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Stress Among Prisoners from the Perspective of Causal Factors and Psychological Impacts: A Systematic Literature Review

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A R T I C L E I N F O

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A B S T R A C T

A Systematic Literature Review (SLR) was conducted through PubMed, PubMed Central, DOAJ, Google Scholar, and publisher websites. Eligible journal articles were published in 2021–2026, addressed incarcerated populations, reported prison-related stressors or psychological outcomes, and provided full text or sufficiently detailed structured abstracts. Nineteen thematic studies were synthesised together with one PRISMA 2020 reporting guideline. Five major groups of causes emerged: pre-existing vulnerability, loss of autonomy and safety, overcrowding and isolation, disrupted family and social support, and barriers to mental healthcare. Pandemic restrictions intensified pre-existing stressors through prolonged cell confinement, suspended visits, uncertainty, and fear of infection. The most consistent impacts were anxiety, depression, loneliness, sleep disturbance, anger, helplessness, social withdrawal, and suicidal expressions. Women, young prisoners, people with prior mental disorders, and transgender or non-binary prisoners showed more complex needs. Effective responses require periodic screening, a healthier social environment, meaningful activities, maintained family contact, confidential referral pathways, and services tailored to vulnerable groups.

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INTRODUCTION

Stress among prisoners cannot be understood merely as an immediate reaction to sentencing or the loss of freedom. Imprisonment changes an individual's lifestyle, personal space, social relationships, access to resources, and decision-making processes. These changes occur within a highly regulated environment, characterized by limited privacy and the placement of individuals together with others who have diverse needs and backgrounds. Stress emerges when environmental demands are perceived to exceed an individual's adaptive capacity. Stress responses may be physiological, emotional, cognitive, and behavioral. Their intensity is influenced by life history, mental health status, stage of imprisonment, available support, and the quality of the correctional environment.

Prison populations often bring vulnerabilities that have developed prior to incarceration. Histories of trauma, substance use, mental disorders, family conflict, economic hardship, experiences of violence, and exposure to legal problems may occur simultaneously. Imprisonment then adds new sources of pressure, including uncertainty, shame, concern for family members, loss of social roles, and the need to understand informal rules within the prison environment. Findings from 1,296 individuals in 15 Belgian prisons showed that a history of mental disorders was associated with distress, while low autonomy, perceived safety, and social support also contributed independently to psychological distress (Favril & van Ginneken, 2024).

The prison environment may shape the experience of stress through both physical and social factors. Overcrowding increases noise, conflict, limited access to facilities, and competition for resources. Isolation creates different problems because it reduces stimulation, activity, and human connection. These two conditions may also coexist. A person may live in an overcrowded space yet still feel lonely because the available relationships do not provide a sense of safety or support. A study of young prisoners in Cambodia described the experience of being "overcrowded but lonely," which was associated with poor mental well-being (Pat et al., 2023).

Safety has a broad meaning for prisoners. Physical threats, bullying, sexual violence, intergroup conflict, uncertainty regarding officers' actions, and concerns about health may keep individuals in a state of vigilance. Such conditions consume psychological resources needed for adaptation. Perceptions of the environment are also influenced by affective traits, cognitive patterns, and psychopathic characteristics. Research on the psychological effects of imprisonment has shown that affective and cognitive tendencies are associated with variations in depression, anxiety, stress, and adjustment during incarceration (Lanciano et al., 2022).

Disconnection from family is a consistent source of pressure. Prisoners may worry about childcare, the health of spouses or parents, household economic conditions, and relationship changes during imprisonment. Visits and communication provide emotional functions, identity, and hope. The interruption of contact may lead to loneliness, guilt, or fear of abandonment. Support from fellow prisoners and correctional officers is also important, but it

is not always easily obtained. Hierarchical relationships, stigma surrounding mental health problems, and fear of being perceived as weak may prevent individuals from expressing their difficulties.

Mental health services should serve as a protective resource, yet the process of accessing them may become a stressor. Prisoners may be unaware of help-seeking pathways, doubt confidentiality, fear being labelled, or believe that officers will not respond to their concerns. Interviews with male prisoners in Norway identified barriers at the individual level, within prison culture, in interactions with officers, and within service organization. Trust and clear information were found to determine willingness to seek help (Solbakken et al., 2024). Such barriers risk prolonging symptoms until they reach a crisis stage.

The COVID-19 pandemic demonstrated the close relationship between security policies, infection control, and mental health. Many prisons restricted visits, activities, worship, education, work, and time outside cells. Although such policies may reduce disease transmission, they also remove psychological buffers. A systematic review of prisoners' mental health during the pandemic found increased or high levels of anxiety, depression, stress, fear, and loneliness across various countries, although research designs and instruments varied (González-Riera et al., 2024). A global mixed-methods review also concluded that the pandemic affected the physical health, mental health, access to services, and social conditions of people experiencing imprisonment (Kim et al., 2022).

Evidence from the pandemic should not be treated as entirely separate from everyday prison life. Prolonged confinement, limited information, uncertainty, and reduced services intensified problems that had already existed. A qualitative study in England described prison healthcare services as already weak before the pandemic and under even greater pressure after restrictions were implemented (Wainwright et al., 2023). This situation indicates that crisis preparedness must include the maintenance of mental health, not only the prevention of infection.

