



FACTORS ASSOCIATED WITH SUICIDAL BEHAVIOR IN PRISONERS: A SCOPING REVIEW

Nur Oktavia Hidayati^{1*}, Efri Widianti²

^{1,2}*Faculty of Nursing, Universitas Padjadjaran*

**Corresponding author: nur.oktavia@unpad.ac.id*

Abstract

Suicidal behavior and self-harm in the prison environment are serious public health problems because they often result in death or serious injury requiring intensive medical intervention. The high incidence of this behavior among prisoners is influenced by various complex and interrelated factors. This research aims to determine the factors associated with suicidal behavior in prisoners. Method: The method used was a scoping review. Search articles using PubMed, ScienceDirect, Scopus, EBSCO, and Google Scholar with the keywords "Association factors" AND "Suicidal Behavior" OR "Self-harm" OR "Suicidal ideation" OR "Self-mutilation" OR "Suicide attempts" AND "Prisoners" OR "Convicts" OR "Incarcerated individuals" OR "Inmates". The inclusion criteria used are articles with a publication year range of 2014-2024, articles in Indonesian and English, articles with quantitative research, and articles that can be accessed in full text. After selection, 10 articles were obtained that met the inclusion criteria. Factors associated with suicidal behavior in prisoners are gender, education level, marital status, mental disorders, family history of mental disorders, stigma and social support, family history of suicide, length of detention and history of previous detention, and history of drug use. Based on several findings, it is recommended that further research focus on interventions to reduce the prevalence and risk factors for suicidal ideation and attempts in prisoners.

Keywords: Factors Associated, Prisoners, Suicidal Behavior.

1. INTRODUCTION

Mental health issues among prisoners have become a global concern in recent decades. Research indicates that the prevalence and incidence of suicidal behavior and self-harm among prisoners are significantly higher than in the general population^[1-3]. A study conducted across 24 European countries revealed that suicide rates among prisoners ranged from three to eight times higher in men and ten times higher in women compared to the general population. Many countries reported prisoner suicide rates of 100 per 100,000. Additionally, the annual prevalence of self-harm in prison is estimated to be around 5-6% in adult male prisoners and 20-24% in adult female prisoners, which is substantially higher compared to the approximately 1% prevalence in the general population^[4].

Research indicates that prisoners are at a significantly higher risk of suicidal behavior compared to the general population. One study highlighted that prisoners with a history of injection drug use had very high rates of suicide attempts and self-harm, with 47% reporting having attempted suicide and 37% reporting having self-harmed^[5]. Additionally, a study in Uganda found that 25% of prisoners experienced suicidal ideation and 86% had a diagnosed mental disorder at some point in their lives, with 44% suffering from major depression, a key factor related to suicidal behavior^[6].

Suicidal behavior and self-harm in the prison environment represent a serious public health issue, often resulting in death or severe injury requiring intensive medical intervention. A meta-analysis underscored that the incidence of suicide in prisons is notably elevated, with rates varying across different regions and prison settings. Factors contributing to this heightened risk include overcrowding, limited access to mental health services, and the inherent stress of incarceration^[7]. This study aims to review existing literature on the factors associated with suicidal

behavior among prisoners. By understanding these factors, it is hoped that more effective prevention and intervention strategies can be developed.

2. METHODOLOGY

The methodology employed in this research was a scoping review. In this study, the researchers utilized the prisma flowchart to detail the number of pieces of literature identified through the search results, the screening process, the number of studies that met the inclusion and exclusion criteria, and the number of studies selected for a comprehensive review (figure 1). The research involved searching for articles in five databases published between 2014 and 2024. These databases included pubmed, sciencedirect, scopus, ebsco, and google scholar. The search utilized keywords such as "association factors" and "suicidal behavior" or "self-harm" or "suicidal ideation" or "self-mutilation" or "suicide attempts" and "prisoners" or "convicts" or "incarcerated individuals" or "inmates". Table 1 illustrates the database search strategy and the number of studies obtained. The inclusion criteria in this research are articles with a publication year range of 2014-2024, articles in Indonesian and English, articles with quantitative research, and articles that can be accessed in full text. The exclusion criteria in this research were documents, review articles, and articles with a pilot study type of research.

3. RESULTS

A total of 254,539 articles were identified through the databases and search engines. After removing duplicates, 220,119 articles remained. Following the selection process based on titles and abstracts, 34,400 articles were excluded. Ultimately, ten articles were deemed relevant to the research objectives and were selected for further review. There were 10 studies included in this literature review. There are 9 articles with cross-sectional study^[8-16] and one article used a cohort study^[5]. In addition, when viewed by location, the research was carried out in various countries including Ethiopia (n=5), and one article from Belgium, Spain, Cambodia, Australia, and France. The publication years of the ten articles ranged from 2017 to 2024. There were 5,872 respondents in this scoping review, with ages ranging from 15 to more than 58 years, with prison terms of less than 1 year to more than 10 years.

