

Jail Personnel's Challenges in the Era of Covid-19: Basis in the Development of a Contingency Plan

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Abstract

The challenges faced by jail personnel became significantly complex and demanding as a result of the widespread impact of the COVID-19 pandemic. It affected correctional facilities and their operations on a global scale. This study aimed to find out the challenges faced by the jail personnel of Zamboanga del Norte Correctional and Rehabilitation Center (ZNCRC) during the COVID -19 pandemic as basis for a proposed contingency plan in the facility. This study employed the descriptive survey type of research utilizing quantitative data taken from the responses of fifty-seven (57) jail personnel in Zamboanga del Norte Correctional and Rehabilitation Center (ZNCRC) with the prime purpose of determining the challenges faced by the jail personnel during the COVID-19 pandemic. The study revealed that mental health issues, intervention management and challenges on duties and functions was perceived to be rarely experienced by the respondents. However, the jail personnel had frequently experienced problems relative to supplies and facilities. The findings of this study have practical implications in developing a contingency plan and securing enough funds to enhance supplies and facilities for both jail personnel and those Persons Deprived of Liberty (PDL). This is to effectively deal with the challenges posed by the COVID-19 pandemic.

Keywords: correctional facilities, persons deprived of liberty, mental health, health protocols, intervention management, duties and functions



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INTRODUCTION

COVID-19 has caused havoc in societies around the globe, bringing forth a myriad of problems with devastating effects. Overcrowding is an entrenched problem in prisons that has now been compounded by the pandemic, making it difficult to institute measures for preventing the spread of COVID-19, yet at the same time infringing on basic human rights, such as the right to health. In other words, this added responsibility has placed an increased pressure on prison administrators, workers, and staff to act fast in combating such phenomena before they lead to any sort of catastrophe. In a study conducted by Zeveleva and Nazif-Munoz (2021), it was discovered that all the European Union nations imposed a ban on visits during the COVID-19 outbreak. They noticed that there had been some convergence in policy among

various European states with respect to visitation rules.

The correctional institutions have had the primary mission of safeguarding inmates from the Coronavirus pandemic. Murhula (2023) explained that despite all the efforts that aimed at curbing its spread in South African correctional Centers; COVID-19 spread like wildfire among both inmates and prison staff. This shows how hard it is to maintain healthcare and safety in such a closed environment. As De Paiva et al. (2023) point out, addressing healthcare in prisons requires a broad perspective, encompassing not only inmates but also all staff and professionals who work, directly or indirectly, within the correctional system.

The article presented by Akiyama et al. in 2020 reflects the prison-related experience during the COVID-19 pandemic. It was a challenge for jail guards to maintain physical distance in correctional facilities because of the close interaction they have with infected but asymptomatic jailed individuals. This increases their chance of getting the virus. Staff shortages due to illness among colleagues has added to the burden to those who are healthy. Globally, prison officials have thus established precautions such as a halt on visitation, transfer of inmates, and virtual service delivery for legal and health services (Miller & Blumstein, 2020). Outbreaks in the crowded prisons and jails continue to threaten the health infrastructure and the control efforts of both people behind bars and the greater community.

To date, government offices and agencies here in the Philippines indeed did a good job by continuing their services to the people following a skeletal workforce and flexible work arrangement in line with the Civil Service Commission (Civil Service Commission, 2020). However, the country's correctional institutions, like those globally, have faced exacerbated issues within the Philippine Correctional System. Covid-19 has been a challenge to the overcrowding issue, poor health conditions, and sanitation in the facility. The hospital and information technology infrastructures have been inadequate, and Covid 19 has been added to that, which has been a direct challenge to health and safety inmate situations (International Committee of the Red Cross, 2021).

The issues correctional institutions are facing during the pandemic did not only pertain to the issue of inmates. Rather, the jobs of the prison and jail employees themselves and their health are at risk. As Nowotny et al. (2021) note, the COVID-19 epidemic has illuminated the need for progressive changes in criminal justice systems, one of which is decarceration. It has also highlighted the need for health and safety measures of correctional officers by putting COVID-19 mitigation measures in place to minimize the risk of infection on all employees.

According to a study by Mekonnen et al. (2021), it was found that both prisons and detention centers lacked a contingency plan for the COVID-19 pandemic. No one in these facilities was educated about anything related to COVID-19. Neither did any jail facility implement the most basic preventive measures like keeping distances, hands hygiene, mask-wearing, and respiratory etiquette among the inmates. At the Zamboanga del Norte Correctional and Rehabilitation Center, the response to the COVID-19 pandemic was also considered not sufficient and almost negligible because they had no plan for contingency in which they could efficiently and systematically respond.

In light of the above findings, the research intended to investigate the perceptions of jail personnel toward the challenges they faced during the COVID-19 pandemic. The study specifically sought answers to the following problems: 1) the respondents' demographic profile; and 2) how the jail personnel perceive the difficulties they have faced during the pandemic in terms of mental health concerns, the availability of enough resources and facilities, the efficacy of interventions, and the completion of tasks and jobs. The focus of this study is to formulate possible preventive measures and create a contingency plan in order to address the concerns that jail personnel had during the COVID-19 pandemic. The goal of this proactive strategy is to improve responsiveness and readiness within the correctional facilities in order to better safeguard the general well-being and health of personnel and prisoners in times of public health emergency, like the COVID-19 pandemic.

Theoretical Framework. The study is anchored mainly on the Social Cognitive Theory of Albert Bandura (1977; as cited in Pajares, 2017) which states that behavioral change is determined by environmental, personal, and behavioral elements. Bandura's theory suggests that individuals learn through observation and modeling, allowing them to adopt new behaviors and knowledge by observing others' actions and their consequences. The theory also highlights the importance of self-efficacy, which plays a crucial role in determining individuals'

actions, motivation, and perseverance when encountering challenges.

Additionally, the Social Cognitive Theory incorporates reciprocal determinism, which states that behavior is influenced by personal factors, environmental influences, and the individual's behavior itself, emphasizing the intricate interplay between personal traits, environmental factors, and behavioral patterns (LaMorte, 2022). By examining how individuals learn through observation, modeling, and self-efficacy beliefs, the Social Cognitive Theory provides insights into how individuals, such as jail personnel during the COVID-19 pandemic, may adjust their behaviors and responses based on their observations and beliefs about their capabilities.

LITERATURES

Global correctional facilities have been severely affected by the COVID-19 pandemic, as seen by the substantial rise in infection rates among personnel and inmates. Reports indicate that states such as Pennsylvania, Connecticut, Georgia, and California have experienced notable outbreaks within their correctional facilities (California Department of Corrections and Rehabilitation, n.d.; Becker, 2020; Fawcett, 2020; McCormick, 2020; Sharpe & Boone, 2020). In response to these difficulties, many facilities have enforced stringent visitor prohibitions, akin to the strategies employed by assisted living institutions, with the aim of reducing the spread of the virus inside the facility (Rubin, 2020).