The impacts of stress may appear as anxiety, depression, sleep disturbances, irritability, difficulty concentrating, hopelessness, social withdrawal, and self-harming behavior. Some individuals suppress emotions as a way of maintaining safety or social status. Emotional suppression may be useful in certain situations, but its continuous use reduces opportunities to process experiences. A study in Polish penitentiary institutions found an association between perceived stress and anger control, anxiety, and depression (Kołodziej et al., 2022). Generalized anxiety disorder was also identified as a relevant mental health problem among prisoners in Poland (Stawińska-Witoszyńska et al., 2021).

The most serious risks arise when stress interacts with depression, trauma, substance use, hopelessness, and low levels of support. Research on young male prisoners in Cambodia found mental health problems and suicidal expressions that required direct service responses (Pat et al., 2021). Risk is not distributed evenly. Women may carry experiences of violence and caregiving responsibilities. Young prisoners face developing identities and immature emotional regulation skills. Transgender and non-binary prisoners may

experience stigma, inappropriate placement, and greater insecurity. A study conducted during the pandemic showed particular burdens among transgender and non-binary prisoners (Suhomlinova et al., 2023).

This review was developed to answer three questions. First, what individual, social, environmental, and service-related factors trigger or intensify stress among prisoners? Second, what psychological impacts are most frequently reported in publications from the past five years? Third, what forms of intervention can be derived from these patterns of findings? The purpose of this review is to build a synthesis that can serve as a foundation for research, mental health program development, and improvement of correctional governance.

THEORETICAL REVIEW

Conceptualization of Stress in the Context of Imprisonment

Stress among incarcerated individuals is understood as an interactive process between the demands of imprisonment and the adaptive resources available to the individual. These demands include the loss of freedom, restrictions on personal choices, uncertainty, threats to personal safety, changes in social relationships, and the obligation to comply with both formal and informal rules. The responses that emerge are not uniform, as they are influenced by a history of mental disorders, traumatic experiences, substance use, cognitive-affective characteristics, and the ability to regulate emotions. Thus, stress does not arise solely from individual characteristics but also from the ways in which the correctional environment intensifies or alleviates psychological pressure (Favril & van Ginneken, 2024; Lanciano et al., 2022). This review employs an interactional-cumulative framework. The interactional framework positions stress as the outcome of the interaction between personal vulnerabilities and institutional conditions. Meanwhile, the cumulative framework explains that multiple stressors occurring simultaneously may exceed an individual's coping capacity, even when each stressor might still be tolerable in isolation. Overcrowding, feelings of insecurity, isolation, loss of family support, and barriers to accessing services may reinforce one another and lead to more severe psychological distress (Favril & van Ginneken, 2024; Pat et al., 2023).

Causal Factors and Psychosocial Mechanisms

The literature classifies the causes of stress into individual, institutional, social, and service-related factors. Individual factors include a history of mental disorders, trauma, substance use, age, developmental stage, and emotional regulation skills. Institutional factors include the loss of autonomy, overcrowding, noise, prolonged confinement, unclear rules, and threats of violence. Social factors include family disconnection, interpersonal conflict, loneliness, stigma, and limited social support. Service-related factors include unclear procedures for obtaining assistance, concerns regarding confidentiality, delayed responses, and low levels of trust in healthcare professionals (Pat et al., 2023; Solbakken et al., 2024). The psychosocial mechanisms linking these factors to stress include loss of control, heightened vigilance, reduced predictability, rumination, and a weakened sense of belonging. Restrictions imposed during the pandemic made these mechanisms more apparent because the suspension of

visits, reduction in activities, and uncertainty surrounding institutional policies removed previously available psychological buffers. Therefore, the impact of the pandemic is understood as an intensification of pre-existing prison-related stressors rather than an entirely separate phenomenon (Kim et al., 2022; González-Riera et al., 2024; Kothari et al., 2022).

Psychological Impacts, Protective Factors, and Vulnerable Groups

The most frequently reported psychological impacts include anxiety, depression, loneliness, sleep disturbances, anger, mood changes, social withdrawal, helplessness, and suicidal expressions. These symptoms may be interconnected and may manifest as behavior perceived as uncooperative or as violations of institutional rules. The level of risk increases when stress interacts with trauma, hopelessness, substance use, the loss of meaningful relationships, and limited access to psychological support (Kołodziej et al., 2022; Pat et al., 2021; Stawińska-Witoszyńska et al., 2021). Protective factors include family support, secure relationships with correctional officers and fellow incarcerated individuals, meaningful activities, clear information, opportunities to make limited choices, resilient coping skills, and accessible mental health services. Such protective measures should be adapted to the specific needs of vulnerable groups. Women, younger incarcerated individuals, people with a history of trauma or mental disorders, and transgender and nonbinary individuals may experience additional pressures that are not adequately addressed through standardized service approaches (Mendes et al., 2023; James et al., 2023; Suhomlinova et al., 2023).