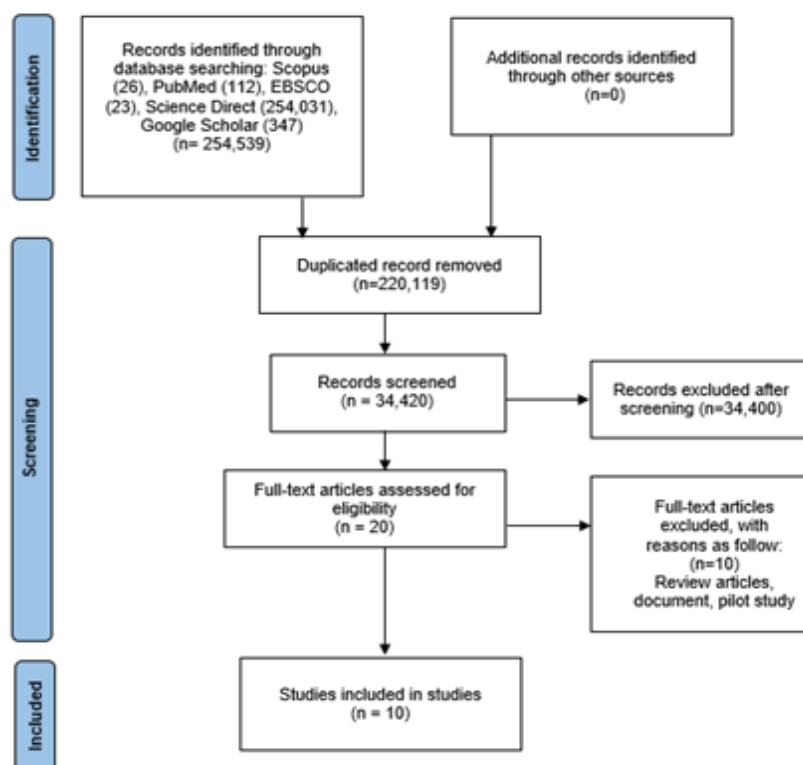


Figure 1. PRISMA Flow Diagram

Table 1. Summary of studies

Authors, Year, Country	Sample size	Design	Suicide behavior	Factors associated with suicide behavior
Fentahun et al., (2024) ^[8] Ethiopia	788	Cross-sectional	Suicide attempts and suicidal ideation	Gender, marital status, occupation, history of mental health problems, family history of mental health problems, depression, stigma, lack of social support, and history of detention.
Egziabher et al., (2018) ^[9] Ethiopia	423	Cross-sectional	Suicidal ideation	Gender, stigma, and family history of suicide.
Ayhan et al., (2017) ^[11] France	707	Cross-sectional	Not specific	Depression, dysthymia, panic disorder, general anxiety disorder, and abuse history.
Tadesse et al., (2021) ^[12] Ethiopia	640	Cross-sectional	Suicide attempts and suicidal ideation	Gender, family history of mental disorder, marital status, and lack of social support.
Anbesaw et al., (2022) ^[13] Ethiopia	288	Cross-sectional	Not specific	Gender, depression, anxiety, and history of drug abuse.
Stewart et al., (2018) ^[5] Australia	364	Cohort study	Suicide attempts	History of mental disorder and history of drug abuse.
Pat et al., (2021) ^[15] Cambodia	572	Cross-sectional	Suicidal expressions/threats	History of drug abuse, age, and education level.
Ricarte et al., (2022) ^[16] Spain	201	Cross-sectional	Suicide attempts	Disease history and length of detention.
Habtamu et al., (2020) ^[10] Ethiopia	650	Cross-sectional	Not specific	Gender, marital status, history of mental disorder, and lack of social support.
Favril et al., (2017) ^[14] Belgium	1,203	Cross-sectional	Suicidal ideation	History of detention.

4. DISCUSSION

This study aims to identify the factors associated with suicidal behavior in prisoners. Among the 10 articles reviewed, suicidal ideation and suicide attempts were the most frequently observed levels of suicidal behavior. Suicidal ideation, characterized by thoughts, desires, or intentions to end one's own life, represents the initial stage of the suicidal process. Conversely, a suicide

attempt is an act of self-harm carried out with the intent to cause one's death^[17]. The following section discusses the factors related to prisoner behavior.