Staff members in correctional facilities have reported significant shortages of essential cleaning supplies, including wipes, hand sanitizer, and disposable thermometer covers, hindering their capacity to perform necessary temperature screenings for inmates. The lack of adequate personal protective equipment (PPE) has further exacerbated anxiety and fear among staff (Nelson & Kaminsky, 2020). Findings from Williams et al. (2020) further emphasize the difficulty of controlling COVID-19 outbreaks in correctional settings. These findings point to a number of particular difficulties, including the

lack of medical supplies to treat severe cases, the inadequateness of CDC guidelines designed specifically for correctional settings, chronic understaffing in correctional healthcare systems, and the propensity for security concerns to take precedence over health considerations.

The pandemic has had a profound impact on the mental health of correctional staff. According to Burhanullah et al. (2022), healthcare workers within correctional facilities reported notably higher levels of depression and sleep disturbances compared to correctional officers, who themselves experienced significant burnout—especially among female officers. Contributing factors to this burnout include increased workloads, workplace conflicts, and the age of employees, highlighting the unique challenges faced by correctional staff during this crisis.

According to Franco-Paredes et al. (2020), enhanced testing is necessary for correctional officials and prisoners in order to use effective population management techniques including isolation, quarantine, and sequestration. However, because of the large number of prisoners and the complex dynamics of interactions between prisoners and personnel, adhering to established infection prevention protocols presents significant challenges, especially with regard to routine surface disinfection and decontamination (Kinner et al., 2020). According to Solis et al. (2020), the lack of extensive testing greatly restricts the ability to conduct effective isolation and quarantine procedures. This is further complicated by the fact that inmates' PPE supplies are inadequate, and the cyclical pattern of jail admissions facilitates the spread of the infection.

Moreover, the financial realities of operating correctional facilities often conflict with necessary COVID-19-related decisions. Puglisi et al. (2022) confirm that corrections staff frequently find themselves navigating these competing interests and advocate for sustained investments in local economies to mitigate harm to families affected by decarceration efforts. Montoya-Barthelemy et al. (2020)

further argue that the safety of correctional workers and inmates is inherently tied to public health, given that they represent millions of interconnected family members and community members.

METHODS

The research methodology employed a descriptive survey method, utilizing a standardized questionnaire as the primary research tool, to gather quantitative data from forty jail personnel at the Zamboanga del Norte Correctional and Rehabilitation Center (ZNCRC) in Manukan, Zamboanga del Norte, Philippines. The researchers utilized complete enumeration sampling technique in choosing respondents. The study specifically targeted twenty-seven (27) regular employees and thirty (30) job order respondents with a minimum of 5 years in service for inclusion, ensuring a comprehensive representation within the study.

In this study, the data collection instrument was a standardized research questionnaire that underwent rigorous validity and reliability testing. The content validity process involved assessing if the questionnaire content was suitable and pertinent to the study's aim. A validation panel consisting of a jail personnel from Dipolog City Jail, another jail personnel from Dapitan City Jail, and a professor from Jose Rizal Memorial State University reviewed the draft to ensure its alignment with the study's purpose. Each reviewer individually rated the relevance of every item: 1 means not relevant, 2 means somewhat relevant, 3 means relevant, and 4 means very relevant (4-point Likert scale). The Content Validity Index (CVI) was utilized to determine the validity of the items. Items in the instrument with a CVI higher than 0.87 were considered to meet the required level of validity (Almanasreh et al., 2019).

Cronbach's alpha was calculated to assess both the internal consistency of the instrument and the unidimensionality of its items. Internal consistency was evaluated by administering the instrument to 20 jail personnel from Dipolog and Dapitan City Jails. The instrument underwent Cronbach's alpha computation

following content and then face validation. The Cronbach's alpha correlation coefficient was 0.911, indicating a strong correlation and demonstrating the instrument's consistent reliability.

To determine the reliability of the instrument utilizing test-retest, the questionnaire was once again administered to 20 jail personnel in Dipolog and Dapitan City jails five days after the initial administration. Since the questionnaire yielded ordinal data utilizing a Likert scale (four-point) that ranges from strongly agree to strongly disagree, which is not continuous, non-parametric statistical tests were considered more suitable than the Pearson Correlation Coefficient (Stevens & Stevens, 2001).

Consequently, the comparison of responses between the test and retest was carried out using the Wilcoxon Non-Parametric Statistical Test to determine any significant differences in responses at each time point. The results revealed no significant variance between the two tests, indicating that there was no substantial alteration in the construct being studied between the two assessment points. This outcome aligns with DeVon et al. (2007), who suggested that a high correlation between scores at different time points signifies the stability of the instrument over time.

Furthermore, the questionnaire was translated into English and Vernacular languages. It was divided into two sections: the first part aimed to gather respondent profiles, while the second part highlighted the challenges faced by jail personnel at the Zamboanga del Norte Correctional and Rehabilitation Center during the COVID-19 pandemic.

To determine the level of perception on the challenges encountered by jail personnel in Zamboanga del Norte Correctional and Rehabilitation Center, the 5-point likert scale was used.

Table 1
Rating Scale for the challenges encountered by jail personnel in Zamboanga del Norte Correctional and Rehabilitation Center

| Rating | Range | Verbal Description |
|--------|-----------|--------------------|
| 5 | 4.21-5.00 | Always |
| 4 | 3.41-4.20 | Frequent |
| 3 | 2.61-3.40 | Occasional |
| 2 | 1.81-2.60 | Rare |
| 1 | 1.00-1.80 | Never |

Prior to data collection, the researchers obtained permission from the correctional institution and secured an ethics certificate from the university. Throughout the research process, the researchers made sure that the participants were not exposed to any form of harm or intimidation. Complete consent was obtained from both the respondents and the institution before distributing the questionnaires. Additionally, the researchers guaranteed the protection and privacy of the participants, maintaining a high level of confidentiality for the research data. The anonymity of individuals involved in the study was also preserved.

To address the impact of the COVID-19 pandemic, the Zamboanga del Norte Correctional and Rehabilitation Center prohibited visitations and interactions, allowing researchers to collect data off-site for their study. Stringent safety and health protocols were meticulously followed during the data gathering process, ensuring the well-being of all involved. Researchers were permitted to collect data only after the completion of the jail personnel's duties, emphasizing a careful and diligent approach to data collection in compliance with health guidelines. The questionnaires and consent forms were promptly retrieved after the respondents diligently completed them.

Subsequently, the responses were meticulously tallied, computed, and interpreted for analysis. Frequency counting and percent were used to determine the respondents' profile in terms of sex, age, civil status, job position, length of service, and employment status. Weighted mean was used to determine the level of

perception on the challenges encountered by the jail personnel in the provincial jail correctional and rehabilitation center. Additionally, Kolmogorov- Smirnov (Poisson) was used to test the significant difference on the perceived level of challenges encountered by Zamboanga del Norte Correctional and Rehabilitation Center personnel during Covid-19 Pandemic.