Research Gaps, Novelty, and the Research Synthesis Framework

Previous studies have tended to focus on a single country, a particular incarcerated population, one type of stressor, or a specific psychological outcome. Much of the recent evidence has also positioned the pandemic as the primary context, meaning that the relationships among routine pressures of imprisonment, psychosocial mechanisms, and service needs have not always been presented as an integrated continuum. Variations in research designs and measurement instruments make prevalence findings difficult to compare directly, while findings concerning vulnerable groups and the reintegration period remain scattered across different studies. The novelty of this review lies in its integration of causal factors, psychosocial mechanisms, psychological impacts, protective factors, and service responses within a single framework. The synthesis positions pre-existing vulnerabilities and institutional conditions as sources of stress; the loss of control and social support as underlying mechanisms; emotional, cognitive, and behavioral symptoms as outcomes; and clinical interventions and environmental improvements as appropriate responses. This framework also incorporates the specific needs of vulnerable groups and the continuity of services throughout the reintegration process. Consequently, the findings of this review may be used to develop a multilevel prevention framework within correctional institutions.

METHODOLOGY

This study employed a Systematic Literature Review (SLR) using a narrative synthesis approach. The review was conducted and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines, particularly regarding the formulation of the review question, eligibility criteria, information sources, study selection, data extraction, and presentation of findings. A narrative synthesis was considered the most appropriate approach because the included studies differed substantially in terms of research design, participant characteristics, national contexts, and measurement instruments. Consequently, a quantitative meta-analysis was not performed due to the considerable methodological heterogeneity, which precluded a meaningful estimation of a pooled effect size.

The review question was developed using the Population–Exposure–Outcome (PEO) framework. The population comprised adolescents and adults who were incarcerated in prisons, correctional institutions, or other custodial facilities. The exposure included incarceration-related conditions such as loss of autonomy, overcrowding, isolation, interpersonal conflict, family separation, restricted activities, barriers to healthcare access, and restrictions associated with public health emergencies. The outcomes of interest included perceived stress, psychological distress, anxiety, depression, loneliness, emotional disturbances, sleep disorders, hopelessness, self-harm, and suicidal expressions.

A comprehensive literature search was conducted using PubMed, PubMed Central (PMC), the Directory of Open Access Journals (DOAJ), Google Scholar, and publishers' official websites. Search terms were developed in both English and Indonesian to maximize retrieval of relevant studies. The English search terms included "prisoner stress," "inmate psychological distress," "prison mental health," "incarceration anxiety depression," "prison loneliness," "prison mental healthcare barriers," and "COVID-19 prisoners mental health." Indonesian keywords included "stres narapidana" and "kesehatan mental lembaga pemasyarakatan." Boolean operators (AND and OR) were used to combine population, exposure, and outcome terms. The search was limited to studies published between January 2021 and June 2026.

Studies were considered eligible for inclusion if they met the following criteria: (1) they were published in peer-reviewed journals between 2021 and 2026; (2) they involved individuals who were currently incarcerated or had experienced imprisonment; (3) they examined factors contributing to stress or reported psychological outcomes associated with incarceration; (4) they provided a sufficiently detailed description of the study methodology; and (5) they employed quantitative, qualitative, longitudinal, cross-sectional, mixed-methods, or systematic review designs. Studies were excluded if they focused exclusively on correctional staff without including prisoner participants, consisted solely of editorials, commentaries, or opinion papers without empirical evidence, were unpublished reports or non-journal publications, or investigated only physical health outcomes without addressing psychological aspects of imprisonment. Additionally, one methodological article describing the PRISMA

2020 reporting guideline was included to ensure transparency and methodological rigor in the reporting of this review.

The study selection process consisted of two stages. During the first stage, titles and abstracts were screened to assess their relevance based on the target population, study focus, and publication period. In the second stage, the full texts of potentially eligible studies were examined, with particular attention to the methods, results, and study limitations. Relevant information was extracted using a standardized data extraction matrix that included the authors, publication year, country, study design, sample characteristics, identified stressors, psychological outcomes, and principal findings. Nineteen thematic studies fulfilled the eligibility criteria and were included in the narrative synthesis. Together with one PRISMA 2020 methodological guideline, the review incorporated a total of 20 journal references. The study selection process is illustrated in Figure 1, which presents the identification, screening, eligibility assessment, and inclusion stages following the PRISMA framework.

