hout et al., 2022). The potential for bringing the virus into correctional facilities by new admissions from police stations was a specific fear for some. Incarcerated individuals felt that people coming from outside, where Covid-19 was perceived to be more prevalent, posed a risk to those already inside (Mhlanga-Gunda et al., 2023). For people with pre-existing health conditions, the fear of contracting Covid-19 was amplified due to the potential for severe complications. For example, incarcerated individuals with lung disease were particularly careful to maintain distance and wear a mask out of fear. The experience of having flu-like symptoms also triggered fear, as people worried whether it was just the flu or Covid-19 (Akiyama et al., 2020). The initial lack of specific medication and the prospect of being quarantined, even though they were already confined, were also frightening experiences. Incarcerated individuals avoided hospitals and were quarantined (Chin et al., 2021). Incarcerated individuals described the psychological impact of this fear as significant, leading to stress, anxiety, and even the need to see a psychologist or social worker (Wainwright et al., 2023). The constant worry and the feeling of being trapped and helpless in a potentially dangerous environment contributed to emotional distress. Despite the pervasive fear, some incarcerated attempted to cope by focussing on prayer, adjusting their habits to avoid contact, and accepting the situation as something beyond their control (Van Hout et al., 2022). However, the overall experience was marked by significant fear and anxiety related to the possible health consequences of Covid-19 within the confined and often overcrowded environment of correctional facilities.

The pandemic significantly affected the well-being of incarcerated individuals in psychological, physical, and social dimensions (Davies, 2020). Psychologically, many experienced increased stress, anxiety, and depression. The constant fear of contracting the virus and the uncertainty about the future took a significant toll on their mental health (Bruine de Bruin, 2021; Van Hout, Bigland, et al., 2023). Physically, overcrowded conditions increased the risk of infection and made it difficult to adhere to recommended guidelines. Some respondents reported experiencing symptoms consistent with Covid-19 and expressed concerns about the adequacy of healthcare and access to medications (Van Hout et al., 2022; Van Hout, Southalan, et al., 2023). Changes in daily routines, such as food collection, also affected their physical well-being. Socially, restrictions on visitation led to feelings of isolation, loneliness, and a lack of crucial family support, which is often a significant source of hope for incarcerated individuals (Mhlanga-Gunda et al., 2023). Fear of infection also affected interactions within correctional facilities, leading to a sense of mistrust and caution among inmates.

Limitations

The study used self-administered scales that were all in English, the respondents do not speak English as the first language, therefore the researchers had to make sure that they verbally translate some of the scales items when the respondents do not understand the meaning of some other work words. In correctional environment incarcerated individuals needs to be ensured that the study is for research purposes only, it will not negatively or positively impact their sentences, if this is not clear, incarcerated individuals are more likely to or not participate in the study.

Conclusion

Fear of Covid-19 stemmed from multiple factors, including the risk of death in confined and often overcrowded environments where social separation was impossible. The protective measures taken by staff, such as wearing extensive personal protective equipment, paradoxically increased this fear, making inmates feel like they were in extreme danger. Lack of access to family and social support due to visitation restrictions also amplified feelings of isolation and fear, with people worrying about their loved ones outside and feeling helpless. The uncertainty surrounding the virus, its transmission, and the potential for rapid deterioration of health also contributed significantly to the anxiety. Furthermore, the fear of new inmates bringing the virus into the facilities was a constant concern. In response to this challenging situation, the incarcerated individuals employed various adjustment strategies. On a physical level, other incarcerated individuals reported increased vigilance in hygiene, such as frequent hand washing and mask-wearing, although the type of masks provided was sometimes a concern. The disruption of social interactions and regular programmes such as gym and educational activities made adjustment particularly difficult. Lack of physical contact with loved ones and restrictions on visits required significant emotional adjustment, often relying solely on phone communication. The interruption of rehabilitation and educational programmes further impacted their sense of purpose and long-term well-being. Overall, the Covid-19 pandemic was a deeply unsettling and traumatic experience for many incarcerated individuals, significantly affecting their fear levels, adjustment capabilities, and overall well-being.

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Implications for Covid-19 in correctional settings

Many tried to maintain distance from others within the limitations of the correctional setting, sometimes staying in their cells more often. Psychologically, individuals coped through prayer and faith, attempting to accept the situation despite its difficulties, and engaging in solitary activities to occupy their time and distract themselves. However, some respondents explicitly stated that they never truly adjusted to the situation, highlighting the profound and lasting impact of the pandemic.

