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An Analysis of the Impact of COVID-19 on the Prison System in Ghana

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Introduction

Research on COVID-19 in prisons emphasized the potential for the virus to spread rapidly in prison settings due to proximity among prisoners and recommended the speedy implementation of infectious diseases control protocols such as safe social distancing, surveillance and testing, isolation of individuals who tested positive from the general population, limiting interactions by strict control of the prison environment, increasing sanitization and disinfection practices including regular handwashing (Burki, 2020; Jones & Tulloch, 2020; Okano & Blower, 2020; Solis et al., 2020; Wang et al., 2020). Other researchers argued for the development and implementation of rapid risk assessment tools to limit the import and export of infections between community and prisons (Kinner et al., 2020), early release of some prisoners due to their vulnerability to COVID-19, e.g. older prisoners and those with chronic health conditions (Simpson & Butler, 2020), "decarcerating", or releasing, as many people as possible, focusing on those who are least likely to commit additional crimes" to overcome overcrowding (Akiyama et al., 2020: 2076; Brennan, 2020). Overall, the emerging research about COVID-19 in prisons underscores the need to adopt sound infection control practices and avoid or prevent prison overcrowding to curb the spread of the virus.

However, there is a paucity of literature on the impact of COVID-19 on the everyday life of prisoners and prison officers. The emerging literature broadly emphasizes the difficulties and frustrations associated with prison officers' work and prisoners' lives. African prisons were not an exception

to COVID-19 infections and their adverse consequences. Indeed, given the weak prison systems in Africa before the pandemic including limited surveillance, laboratory and testing capacity, and health resources, the adverse consequences were predictably dire (Heard, 2020; Nkengasong & Mankoula, 2020). We have limited knowledge of the way COVID-19 is impacting everyday life in prisons. Our study is an attempt to address this gap by exploring prison officers' assessments of the impact of the COVID-19 pandemic on their work and the individuals in custody.

COVID-19 and Frontline Criminal Justice Personnel

COVID-19 has impacted global criminal justice systems and frontline personnel who work in them in a variety of ways. Among police officers, the pandemic has increased depression, anxiety and stress (Frenkel et al., 2021; Laufs & Waseem, 2020; Mohammed et al., 2022). Operational issues such as the lack of resources, unequal sharing of working responsibilities and officers' high-risk of contracting COVID-19 were directly related to officers' mental health deterioration (Mohamed et al., 2022). In prisons, the incidence of infectious diseases and the fear of infection affect prison officer stress, job satisfaction and organizational commitment (Akoensi, 2014; Hartley et al., 2012; Lambert and Paoline, 2005). However, when prison staff perceives that the incidence of infectious diseases is handled properly, this curtails job stress and burnout (Lambert et al., 2018). In Ghana, Akoensi (2014) found that officers' concerns about contracting infectious diseases and the risk of further transmission of infections to their families and the public as distressing. Officers recounted that prison overcrowding, some specific and general officer routines, or duties particularly the morning unlock and the search for contrabands, the lack of personal protective equipment exposed them to infectious diseases (Akoensi, 2014). The lack of health provisions for prison officers in the form of vaccinations, lack of in-prison health facilities and lack of knowledge about prisoners'

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health status were also cited as increasing officers' anxieties about contracting infectious diseases. Together, these concerns about infectious diseases further undermined officers' job satisfaction and organizational commitment.

In England and Wales, the Prison Reform Trust (2021) observed that due to COVID-19, prison officers varied their way of work by limiting interactions with prisoners whilst others risk their safety to provide support to prisoners. One of the reasons that the job of being a prison officer might have become harder was related to the need to form trusting relationships with prisoners. This was highlighted as an important factor by Lambert and Wilkinson (2021) in their analysis of testing protocols within prisons in England and Wales. This aspect of prison life has been discussed at greater length by Liebling (2011) and Crewe, Liebling and Hulley (2015) who found that staff-prisoner relationships are at the heart of prison life and that staff-prisoner relationships deployed mainly through officers' exercise of authority determined prisoners' evaluation of the fairness of prison regimes and differentiated between prisons that were survivable and those that were not. Part of this relationship, for Liebling (2011), relates to the motivation officers have for their role. Indeed, Ikwukananne (2009) found that where prison officers are intrinsically motivated to perform their role (i.e. they gain some level of satisfaction from engaging with prisoners), they are less likely than officers who are extrinsically motivated (i.e. by financial reward) to leave the profession. Although we know a great deal about the impact of the COVID-19 on police officers from various jurisdictions, our knowledge on how it affected prison officers is limited, and it is our aim to address this void in the literature.

COVID-19 and the Pains of Imprisonment

Since his seminal work, Sykes (1958) outlined what he called the "pains of imprisonment"; that is, a set of frustrations experienced by prisoners, including deprivation of liberty, goods and services, security, and autonomy. Crewe (2011) observes that, despite the transformation of prisons since Sykes' (1958) work, the concept of "pains" is still felt although generated differently by the reconfiguration of prisons with increasing emphasis placed on psychological power. Three additional pains have been identified: self-governance (where self-regulation and taking responsibilities for determining their futures), uncertainty and indeterminacy (experienced as anxieties and despair due to increasing indeterminate sentences by the courts), and psychological assessment (where psychological assessments of risk by psychologists supersedes prisoners everyday welfare provisions) (Crewe, 2011). As noted by Crewe (2011: p. 509), "modern penal practices have created some new burdens and frustrations that differ from other pains in their causes, nature, and effects". COVID-19 has resulted in new penal practices through the promulgation of prison policies to prevent and control the virus (Brennan, 2020; Byrne et al., 2020). This has resulted in significant changes to prison life resulting in the experience of existing pains in new ways and the potential creation of new pains.

Despite these developments, there is limited research assessing the impact of COVID-19 on prison culture and penal practices (for notable exceptions, see Maycock, 2022; Suhomlinova et al., 2022). Strict measures adopted during the pandemic limited researchers' ability to access prisons. Thus, innovative research methods were expedient in addressing this research gap. Both Maycock and Dickson (2021) and Suhomlinova et al., (2022) adopt a correspondence participatory action methodology to ascertain the impact of the COVID-19 pandemic on prisoners in the Scottish prisons and English and Welsh prisons respectively. Both studies found that lockdown restrictions and prison rule changes brought on by the pandemic mainly affected prisoners' family relationships where prisoners were unable to get in touch with their families leading to feelings of detachment and isolation in prison. This also affected prisoners' communication as they were unable to write letters due to their confinement over lengthy periods in cells. Interpersonal relationships among prisoners and prison-staff relationships were also strained. Overall, lockdown measures were experienced as further punishment, exacerbating the 'pains of imprisonment'. In a further analysis of their findings, Maycock (2022) emphasizes the importance of innovative approaches to understanding the impact of COVID-19 on prison life and provides important context to the extent of the transformation of everyday prison life via the amplification of existing "pains" and causing significant issues to prisoners.