RESULTS AND DISCUSSION

Esteemed scholars and seasoned professionals who are authorities in their respective fields typically disseminate their research findings. This segment presents the discoveries of the study and is structured in alignment with the objectives of the study raised in the survey questions. The outcomes are derived from the methodology utilized to gather information, shedding light on the insights gleaned from the research endeavor.

Profile of Jail Personnel. The survey sought to establish the profile of the jail personnel. Table 2 presents an overview of the profile of jail personnel based on various demographic factors such as sex, age, civil status, job position, length of service, and employment status. The data presented in the table offer insights into the composition of the respondents in terms of these key characteristics.

The analysis of the data in Table 2 reveals several key findings regarding the profile of jail personnel. Firstly, in terms of sex, the majority of respondents were male, comprising 87.5% of the sample, while females accounted for 12.5%. This indicates a significant gender disparity within the population studied. This gender imbalance may have implications for understanding the dynamics and challenges faced by male and female jail personnel differently within the correctional environment.

Regarding age distribution, the highest percentage of respondents fell within the 28-37 years old category, making up 45% of the sample, followed by the 18-27 years old category at 30%. This distribution provides

insights into the age demographics of the jail personnel included in the study. It suggests that the majority of the workforce is relatively young, which could impact factors such as experience levels and job outlook within the correctional facility.

Table 2
Profile of Jail Personnel in Terms of Sex, Age, Civil Status, Job Position, Length of Service, Employment Status

| Sex Profile | Percentage | Rank |
|---------------------------|------------|------|
| Male | 87.5% | 1 |
| Female | 12.5% | 2 |
| Age Profile | Percentage | Rank |
| 18-27 years old | 30% | 2 |
| 28-37 years old | 45% | 1 |
| 38-47 years old | 10% | 3 |
| 48-57 years old | 10% | 3 |
| 58 and above | 5% | 4 |
| Civil Status Profile | Percentage | Rank |
| Single | 42.5% | 2 |
| Married | 57.5% | 1 |
| Length of Service Profile | Percentage | Rank |
| 0-15 years | 55% | 1 |
| 6-10 years | 35% | 2 |
| 11-15 years | 2.5% | 4 |
| 16-20 years | 7.5% | 3 |
| Employment Status Profile | Percentage | Rank |
| Permanent | 32.5% | 2 |
| Casual | 67.5% | 1 |
| Job Position Profile | Percentage | Rank |
| Rank and File | 77.5% | 1 |
| Supervisory | 5% | 3 |
| Managerial | 17.5% | 2 |

Regarding civil status, the data show that a majority of the respondents were married, representing 57.5% of the sample, while single individuals made up 42.5%. This information sheds light on the marital status distribution among the personnel surveyed. Marital status can influence various aspects of an individual's life, including job satisfaction and stress levels, which may be pertinent in the context of working in a correctional facility during covid-19 pandemic.

The length of service profile highlights that the majority of respondents had been in service for 0-15 years, accounting for 55% of the sample. This suggests a relatively young workforce

within the correctional institution. Understanding the distribution of experience levels among personnel can provide insights into training needs, career development opportunities, and institutional knowledge within the facility.

In terms of employment status, a significant portion of the respondents were classified as casual employees, comprising 67.5% of the sample, while permanent employees made up 32.5%. This distribution indicates the employment structure within the institution. The prevalence of casual employment may have implications for job security, benefits, and overall job satisfaction among jail personnel.

Lastly, the job position profile reveals that the majority of respondents held rank and file positions, representing 77.5% of the sample, followed by managerial positions at 17.5% and supervisory roles at 5%. This breakdown provides insights into the hierarchical distribution of job positions among the jail personnel. Varied job positions may indicate different levels of authority, responsibilities, and decision-making power within the correctional setting.

The data presented in Table 2 offer a comprehensive overview of the demographic profile of jail personnel, providing valuable insights into the composition of the workforce within the correctional environment. The findings indicate the significance of taking into account demographic factors such as sex, age, civil status, length of service, employment status, and job position when analyzing the characteristics of jail personnel. These insights can inform future research, policy development, and strategies designed at addressing the specific needs and challenges faced by individuals working in correctional facilities.

Mental Health Challenges. Table 3 presents the perceived level of mental health issues encountered by jail personnel at the Zamboanga del Norte Correctional and Rehabilitation Center. The table displays the mental health issues assessed, the number of respondents (N), the mean scores, and a description

categorizing the frequency of encountering each issue. The mean scores indicate the average perception of the severity of each issue, ranging from "Rare" to "Never."

Table 3
Perceived level of mental health issues encountered in Zamboanga del Norte Correctional and Rehabilitation Center

| Mental Health issues | N | Mean | Description |
|--|----|------|-------------|
| Post-traumatic stress | 57 | 2.50 | Rare |
| Fear | 57 | 2.45 | Rare |
| Anxiety | 57 | 2.30 | Rare |
| Depression | 57 | 2.12 | Rare |
| Sleeping disturbance or Insomnia | 57 | 1.72 | Never |
| Suicidal ideation | 57 | 1.32 | Never |
| Substance Abuse (medical alcohol, alcoholic beverages) | 57 | 1.72 | Never |
| Paranoia | 57 | 1.57 | Never |
| Burnout | 57 | 1.77 | Never |
| Borderline personality disorder | 57 | 1.62 | Never |
| Grand Mean | 57 | 1.91 | Rare |

Legend: 1.00-1.80 = Never; 1.81-2.60 = Rare; 2.61-3.40 = Occasional; 3.41-4.20 = Frequent; 4.21-5.00 = Always

Table 3 shows the level of perception on the challenges encountered by jail personnel in Zamboanga del Norte Correctional and Rehabilitation Center (ZNCRC) in terms of Mental Health issues. It can be observed that sleeping disturbance or insomnia, suicidal ideation, substance abuse, paranoia, burnout and borderline personality disorder were perceived to be "never" with a mean of 1.72, 1.32, 1.72, 1.57, 1.77 and 1.62 respectively which means that these mental health issues were never experienced by jail personnel in ZNCRC. While post-traumatic stress, fear, anxiety and depression were perceived to be rarely experienced by the respondents.

The grand mean of 1.91 indicates an overall perception of mental health issues as "Rare" among the respondents. This collective assessment reflects a low frequency of encountering severe mental health issues within the surveyed population. Promoting and maintaining the mental health and work performance of employees during the COVID-19 epidemic is crucial, as highlighted by Sasaki et al. (2020). The impact of mental health issues on prison and jail personnel in correctional institutions during the Covid-19 pandemic has been a significant concern.