References

- Ahorsu, D. K., Lin, C.-Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The fear of COVID-19 scale: development and initial validation. *International journal of mental health and addiction*, 1-9.
- Akiyama, M. J., Spaulding, A. C., & Rich, J. D. (2020). Flattening the curve for incarcerated populations Covid-19 in jails and prisons. *New England Journal of Medicine*, 382(22), 2075-2077.
- Alemayehu, F., Ambaw, F., & Gutema, H. J. B. p. (2019). Depression and associated factors among prisoners in Bahir Dar Prison, Ethiopia. *19*(1), 1-7.
- Anyanwu, J. I., Onyechi, K. C., Adikwu, V., Ezegbe, B. N., & Otu, M. S. (2018). Influence of vocational education on Prison Inmates' interest in vocational activities in Enugu State, Nigeria. *International Journal of Applied Engineering Research*, 13(21), 15310-15316.
- Association, A. P. (2013). Specialty guidelines for forensic psychology. *The American Psychologist*, 68(1), 7-19.
- Banati, P., Jones, N., & Youssef, S. (2020). Intersecting vulnerabilities: The impacts of COVID-19 on the psycho-emotional lives of young people in low-and middle-income countries. *The European Journal of Development Research*, 32(5), 1613-1638.
- Banga, K., & te Velde, D. W. (2020). Covid-19 and disruption of the digital economy; evidence from low and middle-income countries. *Digital Pathways at Oxford Paper Series*(7).
- Bauer, A., Garman, E., McDaid, D., Avendano, M., Hessel, P., Díaz, Y., Araya, R., Lund, C., Malvasi, P., & Matijasevich, A. (2021). Integrating youth mental health into cash transfer programmes in response to the COVID-19 crisis in low-income and middle-income countries. *The Lancet Psychiatry*, 8(4), 340-346.

- Bereswill, M., Farrall, S., Hough, M., Maruna, S., & Sparks, R. (2010). Inside-out: transitions from prison to everyday life. *Escape routes: Contemporary perspectives on life after punishment*, 202-220.
- Boruch, R. F., & Cecil, J. S. (2016). *Assuring the confidentiality of social research data*. University of Pennsylvania Press.
- Bruine de Bruin, W. (2021). Age differences in COVID-19 risk perceptions and mental health: Evidence from a national US survey conducted in March 2020. *The Journals of Gerontology: Series B*, 76(2), e24-e29.
- Chin, E. T., Leidner, D., Ryckman, T., Liu, Y. E., Prince, L., Alarid-Escudero, F., Andrews, J. R., Salomon, J. A., Goldhaber-Fiebert, J. D., & Studdert, D. M. (2021). Covid-19 Vaccine Acceptance in California State Prisons. *New England Journal of Medicine*.
- Cohen, M. L. (2019). Choral singing in prisons: Evidence-based activities to support returning citizens. *The Prison Journal*, 99(4_suppl), 106S-117S.
- Corburn, J., Vlahov, D., Mberu, B., Riley, L., Caiaffa, W. T., Rashid, S. F., Ko, A., Patel, S., Jukur, S., & Martínez-Herrera, E. (2020). Slum health: arresting COVID-19 and improving well-being in urban informal settlements. *Journal of urban health*, 97(3), 348-357.
- Cruz, R. A., Peterson, A. P., Fagan, C., Black, W., & Cooper, L. (2020). Evaluation of the Brief Adjustment Scale-6 (BASE-6): A measure of general psychological adjustment for measurement-based care. *Psychological Services*, 17(3), 332.
- Davies, M.-A. (2020). HIV and risk of COVID-19 death: a population cohort study from the Western Cape Province, South Africa. *medRxiv*.
- Desai, A., Durham, K., Burke, S. C., NeMoyer, A., & Heilbrun, K. (2021). Releasing individuals from incarceration during COVID-19: Pandemic-related challenges and recommendations for promoting successful reentry. *Psychology, Public Policy, and Law*, 27(2), 242.
- Djankov, S., & Panizza, U. (2020). *COVID-19 in developing economies*. Centre for Economic Policy Research.
- Edwards, M. E., & Van Tongeren, D. R. (2020). Meaning mediates the association between suffering and well-being. *The Journal of Positive Psychology*, 15(6), 722-733.
- Eyamu, S. (2024). *The Psychosocial Effects of Parental Imprisonment on the Lives of Young People and their Families in Soroti-Uganda* ISCTE-Instituto Universitario de Lisboa (Portugal)].
- Folkman, S., & Lazarus, R. S. (1986). Stress processes and depressive symptomatology. *Journal of abnormal psychology*, 95(2), 107.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: cognitive appraisal, coping, and encounter outcomes. *Journal of personality and social psychology*, 50(5), 992.
- Francis-Graham, S. (2020). *Testing behind bars: A mixed-methods realist evaluation of opt-out blood-borne virus testing and associated pathways of care within London prisons* UCL (University College London)].
- Frankl, V. E. (1966). Logotherapy and existential analysis—a review. *American Journal of Psychotherapy*, 20(2), 252-260.
- Geffen, L. N., Kelly, G., Morris, J. N., & Howard, E. P. J. B. g. (2019). Peer-to-peer support model to improve quality of life among highly vulnerable, low-income older adults in Cape Town, South Africa. *19*(1), 1-12.
- Geldsetzer, P., Vaikath, M., Wagner, R., Rohr, J. K., Montana, L., Gómez-Olivé, F. X., Rosenberg, M. S., Manne-Goehler, J., Mateen, F. J., & Payne, C. F. (2019). Depressive symptoms and their relation to age and chronic diseases among middle-aged and older adults in rural South Africa. *The Journals of Gerontology: Series A*, 74(6), 957-963.
- Ginzburg, K., Mikulincer, M., Ohry, A., & Solomon, Z. (2021). Echoes from the past: adjustment of aging former prisoners of war to the COVID-19 pandemic. *Psychological medicine*, 1-9.
- González-Riera, F. J., García-Iglesias, J. J., Allande-Cussó, R., Ruiz-Frutos, C., Rodríguez-Díaz, L., Vázquez-Lara, J. M., Fernández-Carrasco, F. J., Fagundo-Rivera, J., & Gómez-Salgado, J. (2024). Mental Health of Prison Inmates During the COVID-19 Pandemic: A Systematic Review. *International Journal of Public Health*, 69, 1607166.