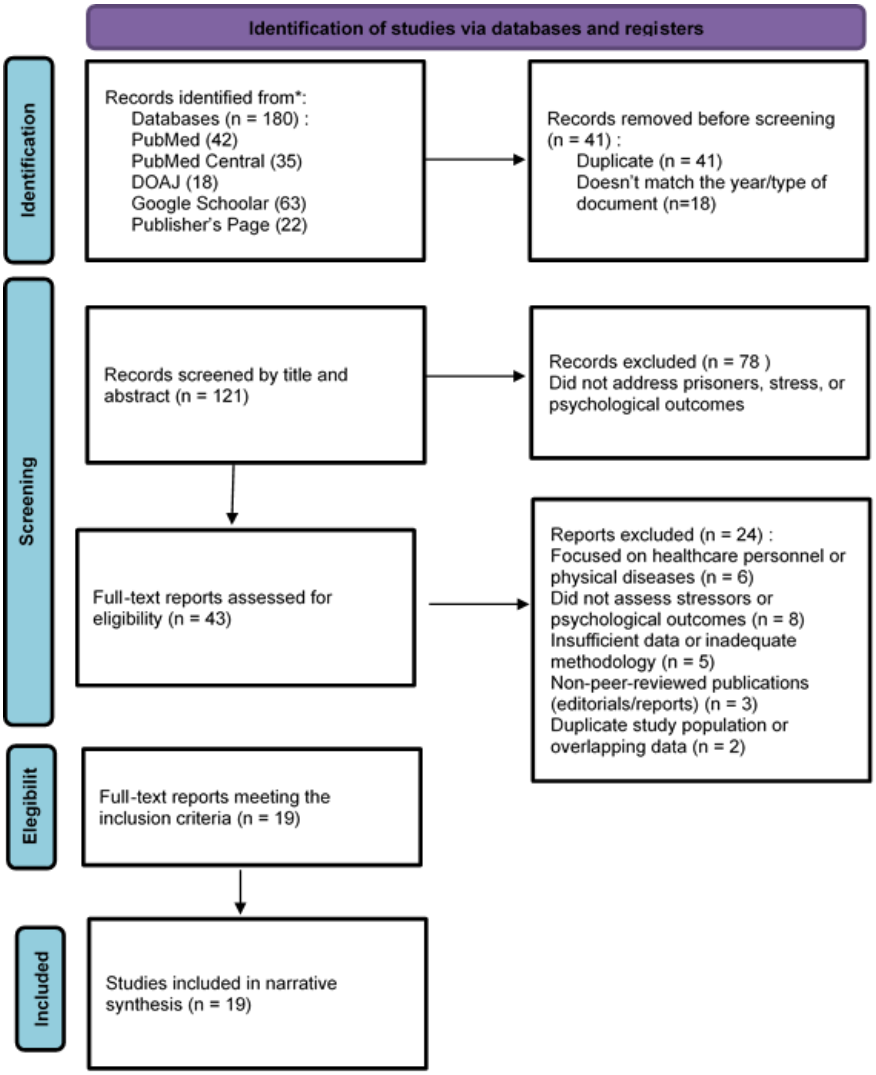

Figure 1. PRISMA 2020 flow diagram of the study selection process.

The methodological quality of the included studies was evaluated qualitatively by examining the clarity of research objectives, appropriateness of

study design, sampling procedures, validity of measurement instruments, transparency of data analysis, discussion of potential bias, and consistency between the reported data and the authors' conclusions. Studies were not excluded solely because they employed cross-sectional designs. Instead, methodological limitations were considered when interpreting the strength of the evidence. Greater emphasis was placed on findings from longitudinal studies and systematic reviews when evaluating changes over time, whereas qualitative studies were used primarily to explain psychological mechanisms that could not be captured through quantitative measurements.

The findings were analysed using thematic analysis. Initial codes were grouped into five overarching themes: individual factors, institutional environmental factors, social relationships, access to mental health services, and situational stressors. Psychological outcomes were further categorized into emotional, cognitive, behavioural, social, and severe adverse outcomes. Relationships among these categories were examined to identify recurring patterns across the included studies. Finally, recommendations were formulated based on modifiable factors that could be addressed by correctional administrators and mental health service providers to improve prisoners' psychological well-being.

RESULTS

Characteristics of the Included Studies

A total of 19 thematic studies were included in the final synthesis. The studies were conducted across diverse geographical settings, including Belgium, Poland, Cambodia, Norway, Ethiopia, Portugal, Peru, England, China, the United States, and several multinational contexts. The included studies employed a variety of research designs, including cross-sectional, longitudinal, qualitative, mixed-methods, and systematic review approaches. This methodological diversity provided a comprehensive understanding of prisoners' psychological experiences across different correctional systems, although it limited direct comparisons of prevalence estimates because of variations in study populations, research settings, and measurement instruments. The characteristics and principal findings of the included studies are presented in Table 1.

Table 1. Characteristics and Main Findings of the Included Studies

Source	Location and Design	Population/Focus	Relevant Findings
Favril & van Ginneken, 2024	Belgium; cross-sectional	1,296 prisoners in 15 prisons	History of mental disorders, low autonomy, perceived safety, and social support were associated with distress.
Lanciano et al., 2022	Italy; quantitative	Adult prisoners	Cognitive, affective, and psychopathic traits influenced variations in stress, anxiety, depression, and adjustment.

Kołodziej et al., 2022	Poland; cross-sectional	Residents of penitentiary institutions	Perceived stress was associated with anger, anxiety, and depression.
Stawińska-Witoszyńska et al., 2021	Poland; cross-sectional	Prisoners in northeastern Poland	Generalized anxiety disorder was identified as a mental health problem requiring detection and treatment.
Pat et al., 2021	Cambodia; cross-sectional	Young male prisoners	Mental health problems and suicidal expressions were associated with unmet service needs.
Pat et al., 2023	Cambodia; qualitative	Young prisoners	Overcrowding may coexist with loneliness; relationships, living conditions, and hope influenced well-being.
Solbakken et al., 2024	Norway; qualitative	Male prisoners	Stigma, low trust, prison culture, and service procedures hindered access to mental healthcare.
González-Riera et al., 2024	Multinational; systematic review	Studies on prisoners during the pandemic	Restrictions were associated with anxiety, depression, stress, loneliness, and reduced well-being.
Birkie et al., 2022	Ethiopia; cross-sectional	Prisoners during the pandemic	Depressive and anxiety symptoms were associated with social, clinical, and pandemic-related factors.
Mendes et al., 2023	Portugal; cross-sectional	Young adult male prisoners	Fear of COVID-19 was associated with mental health; resilient coping played a protective role.
Chimicz et al., 2023	Poland; cross-sectional	Prisoners after the main phase of the pandemic	Mood and emotions remained influenced by restriction experiences and prison conditions.
Esteban-Febres et al., 2023	Peru; cross-sectional	Female prisoners in Lima	Psychological distress emerged after the first pandemic wave and was related to imprisonment conditions.
Kothari et al., 2022	England; mixed methods	Male prisoners and support staff	Prison lockdown intensified isolation, loss of routine, and difficulty obtaining support.
Zhang et al., 2023	China; longitudinal	Prisoners at risk of mood disorders	Anxiety changed during the pandemic, particularly among prisoners with mood-related vulnerability.
James et al., 2023	United States; qualitative	Incarcerated women in California	Risk-mitigation isolation worsened mental health problems and reduced support.
Suhomlinova et al., 2023	England; qualitative	Transgender and non-binary prisoners	Stigma, isolation, insecurity, and unresponsive services