In a follow-up interview conducted by researchers, respondents from the Zamboanga del Norte Correctional and Rehabilitation Center (ZNCRC) mentioned that they did not experience significant mental health issues during the pandemic. This was attributed to the strict implementation of health protocols, such as prohibiting visitors inside the facility and conducting trial hearings online. Additionally, the personnel noted that being fully vaccinated and located in a rural area with sparse population contributed to their sense of safety and reduced concerns about Covid-19. These factors collectively played a role in mitigating the impact of the pandemic on their mental well-being, suggesting that mental health issues were not a prevalent problem among jail personnel at ZNCRC during the Covid-19 pandemic.

However, these findings contrast with the study conducted by Burhanullah et al. (2022), which revealed alarming statistics among correctional officers. The study reported that 32% of correctional officers exhibited depressive symptoms, 37% reported anxiety symptoms, 57% experienced burnout symptoms, 45% reported post-traumatic stress symptoms, and 11% reported sleep disturbances during the Covid-19 pandemic. These results indicate that correctional officers faced significantly increased levels of burnout and mental health difficulties during the pandemic.

Challenges on Availability of Supplies and Facilities. Table 4 illustrates the perceived level of utilization and availability of supplies and facilities reported by jail personnel at the Zamboanga del Norte Correctional and Rehabilitation Center. The table outlines various supplies and facilities assessed, the number of respondents (N), the mean scores, and a description indicating the frequency of availability or utilization for each item.

Table 4
Level of perceived utilization and availability of supplies and facilities in Zamboanga del Norte Correctional and Rehabilitation Center

| Supplies and Facilities | N | Mean | Description |
|---|-----------|-------------|-----------------|
| Availability of face mask. | 57 | 4.55 | Always |
| Availability of hand washing facilities and disinfectants | 57 | 4.28 | Always |
| Availability of vaccines. | 57 | 4.88 | Always |
| Availability of oxygen, oximeter, etc. | 57 | 2.82 | Occasional |
| Medicines | 57 | 3.88 | Occasional |
| Thermal scanner | 57 | 2.15 | Rare |
| Availability of Personal Protective Equipment (PPE). | 57 | 2.90 | Occasional |
| Adequate ventilation. | 57 | 2.78 | Occasional |
| Prison or jail cells. | 57 | 2.85 | Occasional |
| Quarantine facility or isolation room. | 57 | 3.08 | Occasional |
| Grand Mean | 57 | 3.42 | Frequent |

Legend: 1.00-1.80 = Never; 1.81-2.60 = Rare; 2.61-3.40 = Occasional; 3.41-4.20 = Frequent; 4.21-5.00 = Always

The results indicate that items such as face masks, hand washing facilities, disinfectants, and vaccines were consistently available, rated as "Always" with high mean scores ranging from 4.28 to 4.88. This suggests that these critical resources were readily accessible to personnel at all times, contributing to a safe and hygienic environment within the correctional facility.

However, certain supplies and facilities such as oxygen, oximeter, medicines, Personal Protective Equipment (PPE), adequate ventilation, prison or jail cells, and quarantine facilities were rated as "Occasional" availability, with mean scores ranging from 2.78 to 3.08. Thermal scanner, in particular, was rated as "Rare" with a mean score of 2.15. This indicates that while these items were not always readily available, they were accessible on a less consistent basis, potentially impacting the overall preparedness and response capabilities of the facility in certain situations.

The grand mean of 3.42 suggests an overall perception of frequent availability and utilization of supplies and facilities by the jail personnel. This collective assessment implies that while some resources were consistently accessible, there were areas where improvements could be made to ensure more consistent availability of essential supplies and facilities to meet the needs of the personnel effectively.

The correctional systems worldwide have implemented various measures minimize the risk of contracting COVID-19 and their repercussions. However, challenges such as the global shortage of Covid-19 medical supplies (Park et al., 2020) have posed significant obstacles, particularly during the early stages of the pandemic. Bown (2021) highlighted the global shortage of Covid-19 medical supplies, which created difficulties for correctional facilities in securing essential resources to combat the spread of the virus. This shortage not only impacted healthcare facilities but also extended to prisons and detention centers, exacerbating the challenges faced by these institutions in managing the pandemic effectively.

World Health Organization (2021) emphasized the heightened vulnerability of individuals deprived of their liberty in enclosed environments to COVID-19. Mekonnen et al. (2021) further revealed critical deficiencies in Ethiopian prisons and detention centers, including the lack of hand washing facilities, personal protective equipment (PPE), and designated quarantine areas. These shortcomings significantly increased the susceptibility of correctional institutions to the rapid spread of the virus, underscoring the urgent need for adequate resources and infrastructure to protect the health of inmates and staff and prevent the further transmission of COVID-19 within these confined settings.

These findings underscore the critical importance of adequate resources and infrastructure in correctional institutions to effectively manage public health crises like the Covid-19 pandemic. Enhancing the consistent availability of necessary supplies and facilities, particularly those rated as occasional or rare, could further improve the preparedness and response capabilities of the correctional facility, ultimately supporting the well-being and safety of the staff members working in the institution.

Challenges on Health Protocols. Table 5 details the perceived level of adherence to health protocols observed by jail personnel at the Zamboanga del Norte Correctional and

Rehabilitation Center. The table includes various health protocol categories, the number of respondents (N), the mean scores, and descriptions indicating the frequency of compliance for each protocol.

Table 5
Perceived level of health protocols observed in Zamboanga del Norte Correctional and Rehabilitation Center

| Health Protocols | N | Mean | Description |
|---|----|------|-------------|
| Visitors failed to follow the health protocol during visitation like wearing of facemask, face shield, washing or disinfecting hands and social distancing. | 57 | 2.20 | Rare |
| Colleagues' subordinates failed to follow the health protocol like wearing of facemask, face shield, washing or disinfecting hands and social distancing. | 57 | 2.02 | Rare |
| Inmates failed to follow health protocol during visitation. | 57 | 1.90 | Rare |
| Unvaccinated jail personnel. | 57 | 1.62 | Never |
| Jail personnel were infected by Covid-19. | 57 | 1.85 | Rare |
| Inmate was infected by Covid-19. | 57 | 2.10 | Rare |
| Difficulty in isolating inmates who have symptoms of Covid-19. | 57 | 2.30 | Rare |
| Problems in utilization of facility and equipment. | 57 | 2.42 | Rare |
| Overcrowding in jail or lack of space for social distancing. | 57 | 2.62 | Occasional |
| Sanitation inside the correctional institution | 57 | 2.85 | Occasional |
| Grand Mean | 57 | 2.19 | Rare |

Legend: 1.00-1.80 = Never; 1.81-2.60 = Rare; 2.61-3.40 = Occasional; 3.41-4.20 = Frequent; 4.21-5.00 = Always

It can be observed that overcrowding in jail or lack of space for social distancing and sanitation inside the correctional institution were perceived "occasional" with obtained mean of 2.62 and 2.85 respectively. While these issues occurred sporadically, they were not pervasive within the correctional setting, indicating a generally well-maintained adherence to health protocols by the jail personnel.