In England and Wales, HM Inspectorate of Prisons (2021) conducted in-depth interviews with men, women and children held in prisons in Autumn 2020 including those sentenced, unconvicted and those due for release. They found that whilst prisoners questioned the fairness and legitimacy of the very strict lockdown measures that confined them to their cells for almost 23 h a day, they acknowledged that such measures were necessary. Although violence, intimidation and bullying were reduced due to limited opportunities for interactions, prisoner debts persisted, and others resorted to increased drug taking to cope with the boredom and isolation these measures imposed. Prisoners also reported a lack of support from other prisoners, staff, family and friends from beyond the prison. Nonetheless, the introduction of free video calls and in-cell telephones was valued by prisoners. Overall, prisoners reported decreased emotional, psychological and physical wellbeing due to the strict restrictions with some prisoners comparing their situation with caged animals. However, Hewson et al., (2021) observe that the number of reported self-harm during lockdown decreased



in English prisons. Hewson et al., (2021) observe that this decrease occasioned by reduced threats of bullying, threats and violence due to prisoners spending significant amount of time in their cells, it is not a true reflection of the number of self-harm incidents. They argued that minor acts of selfharm going unreported and prisoners' inability to seek medical assistance for self-harm during lockdown were important reasons. Analysis of journals authored by a special group of prisoners known as "cocooners" who were isolating due to advanced age or medical vulnerability in the Republic of Ireland reported experiencing lockdown restrictions as further punishment and solitary confinement. Similar to their counterparts in the United Kingdom, prisoners (i.e. cocooners) reported decreased communications, relationships and social engagements with prison officers and other prisoners which had knock on effects on their mental health (Garrihy, et al., 2023). In the spirit of adopting sound but innovative approaches to research prisons during the pandemic (e.g. Maycock, 2022 and Suhomlinova et al., 2022), we examine the extent to which prison life has changed in Ghana's prisons using prison officers as a lens.

The Ghana Prison Context

Ghana has 43 prisons most of which were established during British colonial rule. These prisons are of different security categorizations, including a maximum-security prison, a medium-security prison and agricultural settlement camps. As of 6 June 2022, there were 14,444 individuals in custody; of these, 166 being females and 229 juveniles held at the Senior Correctional Centre for young persons. Foreign national prisoners mainly from neighbouring countries constitute 6 percent (870) of the population (Ghana Prison Service, 2022). These prisons face various challenges, including limited rehabilitation opportunities and overcrowding (Boakye et al., 2022). Overcrowding has been a persistent problem in Ghana's prisons but with successive improvements, the current overcrowding rate is 45 per cent above capacity. Malnutrition and the poor diet of prisoners make prisoners vulnerable to infectious diseases including COVID-19.1

Several strategies to prevent the spread of COVID-19 in Ghana's penal system were adopted (Egyiri & Acheampong, 2020). Besides health education flyers and workshops on COVID-19 held in all prisons for prisoners and officers to promote awareness of the virus, concrete measures were also implemented. Upon recommendations of non-governmental organizations (NGOs) to decongest the prisons, 808 prisoners convicted for petty crimes and misdemeanours were

¹ Ghana currently spends 1.80 cedis, the equivalent of 0.20 cents, to feed a prison per day.



granted Presidential pardons in March 2020 and another 794 prisoners comprising first-time offenders, seriously ill and aged prisoners over 70 years were pardoned in July 2020 on the recommendations of the GPS to decrease congestion and avoid the spread of COVID-19 (Ghanaian Times, 2020; Egyiri & Acheampong, 2020). Other measures included a total ban on prison visits from religious organizations and individuals and non-governmental organizations, but prisoners were allowed one non-face-to-face visit per week. Visitors were required to wash their hands, apply hand sanitizer, have their temperature monitored, their history of travel documented and the wearing of facemasks. Visitors were not allowed to enter into prison but were allowed to leave provisions or supplies with prison officers at designated sites who sanitized the items and later, presented them to the prisoners.

Some selected prisons (7 in total out of the existing 43 prisons) were designated for receiving new prisoners. Thus, prisons were not admitting prisoners directly and "densely populated prisons put on partial lockdown for new admissions" (Egyiri & Acheampong, 2020: p. 3). Newly admitted prisoners were required to go through the same process as visitors and further screened for COVID-19 symptoms by nurses before completing prison reception procedures. Following this, newly admitted prisoners were monitored daily in an observation centre for between 14 and 28 days for COVID-19 symptoms and were only allowed to associate with resident inmates until declared medically fit by a medical officer. During this period, the transfer of prisoners to court sittings as well as the transfer of remand prisoners, educational and vocational programmes, and external labour activities including work on farms were suspended in all prisons (Egyiri & Acheampong, 2020).

Prison officers were also required to undergo the same procedures as prisoner visitors daily, always wore facemasks and were mandated to carry personal hand sanitizers. The majority of prison officers lived in a barracks-styled accommodation adjacent to the prisons whilst others lived in communities and towns where prisons were located. Prison officers residing in towns and communities were asked to take compulsory medical leave to reduce community-to-prison infection. All prison officers were further entreated to avoid associating in large gatherings and avoid crowded places to prevent the spread of the disease among officers and prisoners (Egyiri & Acheampong, 2020).

It is refreshing to learn that these protocols were successful as only one case of COVID-19 imported by a newly admitted prisoner was recorded in Ghana's prisons on 15 June 2020 (Egyiri & Acheampong, 2020). This prisoner whose who showed no discernible symptoms of COVID-19 was isolated but infected 6 other prison officers who tested positive and were also identified and isolated upon successful contact tracing (Egyiri & Acheampong, 2020). What we do not know, however, is how prison officers and

prisoners experienced the change in the penal system following the implementation of these protocols and how they impacted prison officers' work and prisoners' experiences of confinement.

Data and Methods

The data for the study came from an open-ended electronic survey of prison officers between August 2020 and December 2020. During this period, the Government of Ghana introduced a zero-contact policy. This precluded in-person interviews with both prison officers and prisoners to prevent potential infections between researchers and participants. The crafted open-ended survey questions enabled the exploration of the lived experiences of prison officers and prisoners during COVID-19 pandemic. They included the following: How has COVID-19 affected the way you interact with prisoners?; How has COVID-19 affected the support this prison provides for prisoners?; What are some of the things prisoners have told you about COVID-19?; How do you think COVID-19 is affecting prisoners in your establishment?; How do you think prisoners feel about COVID-19?; How has COVID-19 affected the way you interact with fellow officers?

The questions were hosted on Qualtrics, web-based research platform. Qualtrics allows researchers to design surveys and generate a link which is then shared with prospective research participants. We did a test run of the survey on Qualtrics to ensure that it worked as it was intended. Following the test run, we then contacted the Officers-incharge (OIC) of the various prisons with the approval letter from the headquarters of the Ghana Prisons Service who then held virtual meetings with us and instructed their Staff Officers to assist us. Since these prisons hosted WhatsApp groups for prison officers where various announcements and news were distributed to officers, we agreed that the survey link is shared on the WhatsApp group pages to enable officers to respond on their phones or computers. In some prisons where officers had access to internet-connected computers, officers managed to complete their surveys on site whilst others completed the survey at home. All officers including those who used their personal internet service provider to complete the survey were reimbursed with the cost of data of GHS5 (equivalent to £0.35, the equivalent of 0.44 USD). WhatsApp administrators administered the reimbursement of funds.