			intensified psychological distress.
Wainwright et al., 2023	England; qualitative	Prison service users and providers	The pandemic worsened healthcare barriers that had already existed before the crisis.
Cunha et al., 2023	Portugal; cohort protocol	Individuals during and after imprisonment	The study design assessed mental health changes during imprisonment and reintegration.
Kim et al., 2022	Global; mixed-methods systematic review	Adults experiencing imprisonment	The pandemic affected health, service access, social conditions, and experiences of detention.

Factors Contributing to Stress among Prisoners

The synthesis identified five major categories of stressors contributing to psychological stress among prisoners: (1) pre-incarceration vulnerability, (2) institutional environmental factors, (3) disruption of social relationships, (4) barriers to mental healthcare, and (5) situational stressors related to the COVID-19 pandemic.

Pre-incarceration vulnerability constituted the first layer of risk. Histories of mental disorders, traumatic experiences, substance use, exposure to violence, and social conflict appeared to reduce prisoners' adaptive capacity upon entering correctional facilities. The initial period of incarceration emerged as a particularly sensitive phase, during which individuals were required to adjust to institutional regulations, uncertainty regarding legal proceedings or sentence duration, and new social hierarchies. Higher levels of psychological distress during this early stage, particularly among individuals with pre-existing mental disorders, highlight the importance of mental health screening at prison admission and repeated assessments following the initial adaptation period (Favril & van Ginneken, 2024).

Isolation and prolonged confinement removed many protective daily routines. Educational activities, employment, religious practices, recreational programs, counselling sessions, and structured group activities ordinarily provide purpose, routine, and opportunities for social engagement. The suspension of these activities increased opportunities for rumination and psychological deterioration. During prison lockdowns in England, prolonged isolation, disrupted routines, and reduced access to support services were consistently associated with poorer mental health among male prisoners (Kothari et al., 2022). Similar experiences were reported among incarcerated women subjected to isolation during COVID-19 mitigation measures (James et al., 2023).

Family separation constituted another persistent source of emotional distress. Prisoners frequently expressed concerns regarding childcare responsibilities, financial difficulties, family health, and changing family relationships during incarceration. Restrictions on prison visits during the COVID-19 pandemic further demonstrated the protective role of family contact. International evidence consistently identified suspension of visits and reduced

social interaction as major contributors to deteriorating mental health among incarcerated populations (González-Riera et al., 2024).

Barriers to mental healthcare occurred at multiple levels. Prisoners often failed to recognize psychological symptoms, preferred to remain silent because of stigma, or feared being perceived as weak by fellow inmates. Institutional procedures for requesting mental healthcare were frequently unclear, while brief or impersonal interactions with healthcare providers weakened trust in available services. Concerns regarding confidentiality further discouraged help-seeking behaviours. Qualitative findings from Norway suggested that access to mental healthcare depended not only on service availability but also on trust, institutional culture, communication, and organisational support (Solbakken et al., 2024).

The COVID-19 pandemic functioned as an additional situational stressor that amplified existing psychological burdens. Fear of infection, changing institutional policies, postponed legal proceedings, concerns for family members, and restrictions on movement created persistent uncertainty. A study conducted in Ethiopia reported high levels of anxiety and depressive symptoms associated with both clinical and social factors during the pandemic (Birkie et al., 2022). Likewise, fear of COVID-19 among young adult male prisoners in Portugal was significantly associated with poorer mental health, whereas resilient coping functioned as a protective factor (Mendes et al., 2023).

Finally, prisoners' demographic and social identities shaped differential exposure to stressors. Women frequently experienced stress associated with caregiving responsibilities, reproductive health, histories of violence, and safety concerns. Psychological distress among incarcerated women in Lima following the first wave of the COVID-19 pandemic suggested the need for gender-responsive interventions rather than services modelled exclusively on male prisoner populations (Esteban-Febres et al., 2023). Transgender and non-binary prisoners experienced additional challenges related to institutional placement, recognition of gender identity, discrimination, healthcare access, and exposure to violence, all of which intensified psychological distress during pandemic-related restrictions (Suhomlinova et al., 2023).

Psychological Impacts of Stress

Across the included studies, anxiety emerged as the most consistently reported psychological outcome. Common manifestations included persistent worry, muscular tension, sleep disturbances, hypervigilance, and difficulty relaxing. Uncertainty regarding institutional safety, legal proceedings, personal health, and family circumstances appeared to sustain anxiety symptoms. Evidence from Poland demonstrated that generalized anxiety disorder represented a clinically significant mental health condition requiring systematic screening rather than being regarded solely as a normal reaction to imprisonment (Stawińska-Witoszyńska et al., 2021). Furthermore, a longitudinal study conducted in China demonstrated fluctuations in anxiety levels before and during the COVID-19 pandemic among prisoners at high risk of mood disorders,

indicating an interaction between environmental crises and pre-existing psychological vulnerability (Zhang et al., 2023).