However, challenges such as visitors failed to follow the health protocol during visitation like wearing of facemask, face shield, washing or disinfecting hands and social distancing, colleagues' subordinates failed to follow the health protocol like wearing of facemask, face shield, washing or disinfecting hands and social distancing, inmates failed to follow health protocol during visitation, jail personnel were infected by Covid-19, Inmate was infected by Covid-19, difficulty in isolating inmates who have symptoms of Covid-19 and problems in

utilization of facility and equipment were perceived "rare" with a mean of 2.2, 2.02, 1.90, 1.85, 2.10, 2.30 and 2.42 respectively. This suggests that instances of protocol violations were infrequent among the personnel surveyed. Whereas unvaccinated jail personnel were perceived "never". The data shows that the presence of unvaccinated jail personnel was never an issue (mean = 1.62). This suggests that the jail personnel were largely vaccinated, reflecting a positive aspect of health management within the facility.

The grand mean of 2.19 indicates a prevalent perception of rare instances of non-compliance with health protocols among the jail personnel at the Zamboanga del Norte Correctional and Rehabilitation Center, suggesting minimal observed health protocol violations and challenges within the facility. This collective assessment reflects the personnel's overall good compliance with health guidelines and effective management of protocol-related challenges. Looking ahead, sustaining vigilance and addressing occasional concerns like overcrowding and sanitation can bolster the general health and safety measures within the correctional institution, ensuring a conducive environment for both staff and inmates.

The findings align with the research conducted by Carvalho (2020), which highlights the inherent challenges faced in correctional facilities where social distancing becomes nearly unattainable. The overcrowded and poorly ventilated environments within these facilities create an environment conducive to the rapid spread of infectious diseases. Shared communal spaces like bathrooms, showers, cafeterias, patios, and classrooms further heighten the risk of transmission among inmates and staff. In situations where maintaining physical distance is challenging, a more stringent implementation of all other preventive actions, as advised by the World Health Organization (2021), becomes crucial to mitigate the risk of transmission.

Similarly, the study by Paredes et al. (2020) illuminates the adverse consequences of overcrowding and inadequate sanitation in

prisons, amplifying the vulnerability of correctional institutions as breeding grounds for infectious disease outbreaks. The lack of adequate space and sanitation facilities not only compromises the living conditions within prisons but also escalates the potential for disease transmission among the incarcerated population. Additionally, as highlighted by Alves et al. (2021), poor sanitation can lead to risky behaviors and situations among individuals living in environments that restrict their quality of life.

Given the complexity of health and safety needs within correctional systems, an integrated health approach is essential, as emphasized by Hull et al. (2023). This approach should focus on various levels of influence, target prevention strategies, and consider the broader long-term impact of the correctional system.

Challenges on Duties and Functions. The data presented in Table 6 offer valuable insights into the challenges faced by jail personnel at the Zamboanga del Norte Correctional and Rehabilitation Center concerning their duties and functions.

Table 6
Level of perception on the challenges in Zamboanga del Norte Correctional and Rehabilitation Center in terms of Duties and Functions.

| Duties and Functions | N | Mean | Description |
|--|-----------|-------------|-------------|
| Increased of task and other responsibilities. | 57 | 3.88 | Frequent |
| Delay in attending trial hearings as scheduled. | 57 | 2.25 | Rare |
| Absence in trial hearing. | 57 | 1.60 | Never |
| Unable to take sufficient break. | 57 | 1.98 | Rare |
| Failure to submit reports on or before deadlines. | 57 | 1.78 | Never |
| Discrimination by colleagues after recovery from Covid-19 illness | 57 | 1.65 | Never |
| Returning home late due various unfinished assignments. | 57 | 2.10 | Rare |
| Neglected other work assignments task. | 57 | 2.00 | Rare |
| Errors committed in assignments or reports due to insufficient time and resources. | 57 | 1.92 | Rare |
| Absence in duty due to sickness or being Covid-19 positive. | 57 | 2.40 | Rare |
| Grand Mean | 57 | 2.16 | Rare |

Legend: 1.00-1.80 = Never; 1.81-2.60 = Rare; 2.61-3.40 = Occasional; 3.41-4.20 = Frequent; 4.21-5.00 = Always

Notably, the increased of task and other responsibilities were perceived to be frequently occurring problem in the institution, with a

mean score of 3.88. Conversely, delays in attending trial hearings, the inability to take sufficient breaks, returning home late due to unfinished assignments, neglecting other tasks, errors in assignments, and absence in duty due to sickness or being Covid-19 positive were perceived as rare occurrences, with mean scores ranging from 1.92 to 2.40. In contrast, absence during trial hearings, failure to submit reports on time, and post-Covid-19 recovery discrimination by colleagues were rated as "never," with mean scores of 1.60, 1.78, and 1.65, respectively. The overall perception of challenges related to duties and functions being rare, as indicated by the grand mean of 2.16, suggests a generally well-managed work environment with occasional challenges that can be addressed to further enhance productivity and well-being among jail personnel within the correctional facility.

The findings of the present study corroborate with the study of Dennard et al. (2021), whose research similarly highlighted the persistent issue of high workloads among staff members in correctional institutions. This alignment underscores the prevalence of heavy workloads as a common challenge faced by personnel within the correctional system, emphasizing the need for effective strategies to address workload management and support staff well-being.

Additionally, the research of Norman and Ricciardelli (2021) provides further support for the current findings. Their study revealed that institutional parole officers in the correctional system experienced significant impacts from the pandemic, including shifts in workloads, routines, and responsibilities, as well as an increase in overall work demands. This indicates that the pandemic's widespread impact on the work dynamics and responsibilities of correctional personnel poses a substantial and ongoing challenge.

Test of Significant Difference on Perceived Level of Mental Health Issues, Utilization and Availability of Supplies and Facilities, Health Protocols, and Duties and Functions. Table 7 reveals the test of significant difference on the

perceived level of mental health issues encountered by jail personnel at the Zamboanga del Norte Correctional and Rehabilitation Center.