Ethical approval for the study came from the second author's institution. We also ensured consent was obtained from each participant. The front page of the survey contained information about the nature of the research and the commitment required if participants agreed to take part. We provided assurances of confidentiality of their responses and anonymity for participants. Participants understood that only

the information for which we expressed their responses would be used in our study. In honour of that commitment, we deleted all IP addresses prior to the analysis of the data. Participants were informed that they had the right to decline participation at any stage even when they had commenced completing the survey. The front page contained a mandatory question for participants to answer Yes or No to agree to take part in the study. If they answered no, a message popped up to thank them, and they could not proceed any further. Only those who affirmed consent proceeded to complete the open-ended survey.

Overall, 553 prison officers based at 12 prisons responded to our survey. However, after removing all missing cases, 394 valid responses were retained for further analysis. Of those who completed the survey, 56.8% were males, 41.6% were females and 1.5% preferred not to indicate their gender. In terms of marital status, 41.5% were single, 56.3% were married and the rest were separated or divorced. There was a wide variation in level of experience on the job, ranging from 2 months to 38 years. The median experience was 8 years.

All the responses were imported to NVIVO version 1.7.1. and analysed following an inductive approach. Data units were then assigned into various categories and themes. When a data unit fitted into multiple themes or categories, we ensured that this was assigned to the category or theme that was most suitable. For example, if a respondent referred to three different impacts of COVID-19 on their work, these were separated into three subthemes under the officer impact theme/category. Overall, five overarching themes and their corresponding subthemes were created (see Tables 1, 2, 3, 4, 5).

Findings

We have organized this section under five broad themes or categories relating to how officers believed COVID-19 affected their work, (2) their interactions with prisoners, (3) the effects of COVID-19 on the support systems available to prisoners and (4) on prisoners, and (5) prisoners' perceptions about the COVID-19 virus.

COVID-19 and Prison Officer Work

Overall, 308 codes were generated from the responses in relation to the impact of COVID-19 on officers' work. Whilst a significant majority of officers (234) indicated a negative impact, 72 indicated no impact, and 2 indicated a positive impact of COVID-19 on their work. The breakdown of themes categorized as negative are clustered in Table 1.

The responses from the prison officers show that their work has been negatively affected by the pandemic. By



Table 1 Themes showing the negative Impact of COVID-19 on officers' work

Theme	N	%
Performance 'poor performance'; 'work has slowed down'	55	23.5
Bad 'very bad'; it is affecting our work'	47	20.09
Fear of contracting the disease 'loss of concentration and fear'	42	17.95
Safety protocols 'not comfortable wearing nose mask'	31	13.25
Interactions with prisoners 'it has made people not come to me'	28	11.97
Restrictions on movement 'restrictions on movement'	23	9.83
Changes in shift pattern 'it has changed our shift system'	18	7.69
Workload has increased 'Covid-19 has brought additional responsibility'	11	4.7
External support (NGO's) 'reduction in the support received from'	9	3.85
Reduction in officers resulting in more pressure 'cutting down on staff'	8	3.42
Relationships 'poor human relations has created a barrier for work'	7	2.99
Education and training of prisoners 'formal education program suspended'	7	2.99
Exercising caution 'very cautious'	6	2.56
Commuting to prison 'lack of transports to work'	6	2.56
Social distancing 'because of social distancing we don't get close'	5	2.14
Activities 'it has really affected daily activities'	4	1.71
Loss of support 'we don't get enough support to do our work'	3	1.28
Education and training of officers 'training [] also affected	3	1.28
Unable to complete work 'certain work continues to pile up'	2	0.85
Security compromised 'it can cause security threat'	2	0.85
Increase in prisoners 'we are getting more inmates'	1	0.43
Prisoners make complaints 'it made prisoners complain'	1	0.43
Inspections 'cut down on inspections'	1	0.43
Total	234	100

far, the most dominant theme is work performance. Officers indicated that they were unable to perform their work as they did pre-pandemic and described that their 'work has slowed down' and 'performance was poor'. Related to performance is officers' recognition that the virus had affected their work in a bad way. Others cited the fear of contracting the disease, discomfort in using the PPEs (e.g. wearing face masks), especially in the hot tropical climate, 'not comfortable wearing face masks', limits to their interaction with prisoners, restrictions on prisoners' movements, changes to the usual shift system with its attendant impact on juggling work and family roles, and an overall increase in officers' workloads. Other themes cited by prison officers include a reduction in officers' numbers due to increased sickness absence, commuting stress associated with difficulties in securing transport to work (the lockdown decreased the availability of public transport systems e.g. taxis and buses which were mainly privately owned), limiting physical interactions between prison officers, 'because of social distancing we don't get close [to each other]', affecting general activities within the prison, among a host of other themes outlined in Table 1.

Prison Officers' Interactions with Prisoners

Most officers indicated that the impact of the disease had been bad in relation to their interactions with prisoners (see Table 2), 'it has had a negative impact with interactions with the inmates'; and on their lives in general, 'Covid-19 has caused a lot of harm to our lives and jobs'. Where officers indicated that Covid-19 had made no difference, often the (more elaborate) responses mentioned the role of safety protocols, 'nothing significant has changed in our interactions just that we try to maintain the distance between us so to observe the protocols'. Of course, it is possible that some respondents had not been as affected by Covid-19 due to

Table 2 Officers perceptions of COVID-19's impact on prison interactions

Themes	N	%
have reduced	76	48.41
are still possible following safety protocols	36	22.93
are much harder due to safety protocols	23	14.65
Reduced communication	20	12.74
are still possible ignoring safety protocols	2	1.27
Total	157	100



Table 3 Officers perceptions of fear associated with COVID-19

Fear	N	%
of contracting the disease	38	67.86
meant that officers were exercising caution	12	21.43
of transmitting the disease to prisoners	2	3.57
of new prisoners	2	3.57
were suspicious of inmates	2	3.57
Total	56	100

their role or the geography of the establishment they worked in. Very few, but some, officers indicated that the pandemic had a good impact on interactions, 'the Covid-19 has created an avenue to have more one-to-one interaction by way of health education'.

Most responses were about the impact of the disease and about interactions. Taking interactions as a subtheme, we look in more detail at the responses.

Where officers indicated that their interactions with prisoners had reduced because of Covid-19, they described how safety protocols meant that any interactions were 'based on necessity'. One officer elaborated, thus,

[...] it has really affected the way I interact with prisoners [...] because they know how deadly the virus is and at times, they get scared when you get close to them, even with the appropriate [PPE].