Depression represented another highly prevalent psychological consequence. Symptoms included persistent sadness, diminished interest in daily activities, fatigue, hopelessness, guilt, and pessimistic expectations regarding the future. Monotonous prison environments and the loss of meaningful social roles appeared to exacerbate depressive symptoms. Studies conducted during the COVID-19 pandemic in Ethiopia reported clinically relevant levels of depressive symptoms among prisoners (Birkie et al., 2022). Moreover, anxiety, depression, and perceived stress frequently co-occurred, suggesting overlapping rather than independent psychological conditions (Kołodziej et al., 2022).

Loneliness emerged as both an emotional and social phenomenon. Emotional loneliness reflected the loss of close interpersonal relationships, whereas social loneliness reflected the absence of meaningful group belonging. Overcrowding did not necessarily alleviate loneliness because many prisoners lacked trusted individuals with whom they could openly communicate. This situation hindered emotional regulation and reduced willingness to seek psychological support (Pat et al., 2023). Restrictions on family visits, medical isolation, and suspension of rehabilitation programs further intensified loneliness during the COVID-19 pandemic (González-Riera et al., 2024).

The remaining psychological outcomes, including emotional dysregulation, cognitive impairment, behavioural disturbances, social withdrawal, self-harming behaviour, and suicidal expressions, were consistently reported across the reviewed studies and demonstrated that stress among prisoners extends beyond transient emotional reactions, representing a multidimensional mental health concern requiring comprehensive intervention.

Protective Factors and Coping Strategies

The narrative synthesis identified several protective factors that consistently mitigated psychological stress among prisoners. Among these, social support emerged as the most influential protective factor. Maintaining contact with family members helped preserve prisoners' sense of identity, hope, and belonging throughout incarceration. Positive relationships with fellow prisoners also provided practical and emotional support when established within an atmosphere of mutual trust and respect. Likewise, respectful interactions with correctional officers contributed to prisoners' perceptions of safety and institutional trust. Even after controlling for individual-level characteristics, lower levels of perceived social support remained significantly associated with greater psychological distress, suggesting that social support should be regarded as an integral component of prison mental health services rather than an optional supplementary resource (Favril & van Ginneken, 2024).

Participation in meaningful activities also played an important protective role by providing structure, purpose, and opportunities for personal development. Educational programs, vocational training, physical exercise, artistic activities, religious practices, group counselling, and structured daily

responsibilities helped organize prisoners' daily routines while reducing opportunities for rumination. These activities further promoted competence, self-efficacy, and positive reinforcement. Experiences during prison lockdowns demonstrated the adverse psychological consequences of losing such structured routines, highlighting their importance for maintaining mental well-being (Kothari et al., 2022). Accordingly, correctional institutions should ensure equitable access to meaningful activities rather than limiting participation to selected groups of prisoners.

Finally, accessible, confidential, and non-judgmental mental health services constituted a critical protective resource capable of preventing psychological distress from progressing into mental health crises. Prisoners should be informed about available referral pathways, and these pathways should be equally familiar to correctional officers and healthcare professionals. Early, responsive, and respectful interactions with mental health providers are essential for building trust and encouraging future help-seeking. Furthermore, prison mental health services should adopt approaches that are responsive to gender, age, trauma history, cultural background, disability, and gender identity. Evidence concerning incarcerated women, young prisoners, and transgender and non-binary prisoners indicates that standardized service models are insufficient to address the diverse psychological needs of these vulnerable populations (James et al., 2023; Pat et al., 2021; Suhomlinova et al., 2023).

Table 2. Summary of Stress Pathways and Psychological Outcomes

Factor Group	Examples of Exposure	Psychological Mechanisms	Main Impacts
Initial vulnerability	History of mental disorders, trauma, substance use, family conflict	Low adaptive capacity and heightened threat responses	Anxiety, depression, emotional disturbances, suicide risk
Institutional environment	Loss of autonomy, insecurity, overcrowding, noise, isolation	Vigilance, mental fatigue, rumination, loss of control	High stress, sleep disturbances, anger, helplessness
Social relationships	Family disconnection, low trust, loneliness, stigma	Reduced emotional support and validation	Loneliness, withdrawal, hopelessness
Access to services	Unclear procedures, confidentiality concerns, stigma, slow responses	Untreated and worsening symptoms	Psychological crisis, conflict, self-harm
Situational crisis	Pandemic, suspension of visits, rule changes, fear of illness	Existing stressors intensified and psychological buffers disappeared	Anxiety, depression, fear, reduced well-being

DISCUSSION

Stress as an Interaction Between Individual Vulnerability and the Prison Environment

The present review demonstrates that psychological stress among prisoners arises from the dynamic interaction between individual vulnerability and the correctional environment. Although a history of mental disorders substantially

increases susceptibility to psychological distress, environmental characteristics remain important determinants that can be modified through institutional policies and practices. The findings regarding autonomy, perceived safety, and social support challenge the assumption that psychological distress is solely attributable to prisoners' pre-existing psychological conditions (Favril & van Ginneken, 2024). Consequently, interventions focusing exclusively on individual treatment without improving the correctional environment are unlikely to achieve optimal outcomes. The cumulative stress model provides a useful framework for understanding variations in prisoners' psychological responses. While individuals may adapt successfully to a single stressor, exposure to multiple concurrent stressors can exceed available coping resources. Prisoners with histories of trauma who simultaneously experience family-related concerns, overcrowded living conditions, perceived insecurity, and limited trust in institutional support are exposed to multiple layers of psychological burden. These accumulated stressors may manifest as anxiety, depression, anger, or behavioural problems that are often interpreted merely as disciplinary violations. Therefore, effective intervention requires addressing the underlying mechanisms contributing to distress rather than focusing exclusively on its behavioural manifestations.