Table 7
Test of significant difference on perceived level of mental health issues

| Mental Health issues | N | Z | p-value | Interpretation |
|--|----|-------|---------|-----------------|
| Post-traumatic stress | 57 | .519 | .950 | Not significant |
| Fear | 57 | .546 | .927 | Not significant |
| Anxiety | 57 | .634 | .816 | Not significant |
| Depression | 57 | .779 | .578 | Not significant |
| Sleeping disturbance or Insomnia | 57 | 1.127 | .158 | Not significant |
| Suicidal ideation | 57 | 1.681 | .007 | Significant |
| Substance Abuse (medical alcohol, alcoholic beverages) | 57 | 1.198 | .113 | Not significant |
| Paranoia | 57 | 1.372 | .046 | Significant |
| Burnout | 57 | 1.072 | .201 | Not significant |
| Borderline personality disorder | 57 | 1.245 | .090 | Not significant |

The results show that the probability coefficients on post-traumatic stress, fear, anxiety, depression, sleeping disturbance or Insomnia, substance Abuse, burnout and borderline personality disorder were far above the .05 level of significance, thus, the probability of rejecting the hypothesis was not possible. This further means that jail personnel have a common perception on these challenges. However, a p-values of .007 and .046 were obtained from suicidal ideation and paranoia which shows a greater slight probability of accepting the alternative hypothesis. Thus, it is safe to say that there is a significant difference on the level of perception on the challenges encountered by ZNCRC personnel during Covid-19 Pandemic on suicidal ideation and paranoia. This indicates a variable perception among jail personnel on these issues inside the correctional and rehabilitation center.

Table 8 presents the test of significant difference on the level of perceived utilization and availability of supplies and facilities encountered by jail personnel at the Zamboanga del Norte Correctional and Rehabilitation Center.

Table 8
Test of significant difference on the level of perceived utilization and availability of supplies and facilities

| Supplies and Facilities | N | Z | p-value | Interpretation |
|---|----|-------|---------|-----------------|
| Availability of face mask. | 57 | 1.933 | .001 | Significant |
| Availability of hand washing facilities and disinfectants | 57 | 1.639 | .009 | Significant |
| Availability of vaccines. | 57 | 2.294 | .000 | Significant |
| Availability of oxygen, oximeter, etc. | 57 | .779 | .579 | Not significant |
| Medicines | 57 | 1.237 | .094 | Not significant |
| Thermal scanner | 57 | .737 | .650 | Not significant |
| Availability of Personal Protective Equipment (PPE). | 57 | .675 | .752 | Not significant |
| Adequate ventilation. | 57 | .398 | .997 | Not significant |
| Prison or jail cells. | 57 | .440 | .990 | Not significant |
| Quarantine facility or isolation room. | 57 | .580 | .890 | Not significant |

The obtained probability values .001, .009 and .000 were observed on availability of face mask., availability of hand washing facilities and disinfectants and availability of vaccines which are far below the .05 level of significance leading to a decision of rejecting the null hypothesis. Hence, there is a significant difference on the level of perception on the challenges encountered by ZNCRC personnel during Covid-19 Pandemic in terms of Supplies and Facilities particularly on availability of face mask., availability of hand washing facilities and disinfectants and availability of vaccines.

However, on availability of oxygen, oximeter, etc., medicines, thermal scanner, availability of Personal Protective Equipment (PPE), adequate ventilation, prison or jail cells. and quarantine facility or isolation room, probability coefficients were far above the .05 level of significance indicating no significant difference. This suggests that jail personnel consistently shared the same views on these supply and facility challenges during the pandemic.

Table 9 presents the test of significant difference on the observed level of health protocols encountered by jail personnel at the Zamboanga del Norte Correctional and Rehabilitation Center. This analysis aims to evaluate the significance of differences in the observed adherence to health protocols among the personnel within the correctional facility.

Table 9
Test of significant difference on the observed level of health protocols encountered by jail personnel in Zamboanga del Norte Correctional and Rehabilitation Center

| Health Protocols | N | Z | p-value | Interpretation |
|---|----|-------|---------|-----------------|
| Visitors failed to follow the health protocol during visitation like wearing of facemask, face shield, washing or disinfecting hands and social distancing. | 57 | .701 | .710 | Not significant |
| Colleagues' subordinates failed to follow the health protocol like wearing of facemask, face shield, washing or disinfecting hands and social distancing. | 57 | .835 | .489 | Not significant |
| Inmates failed to follow health protocol during visitation. | 57 | .946 | .332 | Not significant |
| Unvaccinated jail personnel. | 57 | 1.316 | .063 | Not significant |
| Jail personnel were infected by Covid-19. | 57 | .994 | .276 | Not significant |
| Inmate was infected by Covid-19. | 57 | .774 | .586 | Not significant |
| Difficulty in isolating inmates who have symptoms of Covid-19. | 57 | .637 | .812 | Not significant |
| Problems in utilization of facility and equipment. | 57 | .560 | .913 | Not significant |
| Overcrowding in jail or lack of space for social distancing. | 57 | .755 | .618 | Not significant |
| Sanitation inside the correctional institution. | 57 | .776 | .584 | Not significant |

It can be observed that the obtained mean throughout all indicated problems relative to intervention management were greater than the .05 level of significance, thus the likelihood of refuting the null hypothesis is low. Thus, this study showed that there is no significant difference on the level of perception on the challenges encountered by ZNCRC personnel during Covid-19 Pandemic in terms of health protocols. This reflects a shared understanding of the difficulties in maintaining health protocols within the correctional environment during such a challenging period.

Table 10 presents the test of significant difference on the level of perception regarding the challenges encountered by ZNCRC personnel during the Covid-19 pandemic in terms of Duties and Functions.

The findings from Table 10 reveal that there is no significant difference in the perception of challenges faced by ZNCRC personnel during the COVID-19 pandemic concerning their duties and functions. Result shows that issues such as delays in attending trial hearings, absences, insufficient breaks, late report submissions, discrimination after recovering from COVID-19, late returns home due to unfinished tasks, neglected assignments, errors in work due to

limited time and resources, and absence in duty due to sickness or being Covid-19 positive, all have p-values greater than the .05 significance level. Therefore, it can be concluded that the jail personnel's perception of these challenges is consistent and does not significantly differ across these areas.

Table 10
Test of significant difference on the level of perception on the challenges encountered by ZNCRC personnel during Covid-19 Pandemic in terms of Duties and Functions.

| Duties and Functions | N | Z | p-value | Interpretation |
|--|----|-------|---------|-----------------|
| Increased of task and other responsibilities. | 57 | 1.561 | .015 | Significant |
| Delay in attending trial hearings as scheduled. | 57 | .667 | .766 | Not significant |
| Absence in trial hearing. | 57 | 1.277 | .077 | Not significant |
| Unable to take sufficient break. | 57 | .878 | .424 | Not significant |
| Failure to submit reports on or before deadlines. | 57 | 1.072 | .201 | Not significant |
| Discrimination by colleagues after recovery from Covid-19 illness. | 57 | 1.215 | .105 | Not significant |
| Returning home late due various unfinished assignments. | 57 | .774 | .586 | Not significant |
| Neglected other work assignments task. | 57 | .856 | .456 | Not significant |
| Errors committed in assignments or reports due to insufficient time and resources. | 57 | .923 | .362 | Not significant |
| Absence in duty due to sickness or being Covid-19 positive. | 57 | .574 | .897 | Not significant |

This suggests that jail personnel generally share a common perspective on how these challenges impact their operations. However, perceptions differ significantly regarding the increase in tasks and responsibilities, as indicated by a p-value of .015, which is below the .05 significance level. This points to varied views on the increase in tasks as a challenge to their overall operation.