4.1. Gender

Women experience suicidal thoughts at a higher rate than men^[8, 10, 12, 13]. This may be due to the unique stressors female prisoners face, including a higher likelihood of experiencing sexual abuse both before and during incarceration, which can contribute to mental health issues and suicidal ideation. Conversely, research by Egziabher et al.^[9] found that men are three times more likely to develop suicidal ideation than women. Research indicates that male prisoners are more likely to engage in suicidal behavior compared to female prisoners. This is partly due to the higher prevalence of severe mental health disorders among male inmates, such as depression, anxiety, and personality disorders^[18, 19]. Men are more likely to die by suicide compared to women, a trend that has been observed consistently across different countries and cultures. Research by Nock et al.^[20] supports this, finding that men are approximately 3.5 times more likely to die by suicide than women. Factors contributing to this disparity include the use of more lethal methods, such as firearms, and societal expectations that discourage men from seeking help for mental health issues.

4.2. Age

Younger individuals (ages 15-19) are more likely to experience mental health issues and suicidal ideation compared to older prisoners (ages 20-24). Inmates under 20 are at high risk of suicide due to factors such as difficulty adapting to prison life, isolation from family and friends, and pre-existing mental health conditions, which can exacerbate their situation. Prisoners aged 20-39 may experience significant stress from long sentences, feelings of hopelessness about the future, and mental health disorders^[15]. This aligns with research by Fazel and Seewald^[21], which found that young prisoners, especially those aged 18-24, often struggle with adjustment to prison life, peer dynamics, and impulsivity.

4.3. Education level

Education is a crucial factor in determining mental health and well-being. Individuals with higher education levels typically have better mental health outcomes due to greater access to resources, enhanced problem-solving skills, and improved socio-economic status. Conversely, those with lower educational attainment often face limited opportunities, poorer socio-economic conditions, and higher stress levels, all of which can contribute to mental health issues and suicidal behavior^[22]. Prisoners with lower education levels are more susceptible to psychological and environmental stressors that can lead to suicidal behavior. These individuals may have fewer coping skills and lower resilience, making it harder to manage the stressors of prison life. Additionally, they may face stigmatization and marginalization within the prison community, resulting in feelings of isolation and hopelessness^[23]. Research by Pat et al.^[15] on young male prisoners aged 15-24 years in Cambodia found that prisoners with lower education levels tend to have more mental health problems and suicidal ideation compared to those with higher education levels. Prisoners with a history of low education often have limited stress-coping skills, face stigma and feelings of helplessness, and have restricted access to rehabilitation programs.

4.4. Marital status

Divorced and widowed inmates are at higher risk of suicide due to the profound emotional toll of losing a spouse, whether through divorce or death. For divorced prisoners, feelings of failure and guilt about their marriage ending can contribute to depression. Widowed prisoners often experience intense grief and may struggle with motivation to continue living without their partner^[24]. Research by Habtamu & Desalegn^[10] indicates that divorced prisoners face a 3.67 times higher risk of suicide, consistent with findings by Tadesse et al.^[12] showing an elevated likelihood of suicidal ideation among divorced inmates compared to married ones. Factors such as loss of control, jealousy, and relationship breakdown may exacerbate these risks, alongside higher impulsivity and feelings of blame.

Contrary to some findings, marital status has been suggested as a protective factor against suicide attempts among prisoners[16]. The emotional and social support provided by a spouse can offer purpose and mitigate the stress associated with incarceration. Conversely, single prisoners, including those who have never married, exhibit a 2.6 times higher risk of attempting suicide due to a lack of social support and emotional connection^[8]. Research by Noonan and Ginder^[25] underscores that single prisoners are particularly vulnerable, lacking the emotional support and social ties that could provide reasons to live, such as familial responsibilities.

4.5. Mental health problems

According to Stewart et al.^[5], a significant factor contributing to suicide attempts and self-harm among prisoners is a history of mental health issues or prior contact with mental health services. Their study found that 87% of prisoners surveyed reported such a history. Similarly, Habtamu and Desalegn^[10] noted that inmates with a history of mental disorders are 2.54 times more likely to experience suicidal thoughts compared to those without such a history. Tadesse et al.^[12] further supported this, highlighting that prisoners with a family history of mental illness are at higher risk of suicidal ideation and attempts compared to those without such a family history. Ayhan et al.^[11] identified that severe major depression among prisoners in Guyana France significantly increases the risk of suicide, consistent with findings from Anbesaw et al.^[13] indicating that prisoners experiencing depression are nearly five times more likely to exhibit suicidal behavior than those without depression. This heightened risk is attributed to neurotransmitter changes that can lead to feelings of worthlessness and hopelessness, exacerbated by the stress and hopelessness of incarceration^[8].

Anxiety also plays a critical role in suicidal behavior among prisoners, as highlighted by Anbesaw et al.^[13], who found that inmates with anxiety symptoms are 3.14 times more likely to engage in suicidal behavior compared to those without such symptoms. Additionally, Fentahun et al.^[8] reported that prisoners with a family history of mental illness are 3.1 times more likely to have suicidal thoughts, underscoring the impact of familial mental health factors. Moreover, research indicates that prisoners with psychopathic personality disorders face a heightened risk of self-harm compared to other inmates^[16].