- Hesselink, A.-M., & Booyens, K. (2021). Locked-down, locked-up or a double lockdown for inmates? A criminological analysis on the psychosocial impact of COVID-19 on inmates. *Acta Criminologica: African Journal of Criminology & Victimology*, 34(3), 65-84.
- Hewson, T., Shepherd, A., Hard, J., & Shaw, J. (2020). Effects of the COVID-19 pandemic on the mental health of prisoners. *The Lancet Psychiatry*, 7(7), 568-570. [https://doi.org/10.1016/S2215-0366\(20\)30241-8](https://doi.org/10.1016/S2215-0366(20)30241-8)
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. J. F. m. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *18*(1), 3-20.
- Johnson, S. A. (2019). Understanding the violent personality: antisocial personality disorder, psychopathy, & sociopathy explored. *Forensic Research & Criminology International Journal*, 7(2), 76-88.
- Katey, D., Abass, K., Garsonu, E. K., & Gyasi, R. M. (2022). Depopulation or vaccination? Tackling the COVID-19 crisis in prisons in Africa. *Health & Justice*, 10(1), 1-4.
- Kaufmann, J., & Schering, A. (2007). Analysis of variance ANOVA. *Wiley Encyclopedia of Clinical Trials*.
- Kipkemboi, C. R. (2023). *Social Implications Of Correctional Rehabilitation For The Post-Release Wellbeing Of Prisoners In Uasin Gishu County, Kenya* [Kisii University].
- Lambert, M., Hansen, N., Umpruss, V., Lunnen, K., Okiishi, J., Burlingame, G., & Reisinger, C. (1996). Administration and scoring manual for the OQ-45.2. *Stevenson, MD: American Professional Credentialing Services*, 50-80.
- Liebling, A. (2017). The meaning of ending life in prison. *Journal of Correctional Health Care*, 23(1), 20-31.
- Luo, F., Ghanei Gheshlagh, R., Dalvand, S., Saedmoucheshi, S., & Li, Q. (2021). Systematic review and meta-analysis of fear of COVID-19. *Frontiers in psychology*, 12, 1311.
- Machado, N., Abreo, L., Petkari, E., & da Costa, M. P. (2024). The relationship of social contacts with prisoners' mental health: a systematic review. *Public Health*, 234, 199-216.
- Maruna, S., Wilson, L., & Curran, K. (2006). Why God is often found behind bars: Prison conversions and the crisis of self-narrative. *Research in human development*, 3(2-3), 161-184.
- Mbunge, E. (2020). Effects of COVID-19 in South African health system and society: An explanatory study. *Diabetes Metabolic Syndrome: Clinical Research Reviews*, 14(6), 1809-1814.
- Metcalf, H. (2021). Life and death in prisons. *COVID-19 and human rights*, 133-149.
- Mhlanga-Gunda, R., Rusakaniko, S., Chinyuku, A. N., Psarayi, V. F., Robinson, C. S., Kewley, S., & Van Hout, M. C. (2023). "we sleep 10cm apart so there is no social distancing": COVID-19 preparedness in a Zimbabwean prison complex. *International Journal of Prisoner Health*, 19(2), 157-180.
- Muntingh, L. M. (2020). Africa, prisons and COVID-19. *Journal of Human Rights Practice*, 12(2), 284-292.
- Muring'u, P. N. u., Kariuki, M., & Njonge, T. (2021). Influence of physiological stress coping strategies on the psychological well-being of life-sentenced inmates in maximum-security prisons in Kenya. *Editon Consortium Journal of Psychology, Guidance and Counseling*, 3(1), 242-258.
- Murphy, J. K., Khan, A., Sun, Q., Minas, H., Hatcher, S., Ng, C. H., Withers, M., Greenshaw, A., Michalak, E. E., & Chakraborty, P. A. (2021). Needs, gaps and opportunities for standard and e-mental health care among at-risk populations in the Asia Pacific in the context of COVID-19: a rapid scoping review. *International journal for equity in health*, 20(1), 1-22.
- Novak, A. (2014). Anonymity, confidentiality, privacy, and identity: The ties that bind and break in communication research. *Review of communication*, 14(1), 36-48.
- Novisky, M. A., Tostlebe, J., Pyrooz, D., & Sanchez, J. A. (2023). The COVID-19 pandemic and operational challenges, impacts, and lessons learned: A multi-methods study of US prison systems. *Health & Justice*, 11(1), 51.
- Nyashanu, M., Simbanegavi, P., & Gibson, L. (2020). Exploring the impact of COVID-19 pandemic lockdown on informal settlements in Tshwane Gauteng Province, South Africa. *Global Public Health*, 15(10), 1443-1453.
- Ortiz-Paredes, D., Varsaneux, O., Worthington, J., Park, H., MacDonald, S. E., Basta, N. E., Lebouché, B., Cox, J., Ismail, S. J., & Kronfli, N. (2022). Reasons for COVID-19 vaccine refusal among people incarcerated in Canadian federal prisons. *PloS one*, 17(3), e0264145.