Whereas some officers stated that interactions were still possible following safety protocols, 'my interaction with them hasn't changed from the normal routine apart from wearing a nose mask and frequently washing my hands'; others described how interaction had been made much more difficult due to adherence to safety protocols, 'due to the social and physical distance protocols, direct and face to face interaction with prisoners was almost impossible since everyone was trying to protect himself'. Very few, but some officers, described how they ignored safety protocols to interact with prisoners, 'I interacted with them with care, with no mask on'. When officers described a reduction in communication they stated, 'it has brought about a lack of proper interpersonal communication'; 'communication has become difficult for the officers, and the inmates'.

Fear was a major subtheme in officers' responses (Table 3).

Officers stated 'We don't have personal relationships with [inmates] because we are afraid, we might get the virus'. Officers stated that this fear meant they were exercising caution when interacting with prisoners, 'we are careful when interacting with prisoners and are easily alarmed at the least report of an illness which exhibits similar signs of Covid'. A couple of officers suggested they were fearful of transmitting the disease to inmates: '... we don't want to pose any

danger to them by accidentally infecting them with it since we go out and come in daily'. Other officers stated that the pandemic had impacted the way they interacted, 'especially [with] the newly admitted'. Some officers described how they had become 'suspicious and distanced'.

Support for Prisoners

In total, there were 394 respondents (see Table 4). Some respondents provided no response, and others provided responses that were coded more than once. In total, the number of codes produced in relation to support for prisoners was 397.

Many officers believed that the support that the prison provides remains unchanged, 'it has no effect on the support we give to inmates'. Nevertheless, some officers stated, 'support for the prisoners has reduced drastically', and some specifically about a reduction in support from faith groups and NGOs. Some officers believed that support had increased, about healthcare, 'Prison authorities are now, more than ever, supportive to inmates with regards to healthcare'. Nine officers stated that the pandemic had negatively impacted relationships between prisoners and officers, 'it has affected the support by limiting the number of interactions with the inmates'. Again, fear was mentioned, by four officers. Two officers described how delays had been introduced in the court system, hurting prisoners, 'sometimes remand prisoners could not go to court'.

Thirty-two (32) responses related to visits, 'restrictions on visits'; 'they don't get visitors the way they used to'. Twenty-one (21) responses mentioned faith groups, and other NGO's:

Table 4 Areas of support provisions for prisoners affected by COVID-19

Theme	N	%
No change from pre-pandemic	131	33
Finances	68	17.13
Support has reduced	65	16.37
Visits	32	8.06
Support has increased	21	5.3
Faith Groups and NGO's	21	5.3
Healthcare	19	4.8
Interactions with officers	9	2.27
Fear	4	1.01
Education	4	1.01
Safety protocols	4	1.01
Daily activities	3	0.76
Movement around the prison	3	0.76
Delays	2	0.05
Total	397	100



Due to Covid-19 pandemic, support groups such as the churches, groups and individuals that come to support, socialize, and fellowship with inmates have been truncated. Such supports are not forthcoming due to the fear of contracting and spreading the virus.

This was a significant loss given that the Ghana Prisons Service was heavily reliant on these organizations for supporting the welfare of prisoners, and in shaping the moral, spiritual and religious life of inmates through the organization of religious services and counselling. These organizations further provided material (e.g. food and clothing) and infrastructure support (e.g. constructing boreholes, and other critical prison infrastructure e.g. prisons) (Boakye et al., 2022).

Eleven responses discussed the impact of the pandemic on the ability of prisoners to go to work outside the prison, 'We don't send them on outside labour anymore'. This is again another significant loss as "outside or external labour" provided prisoners with opportunities to exercise, enjoy some fresh breeze, fraternize with members of the community within the prison enclave and facilitates their eventual reintegration to society after serving their sentences.

Four responses mentioned education, 'it affected most of the intervention programs such as formal education, technical and vocational skills came to a halt due to the limit in human interaction during this period'. Given the relatively limited rehabilitation provisions in Ghana's prisons, the inability for these educational, vocational, and technical workshops to run normally will place a significant strain and anxiety on prisoners who have enrolled on these programs especially those due for imminent release who would not have completed their programs. Not knowing when these rehabilitative programs were going to be

restarted would add to their pain of uncertainty for the future among prisoners (Crewe, 2011).

Four responses focused on the role of safety protocols in ensuring support was still available, 'all the supports are provided by strict observation the covid 19 protocols'. Three responses referred to daily activities, 'it has affected the support because the daily activities are restricted' and three responses discussed restrictions in movement around the prison, 'the movement of the prisoners has been restricted'.

Perceived Impact of Covid-19 on Prisoners

We asked officers what they believed had been the impact on Covid-19 on prisoners. Most responses (85.7%) described the impact as 'bad'. Details of the perceived impact are presented in Table 5.

The reduction in visits is concerning mainly because besides relieving prisoners of boredom and updating them with family developments, prisoners largely rely on visits from friends and family to replenish their depleted food stock and other provisions. Prison food has received very poor rating among prisoners for their quality and quantity and are not relied upon by prisoners for their daily nourishment. Visits are not limited to family and friends but also from charitable organizations who donate food items and other items to support prisoners. However, this attrition in visits is due mainly to the "no visit" policy introduced by the Ghana Prisons Service, to prevent potential transmission of the virus in prisons.

We also asked the officers about what prisoners told them about the virus. Details about prisoners' perceptions about the virus are provided in Table 6. Most responses fell within the category, 'the virus is real'. Some responses suggested prisoners did not believe the virus existed, 'some prisoners did not believe in the convid-19, others said it would soon go

Table 5 Practical issues affected by COVID-19 in prison

Type of practical issue	N	%
Visits 'visits have been restricted'	91	33.09
Activities 'it is really affecting their daily activities'	39	14.18
Finances 'it has affected donations'	29	10.55
Safety protocols 'they find it difficult to go by protocols'	27	9.82
Movement around the prison 'restrictions on movement'	21	7.64
Court 'they don't get access to court and their legal team'	16	5.82
Loss of interaction 'they can't interact freely'	16	5.82
Prison conditions 'over-crowding'	14	5.09
External support 'they are not visited by support groups/philanthropists'	13	4.73
Rehabilitation 'making rehabilitation [] challenging'	6	2.18
Reduction in disobedience 'has reduced disobedience'	1	0.36
Staff illness 'some officers fell ill'	1	0.36
Prisoner healthcare 'we are not able to send them to the main hospital'	1	0.36
Total	275	100



Table 6 Prisoners perceptions of COVID-19 realities

Issues of concern	N	%
The virus is dangerous	84	31.11
Fear of contracting the disease	81	30
Officers and new prisoners pose a threat	61	22.6
Is dangerous because of conditions in the prison	17	6.3
And prisoners are worried about losing loved ones	11	4.07
Air borne disease	9	3.33
And delaying release	3	1.11
The government is not doing enough	2	0.74
The virus is not dangerous	2	0.74
Total	270	100

away'. Others suggested that the virus had a negative effect, particularly in relation to visits, 'relatives don't visit them'; safety protocols, 'they spoke of the difficulties of adhering to the protocols' and relationships, 'their way of living in the prison has been affected due to this pandemic especially how they interact with each other'. Some responses suggested that prisoners wanted to find out more about Covid-19, 'prisoners have inquired more about Covid-19 from us because we are out there'. A number of responses mentioned conspiracy theories including 'some feel blacks are immune to the disease'; 'they think Covid-19 is a curse from God'; Covid is a 'Manmade virus to reduce population' and 'some feel it's a biological weapon'.