Conclusion and Recommendations. According to the study results, the researchers conclude that concerns regarding mental health, intervention management, and duties and functions were perceived to be rare occurrences among jail personnel during the Covid-19 pandemic. However, issues related to supplies and materials frequently arose in the jail facility due to budget constraints. While there was a general consensus among jail personnel regarding their perceptions of challenges faced in the workplace during the pandemic, some disagreements were evident regarding specific problems. An overarching

challenge faced by the personnel was the increased workload and additional responsibilities brought about by the pandemic.

This research underscores the importance of defining strategies to address the challenges faced by jail personnel during the Covid-19 pandemic at the Zamboanga del Norte Correctional and Rehabilitation Center. Developing a contingency plan tailored to the specific needs of the correctional institution is crucial in effectively responding to the pandemic. Involving rank and file employees, regardless of their position, the formulation of the contingency plan is essential as they possess valuable insights into the real-time situations within the facility. The findings also highlight the necessity for increased funding from the Zamboanga del Norte Provincial Government to support ZNCRC in acquiring necessary supplies and facilities for intervention programs. Additionally, allocating resources for training and counseling for jail personnel is vital to enhance their mental health and preparedness in addressing pandemic-related challenges effectively. The study exclusively surveyed the jail personnel of Zamboanga del Norte Correctional and Rehabilitation Center, given the stringent restrictions on inmate visitation during the Covid-19 pandemic. Consequently, the research solely focuses on capturing the perceptions of jail personnel regarding the challenges encountered amid the pandemic, underscoring the necessity for additional investigations to delve into the inmates' viewpoints within the facility. Exploring the inmates' perspectives is essential to identify potential disparities, gather further significant data, and achieve a thorough grasp of the obstacles encountered by jail personnel at the correctional and rehabilitation center during the pandemic. To enhance the contingency planning process, the researchers recommend considering the provisional advice on readiness, prevention, and management of Covid-19 in correctional facilities and other detention facilities issued by the World Health Organization (Regional Office for Europe) on February 8, 2021. It will adopt value-added insights and best practices in conducting an effective and comprehensive contingency plan

tailored to the needs of the correctional institution in the face of the pandemic.

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REFERENCES

- Akiyama, M. J., Spaulding, A. C., & Rich, J. D. (2020). Flattening the Curve for Incarcerated Populations - Covid-19 in Jails and Prisons. *The New England Journal of Medicine*, 382(22), 2075–2077. <https://doi.org/10.1056/NEJMp2005687>.
- Almanasreh, E., Moles, R., & Chen, T. F. (2019). Evaluation of methods used for estimating content validity. *Research in Social & Administrative Pharmacy*, 15(2), 214–221. <https://doi.org/10.1016/j.sapharm.2018.03.066>.
- Alves, M. R., De Souza, R. a. G., & Caló, R. D. S. (2021). Poor sanitation and transmission of COVID-19 in Brazil. *São Paulo Medical Journal*, 139(1), 72–76. <https://doi.org/10.1590/1516-3180.2020.0442.r1.18112020>.
- Bandura, A. (1977). *Social learning theory*. Prentice Hall.
- Becker, D. (2020, March 21). 1st Mass. prisoner diagnosed with COVID-19. WBUR. <https://www.wbur.org/news/2020/03/21/first-mass-prisoner-covid-19-diagnosed>.
- Bown, C. P. (2021). How COVID-19 medical supply shortages led to extraordinary trade and industrial policy. *PIIE*. <https://www.piie.com/publications/work-ing-papers/how-covid-19-medical-supply-shortages-led-extraordinary-trade-and>

- Burhanullah, M. H., Mazza, P. R., Galecki, J., Wert, M. V., Weber, F., & Malik, M. (2022). Mental health of staff at correctional facilities in the United States during the COVID-19 pandemic. *Frontiers in Psychiatry*, 12, 767385. <https://doi.org/10.3389/fpsy.2021.767385>
- Carvalho, S. G. (2020). The pandemic in prison: interventions and overisolation. *Ciência & Saúde Coletiva*, 25(9), 3493–3502. <https://doi.org/10.1590/1413-81232020259.156820203493>.
- California Department of Corrections and Rehabilitation. (n.d.). CDCR/CCHCS COVID-19 status. California Department of Corrections and Rehabilitation. <https://www.cdcr.ca.gov/covid19/cdcr-cchcs-covid-19-status/>.
- Civil Service Commission. (2020). CSC sets multiple alternative work arrangements for gov't agencies. *Csc.Gov.Ph*. <http://www.csc.gov.ph/new-updates/1951-csc-sets-multiple-alternative-work-arrangements-for-gov%E2%80%99t-agencies.html>.
- Dennard, S., Tracy, D. K., Beeney, A., Craster, L., Bailey, F., Baureek, A., Barton, M., Turrell, J., Poynton, S., Navkarov, V., & Kothari, R. (2021). Working in a prison: Challenges, rewards, and the impact on mental health and well-being. *The Journal of Forensic Practice*, 23(2), 132–149. <https://doi.org/10.1108/JFP-12-2020-0055>.
- De Paiva, J. P. S., Leal, T. C., Da Silva, L. F., Santos, L. G., De Almeida Santana, G. B., Machado, M. F., & De Souza, C. D. F. (2023). Health in prison: Coronavirus disease 2019's challenges in the Brazilian criminal justice system. *Revista da Associação Médica Brasileira*, 69(1), 186–190. <https://doi.org/10.1590/1806-9282.20210889>.
- DeVon, H. A., Block, M. E., Moyle-Wright, P., Ernst, D. M., Hayden, S. J., Lazzara, D. J., ... & Kostas-Polston, E. (2007). A psychometric toolbox for testing validity and reliability. *Journal of Nursing Scholarship*, 39(2), 155–164. <https://sigmapubs.onlinelibrary.wiley.com/doi/abs/10.1111/j.1547-5069.2007.00161.x>.
- Fawcett, E. (2020, March 28). With COVID-19 threat looming, state prisons and jails are on edge. *Hartford Courant*. <https://www.courant.com/2020/03/28/with-covid-19-threat-looming-state-prisons-and-jails-are-on-edge/>.
- Franco-Paredes, C., Jankousky, K., Schultz, J., Bernfeld, J., Cullen, K., Quan, N. G., ... & Krsak, M. (2020). COVID-19 in jails and prisons: A neglected infection in a marginalized population. *PLoS neglected tropical diseases*, 14(6), e0008409. <https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0008409>.
- Hull, O. J., Breckler, O. D., & Jaegers, L. A. (2023). Integrated safety and health promotion among correctional workers and people incarcerated: A scoping review. *International Journal of Environmental Research and Public Health*, 20(12), 6104. <https://doi.org/10.3390/ijerph20126104>.
- International Committee of the Red Cross. (2021). Coronavirus: COVID-19 pandemic. *lcr.org*. <https://www.icrc.org/en/what-we-do/covid-19-pandemic>.
- 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://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(20\)30058-X/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(20)30058-X/fulltext).