4.6. Stigma and lack of social support

The lack of social support within prisons is strongly linked to an increased risk of suicidal thoughts and attempts. Inmates who perceive themselves as socially isolated are more prone to feelings of worthlessness, depression, and hopelessness, all of which are significant predictors of suicidal behavior. Furthermore, the absence of social support diminishes coping mechanisms, making it harder for prisoners to manage the stresses inherent in incarceration^[26]. Research by Fentahun et al.^[8] indicates that prisoners with low social support are 2.8 times more likely to experience suicidal thoughts compared to those with strong social support. Similarly, Tadesse et al.^[12] found that prisoners with inadequate social support have a 2.68 times higher likelihood of suicidal ideation. This heightened risk may stem from reduced friendships both inside and outside prison, diminished closeness with family members, and decreased external communication through letters, phone calls, and visits, all of which are significant stressors contributing to suicidal tendencies among prisoners.

Social stigma in prison refers to negative attitudes and beliefs held by inmates and staff toward individuals displaying suicidal behavior or mental health issues. This stigma can result in discrimination, mockery, and isolation, profoundly affecting an individual's mental health^[27]. Poor social stigma is associated with a 2.67 times higher likelihood of developing suicidal thoughts among prisoners compared to their peers^[9].

4.7. Family history of suicide

Prisoners with a family history of suicide are twice as likely to experience suicidal thoughts compared to those without such a history^[8, 9]. A family history of suicide suggests a combination of genetic and environmental factors that heighten an individual's vulnerability to suicidal behavior. Genetic factors may influence traits such as impulsivity, aggression, and susceptibility to mental illness, all of which are associated with an increased risk of suicide. Environmental influences could include exposure to suicidal behavior within the family and adverse family dynamics^[28].

4.8. Disease history

According to research by Ricarte et al.^[16], having a history of illness is a significant factor contributing to suicide among detainees. Chronic illness can lead individuals to feel hopeless and unable to overcome challenges, prompting them to consider suicide. This finding is supported by Kaba et al.^[29], who found that prisoners with chronic physical illnesses face a heightened risk of suicidal behavior, exacerbated by the additional stress of managing their health conditions in a restrictive environment.

4.9. History of previous detention

According to Fentahun et al.^[8], prisoners with prior incarceration experience are 2.1 times more likely to have suicidal thoughts and attempt suicide compared to those who have never been incarcerated before. This corresponds with findings from Tadesse et al.^[12], indicating that inmates with a history of detention are 2.38 times more likely to engage in suicide attempts. These heightened risks may be attributed to the strain of adapting to prison life and the inadequate mental health support available within correctional facilities, which can exacerbate inmates' ability to cope with stress.

4.10. History of drug use

Substance use disorders, such as alcoholism and drug dependence, are prevalent among incarcerated individuals and are closely tied to suicidal behavior. Prisoners with a history of substance abuse often experience withdrawal symptoms and psychological distress upon entering prison, which heightens their susceptibility to suicide. Research by Bebbington et al.^[30] indicates that substance use disorders double the risk of suicidal behavior in prison populations, highlighting the need for targeted substance abuse treatment programs within correctional facilities to mitigate this risk.

Additionally, Stewart et al.^[6] found that a history of drug overdose is associated with suicide attempts and self-harm among inmates, particularly with drugs like methamphetamine and heroin. This aligns with earlier findings by Shiraly et al.^[31], which identified users of methamphetamine and heroin as having the highest likelihood of experiencing suicidal thoughts. Anbesaw et al.^[13] further underscored this correlation, reporting that drug-using prisoners are 2.83 times more likely to engage in suicidal behavior compared to non-users.

Furthermore, research by Pat et al.^[15] on young male prisoners aged 15-24 in Cambodia revealed that those with a history of drug use are more prone to mental health issues and suicidal ideation. These studies collectively emphasize the critical role of addressing substance abuse within prison settings to improve mental health outcomes and reduce suicide risk among inmates.

5. CONCLUSIONS

A total of 10 articles discussed factors related to suicidal behavior in prisoners, namely gender, age, education level, marital status, mental disorders, family history of mental disorders, stigma and lack of social support, family history of suicide, and history of detention. previous history, and a history of drug use which has a significant relationship with suicidal behavior in prisoners. Suicide prevention efforts must be based on strategies to assess and prevent suicidal behavior in prisoners. Early detection of suicidal ideation and attempts is critical to reducing the overall impact and burden of suicidal ideation and attempts among prisoners. Recommendations for further research focus more on treating suicidal behavior in prisoners by providing interventions and programs to prevent suicidal behavior in prisoners.

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