Where responses fell into the category, 'the virus is real' the responses varied. Most responses indicated that prisoners believed the virus to be very dangerous, 'it's infectious, kills very fast, easily transmissible etc.'. Fear as a theme was again present, responses suggested that prisoners were frightened of contracting the disease, 'it is deadly, and they are afraid they might get it'. Some responses indicated that prison officers had been told they, alongside new inmates, posed a threat, 'they believe it's real and that officers are more likely to import it into the prison because they do not go out, unlike the officers'. Some responses discussed the conditions within the prison and that prisoners felt this posed a risk, 'scary because of lack of practical social distancing. The rapid spread should there be a recorded case due to congestion'; 'Some think it's deadly and are afraid that the mortality will be high if it gets into prison'.

Novisky et al., (2021: p. 1) argue that "incarceration is a potent structural driver of health inequalities that must be considered as a fundamental social cause of disease [...] [and] both currently and formerly incarcerated populations are likely to face heightened vulnerabilities to pandemics, including COVID-19, further exacerbating health disparities among incarceration-exposed groups". Whilst responses were varied, the responses give us some indication as to why prisoners were worried. These included that they perceived

themselves to be at greater risk from prison officers that were leaving the prison and returning as part of their shift pattern (see Maycock, 2021; HMIP, 2021 for similar findings). Furthermore, prisoners believed they were at a greater risk of contracting the disease whilst in prisons that were considered to be overcrowded. Coker (2020: p. 15) states that "over-crowding, unsanitary conditions, poor ventilation in a prison will likely increase the speed at which an epidemic unfolded" (see also Burki, 2020).

Muntingh (2020) argues that such conditions are prevalent in prisons throughout Africa (see also Nweze et al., 2021). Several studies found that prison conditions exacerbated the spread of Tuberculosis within African prisons, which much like Covid-19 is a respiratory disease, spread from person to person through the air via close contact (O'Grady et al., 2011; Reid et al., 2012; Telisinghe et al., 2016). Certainly, overcrowding and general prison conditions were the cause of much concern raised by prisoners in Ghana when asked by officers about the virus (see Sylverken et al., 2019). Concerns about such conditions gave rise to calls from experts in the academic community for early release policies (Simpson & Butler, 2020); or 'empirically informed [...] targeted release' (Vose et al., 2020). These sentiments were echoed by some officers who stated that older prisoners serving sentences for non-violent offences should have been released, alongside introducing more diversionary measures available to the courts.

Discussion

The COVID-19 pandemic has had significant effects on global prison systems. Although there is an emerging literature on the impact, they are limited mainly to Western jurisdictions without recourse to prison institutions in the global South. The present study addresses this gap in our knowledge by utilizing data obtained from prison officers in Ghana. Our aim was to document the extent to which the COVID-19 pandemic is affecting the work of prison officers and impacting prisoners' lives. Our research reveals various frustrations experienced by prison officers in their work and various pains experienced by prisoners—the discovery of new pains and the amplification of existing pains. Indeed, the pandemic had impacted several facets of prison life including the way prison officers did their work, interactions between staff and prisoners, support available to prisoners, prisoners developing emotional and practical reactions to the pandemic and affecting prisoners' fears and anxiety about the virus.

Among prison officers, the most common sentiment expressed was that Covid-19 had impacted their work in a negative way. Not only were officers just as fearful as prisoners about contracting the virus, but they also considered



themselves to be at greater risk of exposure due to conditions within the prison. Hartley et al., (2012) found a relationship between exposure to infectious diseases (including respiratory viruses such as TB) and job stress/satisfaction. This relationship was found to be curtailed somewhat when the officer believed they had the support of their supervisors. The responses from the prison officers in this study suggest that some believed the virus was being handled appropriately, while others did not. This may be due to the level of risk individual officers were exposed to because of the location and overcrowding rate of the prison they were working in.

There were interesting similarities between officers in Ghana and UK reaction to the pandemic. In England, some officers were noted for going above and beyond to support prisoners and ensure that their needs were met-much like some of the responses gathered in this study. Other officers were perceived by prisoners as relishing the opportunity to lock individuals down, treating certain prisoners more/less favourably and not taking necessary precautions in relation to wearing PPE or social distancing. Again, responses from our study indicate that some officers were prepared to ignore safety protocols and that the majority had distanced themselves from prisoners in order to maintain their own personal safety, where this was experienced as a conscious attempt to withhold information from prisoners in Scotland (Maycock, 2022). Whether intended to inflict further punishment on prisoners or not, responses did indicate that communication channels between prisoners and officers had deteriorated because of the virus, with the unintended consequence of making the job of forming relationships and maintaining security harder (see Maycock, 2022).

Prison officers further observed that the pandemic had affected prisoners in their establishments in various ways. Whilst officers felt that COVID-19 had limited available support to prisoners, interestingly, other officers indicated that they did not believe the support provided to prisoners had been affected by Covid-19. Maycock (2022) suggests that Covid-19 has extended the 'pains of imprisonment' (Sykes, 1958; Goffman, 1961). The prisoner letters used in Maycock's (2022) study form the basis from which the author describes how certain constraints are further exacerbated by the impact of the pandemic, 'deepening' the experience of imprisonment (Crewe, 2011). They suggest that in particular, a prisoner's personal autonomy is further reduced within the prison as a result of Covid-19. Furthermore, that prisoners experience an increased sense of isolation, and a breakdown in communication with both staff and fellow prisoners is very evident among prisoners in Ghana which chimes with findings from Western jurisdictions especially Scotland, England and Wales and the Republic of Ireland (Garrihy et al., 2023; Hewson, et al., 2021; Maycock, 2022; Suhomlinova et al., 2022). Despite important contextual differences between Ghana and prisons in the United Kingdom, there is no doubt that the pains of imprisonment experienced by prisoners in Ghana during the pandemic has been further exacerbated.

However, some prison officers described how the pandemic had resulted in delays to some prisoners' sentences as a result of backlogs in the courts. These findings are echoed by reports from prisons within England and Wales (HMIP, 2021; Prison Reform Trust, 2021). Not only were convicted prisoners experiencing delays to their sentence planning and parole hearings, but the number of prisoners awaiting trial in prisons across the UK had by September 2020 risen to its highest peak since 2014 (HMIP, 2021). Furthermore, the extent to which prisoners could engage in rehabilitative programmes or relationships was described by officers as being reduced. The Prison Reform Trust (2021) report emphasized the potential consequences associated with suspending both visits and activities such as work and other vocational programmes designed with rehabilitative ideals in mind (see also Penal Reform International, 2020).