- Peterson, A. P. (2015). *Psychometric Evaluation of the Brief Adjustment Scale-6 (BASE-6): A New Measure of General Psychological Adjustment*
- Pothisiri, W., & Vicerra, P. M. M. (2021). Psychological distress during COVID-19 pandemic in low-income and middle-income countries: a cross-sectional study of older persons in Thailand. *BMJ open*, *11*(4), e047650.
- Reker, G. T., & Wong, P. T. (1984). Psychological and physical well-being in the elderly: The Perceived Well-Being Scale (PWB). *Canadian Journal on Aging/La Revue canadienne du vieillissement*, *3*(1), 23-32.
- Rogers, C., Jordaan, J., & Esterhuysen, K. (2024). Coping, aggression, perceived social support and demographic variables as predictors of prison adjustment among male incarcerated offenders. *Criminology & Criminal Justice*, *24*(2), 339-361.
- Rosemberg, M.-A. S., Adams, M., Polick, C., Li, W. V., Dang, J., & Tsai, J. H.-C. (2021). COVID-19 and mental health of food retail, food service, and hospitality workers. *Journal of occupational and environmental hygiene*, *18*(4-5), 169-179.
- Ryff, C. D., & Singer, B. (1996). Psychological well-being: Meaning, measurement, and implications for psychotherapy research. *Psychotherapy and psychosomatics*, *65*(1), 14-23.
- Saloner, B., Parish, K., Ward, J. A., DiLaura, G., & Dolovich, S. (2020). COVID-19 cases and deaths in federal and state prisons. *Jama*, *324*(6), 602-603.
- Sarkar, S. M., Dhar, B. K., Crowley, S. S., Ayittey, F. K., & Gazi, M. A. I. (2023). Psychological adjustment and guidance for ageing urban women. *Ageing International*, *48*(1), 222-230.
- Schultz, W. J., & Ricciardelli, R. (2023). The floating signifier of 'safety': correctional officer perspectives on COVID-19 restrictions, legitimacy and prison order. *The British Journal of Criminology*, *63*(5), 1237-1254.
- Services, D. o. C. (2005). *Department of Correctional Services*.
- Shah, S. R., & Al-Bargi, A. (2013). Research Paradigms: Researchers' Worldviews, Theoretical Frameworks and Study Designs. *Arab World English Journal*, *4*(4).
- Sibisi, N. N., Masuku, M. M., & Mphatheni, M. R. (2024). Bars of Suffocation: A Critical Review of the Covid-19 Pandemic and its Effect on Correctional Facilities in South Africa.
- Simon, F. H. (2005). *Prisoners' work and vocational training*. Routledge.
- Sorge, A., Bassanini, F., Zucca, J., & Saita, E. (2021). "Fear can hold you, hope can set you free". Analysis of Italian prisoner narrative experience of the COVID-19 pandemic. *International Journal of Prisoner Health*.
- Steger, M. F. (2018). Meaning and well-being. *Handbook of well-being*. Salt Lake City, UT: DEF Publishers.
- Steinberg, L. S. (1977). Social Science Theory and Research on Participation and Voluntary Associations: A Bibliographic Essay.
- Steptoe, A., Demakakos, P., & de Oliveira, C. J. T. d. o. a. (2012). The psychological well-being, health and functioning of older people in England. 98.
- Suhomlinova, O., O'Reilly, M., Ayres, T. C., Wertans, E., Tonkin, M. J., & O'Shea, S. C. (2023). "Gripping onto the last threads of sanity": transgender and non-binary prisoners' mental health challenges during the covid-19 pandemic. *International Journal of Mental Health*, *52*(3), 218-238.
- Tannenbaum, M. B., Hepler, J., Zimmerman, R. S., Saul, L., Jacobs, S., Wilson, K., & Albarracín, D. (2015). Appealing to fear: A meta-analysis of fear appeal effectiveness and theories. *Psychological bulletin*, *141*(6), 1178.
- Testoni, I., Francioli, G., Biancalani, G., Libianchi, S., & Orkibi, H. (2021). Hardships in Italian prisons during the COVID-19 emergency: the experience of healthcare personnel. *Frontiers in psychology*, *12*, 619687.
- Thorpe, D. H., Smith, D., Green, C., & Paley, J. H. (2024). *Out of care: The community support of juvenile offenders*. Taylor & Francis.
- Van Hout, M. C., Bigland, C., & Mariniello, T. (2023). A legal-realist assessment of the Zimbabwean correctional system response to COVID-19 during state disaster measures. *International Journal of Prisoner Health*, *19*(3), 290-305.
- Van Hout, M. C., Mhango, V., Kaima, R., Bigland, C., & Mariniello, T. (2022). A legal-realist assessment of human rights, right to health and standards of healthcare in the Malawian prison