The findings also suggest that the psychological impact of imprisonment changes throughout different stages of incarceration. The initial stage is characterized by uncertainty and adjustment to institutional routines, whereas prolonged imprisonment may be associated with boredom, hopelessness, and deterioration of family relationships. As prisoners approach release, concerns regarding employment, housing, social acceptance, and reintegration into society may become increasingly prominent. Consequently, mental health assessment should not be limited to prison admission but should be repeated at critical transition points throughout incarceration. The cohort protocol proposed by Cunha et al. (2023), which evaluates mental health during both imprisonment and community reintegration, supports a longitudinal perspective on prisoners' psychological well-being.

Another important finding concerns the distinction between social contact and meaningful social support. Overcrowded prison environments do not necessarily reduce loneliness because interpersonal relationships characterized by mistrust and vigilance rarely provide emotional security. Peer-support programmes may therefore represent valuable interventions, provided that they are carefully implemented through appropriate selection, training, supervision, and referral mechanisms. Without adequate safeguards, peer-support systems may inadvertently reinforce informal hierarchies rather than promote psychological well-being. The experience of being "overcrowded but lonely" reported by young prisoners in Cambodia further emphasizes that relationship quality, rather than social proximity alone, determines psychological outcomes (Pat et al., 2023).

The review also highlights the psychological importance of preserving limited opportunities for autonomy. Providing prisoners with opportunities to make minor decisions regarding educational participation, recreational activities, communication schedules, or personal goal setting may enhance their perceived

sense of control without compromising institutional security. Transparent decision-making processes and fair treatment may strengthen prisoners' trust in correctional institutions while simultaneously reducing interpersonal conflict and improving engagement in rehabilitation programmes.

Access to Mental Health Services as Part of the Psychological Environment

The findings indicate that access to mental healthcare extends beyond the availability of psychologists, psychiatrists, nurses, or counsellors. Prisoners must understand how to access services, trust that their requests will be taken seriously, and feel psychologically safe when discussing mental health concerns. Consequently, healthcare services may be administratively available while remaining psychologically inaccessible. The qualitative evidence reported by Solbakken et al. (2024) demonstrates that barriers related to institutional culture, communication, confidentiality, organisational procedures, and interpersonal trust substantially influence prisoners' willingness to seek professional support.

Confidentiality emerged as a particularly important determinant of help-seeking behaviour. Consultation rooms lacking privacy, referral procedures visible to other prisoners, or insensitive escort practices may discourage prisoners from disclosing psychological difficulties. Although correctional institutions operate within strict security requirements, fundamental principles of privacy can still be maintained through confidential consultation spaces, clear explanations regarding the limits of confidentiality, and secure documentation procedures. Such practices foster realistic expectations while strengthening trust in mental health services.

Mental health stigma represents another significant barrier to service utilization. Both prisoners and correctional officers may benefit from mental health literacy programmes designed to normalize psychological help-seeking and improve recognition of early warning signs. These programmes should distinguish between routine psychological support and emergency psychiatric intervention while promoting respectful and non-stigmatizing communication. Because correctional officers interact with prisoners on a daily basis, they are often well positioned to identify behavioural changes indicative of psychological distress. However, the objective of such training is not to transform correctional officers into mental health professionals but rather to enable timely recognition, appropriate initial responses, and referral to qualified clinicians.

The COVID-19 pandemic further demonstrated the importance of maintaining continuity of mental healthcare during institutional crises. Restrictions on rehabilitation programmes and face-to-face consultations should be accompanied by realistic alternatives, including secure telehealth services, self-help resources, structured communication with family members, routine monitoring of high-risk prisoners, and isolation procedures that adequately consider psychological well-being. Experiences reported in England suggest that healthcare systems already experiencing structural weaknesses before the pandemic became substantially more difficult to access during the crisis (Wainwright et al., 2023). These findings underscore the necessity of integrating mental health preparedness into emergency planning within correctional settings.

A tiered referral system may further improve the effectiveness of prison mental healthcare. Mild psychological distress may be addressed through psychoeducation, structured activities, peer support, and routine monitoring, whereas moderate symptoms require scheduled clinical assessment. Individuals presenting with suicidal ideation, acute psychosis, severe agitation, or inability to care for themselves require immediate psychiatric intervention. Importantly, classification into different levels of care should facilitate, rather than delay, timely access to appropriate services.

Vulnerable Populations and Equity in Mental Health Services

The review demonstrates that providing identical services to all prisoners does not necessarily result in equitable access to mental healthcare. Women, young prisoners, individuals with disabilities, those with histories of trauma, and gender minority prisoners experience distinct psychological challenges requiring tailored interventions.