Research suggests that people in prison are at an increased risk of returning to prison post-release (Durose et al., 2014). Dallaire et al., (2021) posit that one potential explanation for this relationship could be related to the lack of support available to prisoners upon release (La Vigne et al., 2005; Maruna & Toch, 2005; Morenoff & Harding, 2014; Baer et al., 2006). Visits have been identified as an essential element in maintaining the types of social bonds necessary for prisoners to be successful once they leave prison (see Balers and Mears, 2008; Duwe and Clark, 2013 in Dallaire et al., 2021). Prison officers indicated that visits were suspended; restricted or that family members were reluctant to visit based on concerns about the increased level of risk associated with the prison conditions and the transmissibility of the virus. Further to the reduction in visits of family members to prisoners, officers indicated that visits by NGOs and other support groups had also decreased having a drastic impact on the amount of donations the prison was receiving.

Furthermore, responses signalled that the pandemic had impacted daily activities throughout the prison including work. The extent to which employment whilst imprisoned influences rehabilitation is contested. Several studies have explored the role of prison work programmes on recidivism (see Chen & Shapiro, 2007; Cook et al., 2015; Mueller-Smith, 2016). More recently Zanella (2020) attempted to prove a causal link between employment whilst imprisoned and reduced recidivism, finding that the impact of unskilled jobs was associated with a reduction in recidivism for prisoners on longer sentences; but increased recidivism for those on shorter sentences. Whilst the evidence on the effect of employment on rehabilitation is a mixed bag, meaningful activity encompassing work is experienced as having a positive impact by prisoners in terms of making their



sentence more 'tolerable' (see PRT, 2021). Issues of boredom were raised in the responses prison officers provided, alongside the fact that communication between prisoners had decreased and a total suspension of inmate vocational and educational activities (see Maycock, 2022 for similar findings).

Our research is not without limitations. First, we relied on prison officers for the assessment of the impact of COVID-19 on prisoners instead of speaking or contacting prisoners directly. It was not possible to speak to prisoners directly because access to prisons by the public was banned in Ghana and prisoners were not allowed access to the internet except for educational purposes under supervision from officers. We, therefore, entreat caution in the interpretation of our findings in relation to prisoners. Second, because we did not have a list of prison officers who worked at the various prisons to send the electronic surveys directly, we relied on WhatsApp platforms administered by prison officers themselves to distribute the surveys. As observed by Ameen and Praharaj (2020), it is not possible to establish response rate in surveys administered via WhatsApp. Again, because it is not possible to identify the socio-demographic profile of non-respondents in electronic surveys, this poses issues for the generalizability for our findings to the entire population of prison officers in Ghana. Despite these limitations, the responses from prison officers indicate that the Covid-19 pandemic has had a very negative impact on the lives of prisoners. Although most prison officers were reluctant to suggest that the support prisoners receive has diminished, responses did suggest that both prison officers and prisoners were fearful of contracting the disease due to conditions in the prison. Furthermore, the suspension of visits and activities including work also had a detrimental impact on prison life. Maycock (2021) uses the 'pains of imprisonment' to underscore the impact of the pandemic on prisoners, and in particular, on their personal autonomy – a subject which was discussed by prison officers in relation to restrictions on movement around the prison in Ghana.

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Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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References

- Adjei, A., Armah, H., Gbagbo, F., Ampofo, W., Boamah, I., Adu-Gyamfi, C., Asare, I., Hesse, I., & Mensah, G. (2008). Correlates of HIV, HBV, HCV and syphilis infections among prison inmates and officers in Ghana: A national multicenter study. BMC Infectious Diseases, 8, 33. https://doi.org/10.1186/1471-2334-8-33
- Akiyama, M., Spaulding, A., & Rich, J. (2020). Flattening the curve for incarcerated populations—Covid-19 in jails and prisons. New England Journal of Medicine, 382(22), 2072–2075. https://doi.org/10.1056/nejmp1915298
- Akoensi, T. D. (2014). A tougher beat? The work, stress and well-being of prison officers in Ghana. Unpublished PhD Dissertation, University of Cambridge, Cambridge, UK
- Ameen, S., & Praharaj, S. K. (2020). Problems in using whatsapp groups for survey research. *India Journal of Psychiatry*. https://doi.org/10.4103/psychiatry_IndianJPsychiatry_321_20
- Baer, D., Bhati, A., Brooks, L., Castro, J., La Vigne, N., Mallik-Kane, K., Naser, R., Osborne, J., Roman, J., Rossman, S., Solomon. A., Visher, C., & Winterfield, L. (2006). Understanding the challenges of prisoner reentry: Research findings from the urban institute's prisoner reentry portfolio. Reentry Research Findings [Preprint]. https://www.ncjrs.gov/App/abstractdb/AbstractDB Details.aspx?id=235103
- Bales, W. D., & Mears, D. P. (2008). Inmate social ties and the transition to society: Does visitation reduce recidivism? *Journal of Research in Crime and Delinquency*, 45(3), 287–321. https://doi.org/10.1177/0022427808317574
- Boakye, K. E., Akoensi, T. D., & Baffour, F. D. (2022). Rehabilitation in Ghana: Assessing prison conditions and Effectiveness of Interventions for Incarcerated Adults. In M. Vanstone & P. Priestley (Eds.), The Palgrave Handbook of Rehabilitation in Criminal Justice. Palgrave MacMillan.
- Brennan, P. K. (2020). Responses taken to mitigate COVID-19 in prisons in England and Wales. *Victims and Offenders*, 15(7–8), 1215–1233. https://doi.org/10.1080/15564886.2020.1832027
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: A rapid review of the evidence. *The Lancet*, 395(10227), 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8
- Burki, T. (2020). Prisons are "in no way equipped" to deal with COVID-19. *The Lancet*, 395(10234), 1411–1412. https://doi.org/10.1016/s0140-6736(20)30984-3
- Byrne, J., Hummer, D. & Rapisarda, S. (2020) 'Introduction to Special Issue: Assessing the global response to COVID-19 outbreaks in prisons, jails, and community corrections during the pandemic—Short-term solutions or harbingers of long-term change?', Victims and Offenders, 15(7-8): 835-838
- Catalan-soares, B., Almeida, R. T., & Carneiro-Proietti, A. B. (2000). Prevalence of HIV-1/2, HTLV-I/II, hepatitis B virus (HBV), hepatitis C virus (HCV), Treponema pallidum and Trypanosoma cruzi among prison inmates at Manhuacu, Minas Gerais State, Brazil. Revista Da Sociedade Brasileira De Medicina Tropical, 33(1), 27–30.
- Chao, W. C., Liu, P. Y., & Wu, C. L. (2017). Control of an H1N1 outbreak in a correctional facility in central Taiwan. *Journal of Microbiology, Immunology and Infection*, 50(2), 175–182. https://doi.org/10.1016/j.jmii.2015.05.005