- system during COVID-19 state disaster measures. *International Journal of Prisoner Health*, 19(3), 273-289.
- Van Hout, M. C., Southalan, L., Kinner, S., Mhango, V., & Mhlanga-Gunda, R. (2023). COVID-19, conflict, climate change, and the human rights of people living in African prisons. *The Lancet Planetary Health*, 7(5), e352-e353.
- Van Hout, M. C., & Wessels, J. (2021). "Ubuntu" I am because we are: COVID-19 and the legal framework for addressing communicable disease in the South African prison system. *International Journal of Prisoner Health*, 18(4), 350-370.
- Van Rooyen, K. (2024). An exploration of female offenders' yoga experience in Worcester's correctional centre.
- Vehovar, V., Toepoel, V., & Steinmetz, S. (2016). Non-probability sampling. *The Sage handbook of survey methods*, 1, 329-345.
- Vittengl, J. R., Clark, L. A., Thase, M. E., & Jarrett, R. B. (2020). Psychometric properties of the Marital Adjustment Scale during cognitive therapy for depression: New research opportunities. *Psychological assessment*, 32(11), 1028.
- Vose, B., Cullen, F. T., & Lee, H. (2020). Targeted release in the COVID-19 correctional crisis: using the RNR model to save lives. *American Journal of Criminal Justice*, 45(4), 769-779.
- Wainwright, L., Senker, S., Canvin, K., & Sheard, L. (2023). "It was really poor prior to the pandemic. It got really bad after": A qualitative study of the impact of COVID-19 on prison healthcare in England. *Health & Justice*, 11(1), 6.
- Wilson Fadiji, A., De La Rosa, P., Counted, V., De Kock, J., Bronkhorst, W., Joynt, S., Tesfai, A., Nyamaruze, P., Govender, K., & Cowden, R. (2025). Flourishing during the COVID-19 pandemic: A longitudinal study in South Africa. *Psychological Reports*, 128(2), 678-701.
- Yamane, T. (1967). *Problems to accompany" Statistics, an introductory analysis"*. Harper & Row.
- Yang, K., & Banamah, A. (2014). Quota sampling as an alternative to probability sampling? An experimental study. *Sociological Research Online*, 19(1), 56-66.