- LaMorte, W. W. (2022). The social cognitive theory. Boston University School of Public Health. <https://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories5.html>.
- McCormick, A. (2020, March 19). Philadelphia, Delaware County officials work to thin jail, prison populations amid COVID-19. 6abc Philadelphia. <https://6abc.com/how-many-people-have-died-from-coronavirus-to-prepare-for-symptoms-covid-19/6057143/>.
- Mekonnen, M., Hailemariam, S., Ejigu, A., Shifera, N., & Simienh, A. (2021). Preparedness and readiness against COVID-19 pandemic in prison institutions and detention centers in Southwest Ethiopia. [ncbi.nlm.nih.gov. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7866933/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7866933/).
- Miller, J. M., & Blumstein, A. (2020). Crime, justice & the COVID-19 pandemic: Toward a national research agenda. [ncbi.nlm.nih.gov. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7343408/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7343408/).
- Montoya-Barthelemy, A. G., Lee, C. D., Cundiff, D. R., & Smith, E. B. (2020). COVID-19 and the correctional environment: the American prison as a focal point for public health. *American journal of preventive medicine*, 58(6), 888.
- Murhula, P. B. B. (2023). The impact of COVID-19 pandemic in South African correctional centres: Challenges and solutions. *International Journal of Comparative and Applied Criminal Justice*, 47(1), 1–17. <https://doi.org/10.11576/ijcv-6541>.
- Nelson, B., & Kaminsky, D. B. (2020). A COVID-19 crisis in US jails and prisons. *EMBO Molecular Medicine*, 12(8), e12828. National Center for Biotechnology Information. <https://doi.org/10.15252/emmm.202012828>.
- Norman, M., & Ricciardelli, R. (2021). “It’s pure chaos every day”: COVID-19 and the work of Canadian federal institutional parole officers. *Correctional and Justice Services*, 1–16. <https://doi.org/10.1177/20662203211056487>.
- Nowotny, K. M., Seide, K., & Rubinstein, L. B. (2021). Risk of COVID-19 infection among prison staff in the United States. *BMC Public Health*. <https://doi.org/10.1186/s12889-021-11077-0>.
- Pajares, F. (2017). Social cognitive theory: An agentic perspective. In M. G. McKendall, H. Fisher, & A. Loeser (Eds.), *Personality, Social Psychological Theories, and the Individual* (pp. 9–35). Springer. [https://books.google.com.ph/books?hl=en&lr=&id=uEq2EAAAQBAJ&oi=fnd&pg=PR9&dq=Social+Cognitive+Theory+of+Albert+Bandura+\(1977\).+as+cited+by+Pajares+\(2017\)&ots=A4Z_OrXd_j&sig=6V5f2lz8OVMkpCmWYtYFy52sq34&redir_esc=y#v=onepage&q&f=false](https://books.google.com.ph/books?hl=en&lr=&id=uEq2EAAAQBAJ&oi=fnd&pg=PR9&dq=Social+Cognitive+Theory+of+Albert+Bandura+(1977).+as+cited+by+Pajares+(2017)&ots=A4Z_OrXd_j&sig=6V5f2lz8OVMkpCmWYtYFy52sq34&redir_esc=y#v=onepage&q&f=false).
- Paredes, C. F., Jankousky, K., Schultz, J., Bernfeld, J., Cullen, K., Quan, N., Kon, S., Hotez, P., Martínez, A. F. H., & Krsak, M. (2020). COVID-19 in jails and prisons: A neglected infection in a marginalized population. *PLoS Neglected Tropical Diseases*, 14(6), e0008409. <https://doi.org/10.1371/journal.pntd.0008409>.
- Park, C. Y., Kim, K., Roth, S., Beck, S., Kang, J. W., & Tayag, M. C. (2020). Global shortage of personal protective equipment amid COVID-19: Supply chains, bottlenecks, and policy implications. *Future of Regional Cooperation in Asia and the Pacific*, 442. https://web.archive.org/web/20201126205051id_/https://www.adb.org/sites/default/files/publication/653256/future-

regional-cooperation-asia-pacific.pdf#page=477.

Puglisi, L. B., Rosenberg, A., Credle, M., Negron, T., Martin, R. A., Maner, M., ... & Wang, E. A. (2022).

Paths to improving pandemic preparedness in jails and prisons: perspectives of incarcerated people and correctional staff. *American Journal of Public Health*, 112(S9), S869-S873.

<https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2022.306956>.

Rubin, R. (2020). The challenge of preventing COVID-19 spread in correctional facilities. *JAMA*.

<https://doi.org/10.1001/jama.2020.5427>.

Sasaki, N., Kuroda, R., Tsuno, K., & Kawakami, N. (2020). Workplace responses to COVID-19 associated with mental health and work performance of employees in Japan. *Journal of Occupational Health*, 62(1). <https://doi.org/10.1002/1348-9585.12134>.

Sharpe, J., & Boone, C. (2020, April 10). Ga. inmate dies from COVID-19 as virus hits more prisons. *The Atlanta Journal-Constitution*.

<https://www.ajc.com/news/local/breaking-inmate-dies-from-covid-outbreak-worsens-prison/TzQZL4uXfK4GzH9ebSFNQN/>.

Solis, J., Franco-Paredes, C., Henao-Martínez, A. F., Krsak, M., & Zimmer, S. M. (2020). Structural vulnerability in the US revealed in three waves of COVID-19. *The American journal of tropical medicine and hygiene*, 103(1), 25. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7263522/>.

Stevens, J. P., & Stevens, J. P. (2001). *Applied Multivariate Statistics for the Social Sciences* (4th ed.). Psychology Press. <https://doi.org/10.4324/9781410604491>.

World Health Organization. (2021). Preparedness, prevention and control of COVID-19 in prisons and other places of detention: interim guidance, 8 February 2021 (No. WHO/EURO: 2021-1405-41155-57257). World Health Organization. Regional Office for Europe. <https://www.who.int/europe/publications/item/WHO-EURO-2021-1405-41155-57257>.

Williams, B. A., Ahalt, C., Cloud, D., Augustine, D., & Rorvig, L. (2020). Correctional facilities in the shadow of COVID-19: Unique challenges and proposed solutions. *Health Affairs Forefront*. <https://doi.org/10.1377/forefront.20200424.134508>.

Zeveleva, O., & Nazif-Munoz, J. I. (2021). COVID-19 and European carcerality: Do national prison policies converge when faced with a pandemic? *Punishment & Society*, 24(4), 642-666. <https://doi.org/10.1177/14624745211002011>.