- Chen, M. K., & Shapiro, J. M. (2007). Do harsher prison conditions reduce recidivism? A discontinuity-based approach. *American Law and Economics Review*, 9(1), 1–29. https://doi.org/10.1093/aler/ahm006
- Coker, R. (2020). Expert Report: Covid-19 and prisons in England and Wales.
- Cook, P. J., Kang, S., Braga, A. A., Ludwig, J., & O'Brien, M. E. (2015). An experimental evaluation of a comprehensive employment-oriented prisoner re-entry program. *Journal of Quantitative Criminology*, 31(3), 355–382. https://doi.org/10.1007/s10940-014-9242-5
- Crewe, B. (2011). Depth, weight, tightness: Revisiting the pains of imprisonment. *Punishment and Society*, 13(5), 509–529. https://doi.org/10.1177/1462474511422172
- Crewe, B., Liebling, A., & Hulley, S. (2015). Staff-prisoner relationships, staff professionalism, and the use of authority in public- and private-sector prisons. *Law & Social Inquiry*, 40, 309–344. http://onlinelibrary.wiley.com/doi/10.1111/lsi.12093/epdf
- Dallaire, D., Shlafer, R., Goshin, L., Hollihan, A., Poehlmann-Tynan, J., Eddy, M., & Adalist-Estrin, A. (2021). Covid-19 and prison policies related to communication with family members. *Psychology, Public Policy, and Law.* https://doi.org/10.1037/law00000297
- Durose, M., Cooper, A., & Snyder, H. (2014). Recidivism of Prisoners Released in 30 States in 2005: Patterns from 2005 to 2010. *U.S. Department of Justice, Special Re*(April), pp. 1–31.
- Duwe, G., & Clark, V. (2013). Blessed be the social tie that binds: The effects of prison visitation on offender recidivism. *Criminal Justice Policy Review*, 24(3), 271–296. https://doi.org/10.1177/0887403411429724
- Egyiri, K. I., & Acheampong, L. K. (2020). Managing COVID-19 in Ghana Prisons Service (COV-043; Issue 22 June 2020). https://icpa.org/asset/EB4F5785-809E-434E-830729B5D58C6AFC/
- Frenkel, M. O., Giessing, L., Egger-Lampl, S., Hutter, V., Oudejans, R. R. D., Kleygrewe, L., Jaspaert, E., & Plessner, H. (2021). The impact of the COVID-19 pandemic on European police officers:
 Stress, demands, and coping resources. *Journal of Criminal Justice*, 72, 101756. https://doi.org/10.1016/j.jcrimjus.2020. 101756
- Garrihy, J., Marder, I., & Gilheaney, P. (2023). Cocooning" in prison during COVID-19: Findings from recent research in Ireland. *European Journal of Criminology*, 20(3), 996–1015. https://doi.org/10.1177/14773708221132888
- Ghana Prisons Service. (2022). Statistics. https://ghanaprisons.gov.gh/about-us/statistics.cits
- Ghanaian Times. (2020). '794 prisoners granted amnesty ... as government decongests various prisons nationwide to prevent COVID-19 spread', Ghanaian Times, 30 July. Available at: https://www.ghanaiantimes.com.gh/794-prisoners-granted-amnesty-as-government-decongests-various-prisons-nationwide-to-prevent-covid-19-spread/
- Goffman, E. (1961). Asylums: Essays on the social situation of mental patients and other inmates. Penguin Books
- Guthrie, J. A., Lokuge, K. M., & Levy, M. H. (2012). Influenza control can be achieved in a custodial setting: Pandemic (H1N1) 2009 and 2011 in an Australian prison. *Public Health*, *126*(12), 1032–1037. https://doi.org/10.1016/j.puhe.2012.08.015
- Hartley, D. J., Davila, M., & a., Marquart, J. W., & Mullings, J. L. (2012). Fear is a disease: The impact of fear and exposure to infectious disease on correctional officer job stress and satisfaction. American Journal of Criminal Justice. https://doi.org/10. 1007/s12103-012-9175-1
- Heard, C. (2020). Commentary: Assessing the global impact of the Covid-19 pandemic on prison populations. *Victims and Offenders*, *15*(7–8), 848–861. https://doi.org/10.1080/15564886.2020. 1825583

- Hewson, T., Green, R., Shepherd, A., Hard, J., & Shaw, J. (2021). The effects of COVID-19 on self-harm in UK prisons. *Bjpsych Bulletin*, 45(3), 131–133. https://doi.org/10.1192/bjb.2020.83
- HM Inspectorate of Prisons. (2021). What happens to prisoners in a pandemic? February.
- Jones, L., & Tulloch, O. (2020). COVID-19: Why are prisons a particular risk, and what can be done to mitigate this? https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/15285/SSHAP_COVID-19_Brief_Prisons_2.pdf?sequence=3&isAllowed=y
- Kinner, S. A., Young, J. T., Snow, K., Southalan, L., Lopez-Acuña, D., Ferreira-Borges, C., & O'Moore, É. (2020). Prisons and custodial settings are part of a comprehensive response to COVID-19. The Lancet Public Health, 5(4), e188–e189. https://doi.org/10.1016/S2468-2667(20)30058-X
- La Vigne, N. G., Naser, R. L., Brooks, L. E., & Castro, J. L. (2005). Examining the effect of incarceration and in-prison family contact on prisoners' family relationships. *Journal of Contemporary Criminal Justice*, 21(4), 314–335. https://doi.org/10.1177/1043986205281727
- Lambert, E., & Paoline, E. (2005). The impact of medical issues on the job stress and job satisfaction of jail staff. *Punishment* & Society, 7, 259–275. https://doi.org/10.1177/1462474505 053829
- Lambert, S., & Wilkinson, D. (2021). Trust, efficacy and ethicacy when testing prisoners for COVID-19. *International Journal of Prisoner Health*, 17(3), 233–244. https://doi.org/10.1108/IJPH-10-2020-0084
- Lambert, E. G., Gordon, J., Paoline, E. A., & Hogan, N. L. (2018). Workplace demands and resources as antecedents of jail officer perceived danger at work. *Journal of Crime and Justice*, 41(1), 98–118. https://doi.org/10.1080/0735648X.2016.1218355
- Laufs, J., & Waseem, Z. (2020). Policing in pandemics: A systematic review and best practices for police response to COVID-19. *Inter*national Journal of Disaster Risk Reduction, 51, 101812. https:// doi.org/10.1016/j.ijdrr.2020.101812
- Liebling, A. (2011). Moral performance, inhuman and degrading treatment and prison pain. *Punishment & Society*, *13*, 530–550. https://doi.org/10.1177/1462474511422159
- Maruna, S., & Toch, H. (2005). The impact of imprisonment on the desitance process. In J. Travis & C. Visher (Eds.), *Prisoner* reentry and Crime in America (pp. 139–178). Cambridge University Press.
- Maycock, M. (2022). 'Covid-19 has caused a dramatic change to prison life'. Analysing the impacts of the Covid-19 pandemic on the pains of imprisonment in the Scottish Prison System. *The British Journal of Criminology, 62*(1), 218–233. https://doi.org/10.1093/bjc/azab031
- Maycock, M., & Dickson, G. (2021). Analysing the views of people in custody about the management of the COVID-19 pandemic in the Scottish Prison System. *International Journal of Prisoner Health*, 17(3), 320–334. https://doi.org/10.1108/IJPH-09-2020-0065
- Mohamed, N., Abidin, E. Z., Rasdi, I., & Ismail, Z. S. (2022). The impact of COVID-19 pandemic on malaysian police officers mental health: Depression, Anxiety and Stress. *International Journal* of *Infectious Diseases*, 116, S45. https://doi.org/10.1016/j.ijid. 2021.12.108
- Morenoff, J. D., & Harding, D. J. (2014). Incarceration, prisoner reentry, and communities. *Annual Review of Sociology*, 40(July), 411–429. https://doi.org/10.1146/annurev-soc-071811-145511
- Mueller-Smith, M. (2016). The Criminal and Labor Market Impacts of Incarceration. *American Economic Review, September*, 1–59. http://www.columbia.edu/~mgm2146/incar.pdf