Women frequently experience psychological distress associated with caregiving responsibilities, reproductive health concerns, prior exposure to violence, and complex family relationships. Evidence from Peru demonstrated that psychological distress among incarcerated women during the COVID-19 pandemic reflected gender-specific experiences that cannot simply be addressed through interventions originally developed for male prisoners (Esteban-Febres et al., 2023). Similarly, qualitative findings from California illustrated how prolonged isolation imposed as a risk mitigation strategy generated substantial psychological harm among incarcerated women (James et al., 2023).

Young prisoners constitute another particularly vulnerable population because emotional regulation, impulse control, and future planning continue to develop throughout adolescence and early adulthood. Their greater dependence on family support and heightened sensitivity to social rejection may further increase vulnerability to psychological distress. The findings reported in Cambodia concerning mental health problems and suicidal expressions among young male prisoners emphasize the importance of proactive outreach rather than relying exclusively on self-referral (Pat et al., 2021). Emotional regulation training, mentoring programmes, and structured developmental activities may therefore represent valuable preventive interventions.

Transgender and non-binary prisoners experience additional challenges related to institutional placement, recognition of gender identity, protection from violence, and equitable access to healthcare. Multiple forms of stigma may undermine trust in both correctional staff and healthcare professionals. Evidence collected during the COVID-19 pandemic further demonstrated that reductions in social support and healthcare access disproportionately affected transgender and non-binary prisoners (Suhomlinova et al., 2023). Correctional policies should therefore avoid relying on prolonged solitary confinement as a routine protective measure because isolation itself may substantially worsen psychological health.

The review also highlights the importance of adopting trauma-informed approaches throughout correctional practice. Routine procedures such as body searches, use of force, prolonged confinement, loud verbal commands, or highly

authoritarian interactions may unintentionally reactivate trauma-related responses. Trauma-informed care does not eliminate institutional rules or compromise security; rather, it modifies the manner in which institutional procedures are implemented to minimize unnecessary psychological harm while maintaining safety.

CONCLUSIONS AND RECOMMENDATIONS

This systematic literature review demonstrates that psychological stress among prisoners results from the interaction between pre-incarceration vulnerabilities and stressors inherent in the correctional environment. The most consistently identified contributing factors include pre-existing mental disorders, the early adjustment period following imprisonment, loss of autonomy, perceived insecurity, overcrowding, isolation, family separation, limited social support, and barriers to accessing mental healthcare. The COVID-19 pandemic further intensified these challenges through movement restrictions, suspension of family visits, disruption of daily routines, uncertainty, and fear of infection.

The psychological consequences of imprisonment extend beyond transient emotional reactions and encompass anxiety, depression, loneliness, sleep disturbances, anger, mood instability, rumination, helplessness, social withdrawal, and suicidal expressions. These outcomes frequently coexist and may be misinterpreted solely as disciplinary or behavioural problems if underlying psychological distress is not adequately recognized. Particular attention should be directed toward vulnerable populations, including women, young prisoners, individuals with pre-existing mental disorders, and transgender and non-binary prisoners, whose psychological needs are often more complex and require tailored interventions.

The findings underscore that improving prisoners' mental health requires an integrated approach combining clinical interventions with institutional and environmental reforms. Routine mental health screening, safe and supportive correctional environments, meaningful rehabilitative activities, maintenance of family relationships, transparent communication, confidential referral pathways, and continuity of care during community reintegration should constitute essential components of correctional mental health services. By adopting evidence-based and person-centred approaches, correctional institutions can reduce psychological distress while maintaining institutional security, promoting rehabilitation, and supporting successful reintegration into society.

Despite providing a comprehensive synthesis of recent evidence, this review has several limitations. The included studies were heterogeneous in terms of research design, participant characteristics, correctional settings, and measurement instruments, precluding quantitative meta-analysis. Furthermore, most available evidence originated from cross-sectional studies, limiting conclusions regarding causal relationships. Future research should prioritize longitudinal and intervention-based studies to evaluate the effectiveness of prison mental health programmes and identify sustainable strategies for reducing psychological distress across diverse correctional contexts.

Recommendations

Correctional institutions are recommended to conduct mental health and suicide-risk screening upon admission, repeat the assessment after the initial adjustment period, following critical incidents, when changes in legal status or interpersonal conflict occur, and prior to release. Screening should be conducted privately using standardized instruments and followed by a clear plan for further assessment and intervention. Each institution should establish a written triage pathway, designate responsible personnel, define clear response times, and provide emergency referral procedures for individuals presenting with suicidal ideation, acute psychosis, severe agitation, or an inability to care for themselves. Correctional administrators should reduce modifiable stressors by maintaining consistent activity schedules, ensuring equitable access to education, work, exercise, religious activities, and counseling, and limiting unnecessary periods of confinement. Information regarding institutional rules, schedule changes, service entitlements, and complaint procedures should be communicated regularly in clear and accessible language. Family contact should be maintained through visits, telephone calls, video calls, or correspondence, with additional assistance provided to incarcerated individuals facing financial barriers, geographical distance, or limited family support.

FURTHER STUDY

Future research should employ multisite longitudinal designs to assess mental health across different stages of incarceration, including admission, the initial adjustment period, the midpoint of the custodial sentence, the pre-release period, and post-release reintegration. Analyses should differentiate outcomes according to gender, age, sentence length, type of offense, history of trauma, pre-existing mental disorders, disability status, and gender identity.

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