- Muntingh, L. M. (2020). Africa, Prisons and COVID-19. *Journal of Human Rights Practice*, 12(2), 284–292. https://doi.org/10.1093/jhuman/huaa031
- Nkengasong, J. N., & Mankoula, W. (2020). Looming threat of COVID-19 infection in Africa: Act collectively, and fast. *The Lancet*, 395(10227), 841–842. https://doi.org/10.1016/S0140-6736(20)30464-5
- Novisky, M. A., Nowotny, K. M., Jackson, D. B., Testa, A., & Vaughn, M. G. (2021). Incarceration as a fundamental social cause of health inequalities: Jails, prisons and vulnerability to COVID-19. British Journal of Criminology, 61(6), 1630–1646. https://doi.org/10.1093/bjc/azab023
- Nowotny, K. M., Seide, K., & Brinkley-rubinstein, L. (2021). Risk of COVID-19 infection among prison staff in the United States. BMC Public Health, 21, 1–8.
- Nweze, V. N., Anosike, U. G., Ogunwusi, J. F., Adebisi, Y. A., & Lucero-Prisno, D. E. (2021). Prison health during the COVID-19 era in Africa. *Public Health in Practice*, 2, 100083. https://doi.org/10.1016/j.puhip.2021.100083
- O'Grady, J., Hoelscher, M., Atun, R., Bates, M., Mwaba, P., Kapata, N., Ferrara, G., Maeurer, M., & Zumla, A. (2011). Tuberculosis in prisons in sub-Saharan Africa The need for improved health services, surveillance and control. *Tuberculosis*, *91*(2), 173–178. https://doi.org/10.1016/j.tube.2010.12.002
- Okano, J. T., & Blower, S. (2020). Preventing major outbreaks of COVID-19 in jails. *The Lancet*, 395, 1542–1543. https://doi.org/10.1016/S0140-6736(20)31015-1
- Penal Reform International. (2020). Coronavirus: Preventing harm and human rights violations in criminal justice systems. London. https://cdn.penalreform.org/wp-content/uploads/2020/07/Coron avirus-briefing-July-2020.pdf
- Prison Reform Trust. (2021). Covid-19 action prisons Project: Tracking innovation, valuing experience. Briefings number 3. London
- Rapisarda, S. S., & Byrne, J. M. (2020). An examination of COVID-19 outbreaks in African prisons and jails. *Victims and Offenders*, 15(7–8), 910–920. https://doi.org/10.1080/15564886.2020.18357 69
- Reid, S. E., Topp, S. M., Turnbull, E. R., Hatwiinda, S., Harris, J. B., Maggard, K. R., Roberts, S. T., Krüüner, A., Morse, J. C., Kapata, N., Chisela, C., & Henostroza, G. (2012). Tuberculosis and HIV control in sub-saharan african prisons: "thinking outside the prison cell." *Journal of Infectious Diseases*, 205(SUPPL. 2), 265–273. https://doi.org/10.1093/infdis/jis029
- Simpson, P. L., & Butler, T. G. (2020). Covid-19, prison crowding, and release policies. *The BMJ*, 369(April), 19–20. https://doi.org/10.1136/bmj.m1551

- Solis, J., Franco-Paredes, C., Henao-Martinez, A. F., Krsak, M., & Zimmer, S. M. (2020). Structural vulnerability in the U.S. revealed in three waves of COVID-19. American Journal of Tropical Medicine and Hygiene, 103(1), 25–278. https://doi.org/ 10.4269/aitmh.20-0391
- Suhomlinova, O., Ayres, T. C., Tonkin, M. J., O'Reilly, M., Wertans, E., & O'Shea, S. C. (2022). Locked up while Locked Down: Prisoners' Experiences of the COVID-19 Pandemic. *British Journal of Criminology*, 62(2), 279–298. https://doi.org/10.1093/bjc/azab060
- Sykes, G. (1958). The society of captives: A study of maximum security prison. Princeton University Press.
- Sylverken, A., El-Duah, P., Owusu, M., Yeboah, R., Kwarteng, A., Ofori, L., Gorman, R., Obiri-Danso, K., & Owusu-Dabo, E. (2019). Burden of respiratory viral infections among inmates of a Ghanaian prison. *Research Square*. https://doi.org/10.21203/ rs.2.14139/v1
- Telisinghe, L., Charalambous, S., Topp, S. M., Herce, M. E., Hoffmann, C. J., Barron, P., Schouten, E. J., Jahn, A., Zachariah, R., Harries, A. D., Beyrer, C., & Amon, J. J. (2016). HIV and tuberculosis in prisons in sub-Saharan Africa. *The Lancet*, 388(10050), 1215–1227. https://doi.org/10.1016/S0140-6736(16)30578-5
- Turner, K. B., & Levy, M. H. (2010). Prison outbreak: Pandemic (H1N1) 2009 in an Australian prison. *Public Health*, 124(2), 119–121. https://doi.org/10.1016/j.puhe.2009.12.005
- Udechukwu, I. (2009). Correctional officer turnover: Of Maslow's needs hierarchy and Herzberg's motivation theory. *Public Per*sonnel Management, 38, 69–82. https://doi.org/10.1177/00910 2600903800205
- 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. https://doi.org/10.1007/s12103-020-09539-z
- Wang, J., Yang, W., Pan, L., Ji, J., Shen, J., Zhao, K., Ying, B., Wang, X., Zhang, L., Wang, L., & Shi, X. (2020). Prevention and control of COVID-19 in nursing homes, orphanages, and prisons. *Environmental Pollution*, 266, 1–6. https://doi.org/10.1016/j.envpol. 2020.115161
- Zanella, G. (2020). Prison Work and Convict Rehabilitation. In IZA Discussion Papers (No. 13446). https://doi.org/10.2139/ssrn. 3643210

