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Literature Review

an Urgent Call for Suicide Prevention in Indonesia: The Clinicians' Role in Preventing Suicide

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Abstracts

Introduction: Since suicide is a complicated matter, multiple sectors must be involved. Globally, there were 703,000 suicide cases in 2019. Over the past three years, there has been a rise in suicide instances in Indonesia. Treating those who are at risk of suicide is difficult since suicide situations, like mental health illnesses, continue to carry stigma. To provide a statistical overview of suicide cases and the role of clinicians in preventing suicide cases. **Methods:** Searching for statistical data in Indonesia, we used Pubmed with the keyword "statistics", "suicide", "Indonesia". Searching for data regarding risk factors and prevention of suicide, we also used Pubmed with the keywords "risk factor", "prevention", "screening", "suicide". **Results:** Globally, in 2019 the average rate of suicide cases was around 9.0 cases per 100,000 population. In Indonesia, exact data regarding the prevalence of suicide cases is still unknown. A person committing suicide can be caused by many factors such as previous mental disorders, relationship conflicts, legal problems, violence, financial problems, social exclusion, and low socioeconomic status. In addition to providing appropriate management, a clinician must provide education and outreach to the public regarding warning signs and risk factors for suicide, restrictions on tools for suicide, screening, and also remind every patient, especially patients with mental disorders, to continue to pray to be given health. **Conclusion:** A clinician has a role ranging from education and related outreach, screening, and also pharmacological and non-pharmacological management of someone at risk of suicide

Keywords: Epidemiology, Prevention, Risk Factor, Screening, Suicide

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INTRODUCTION

There is no doubt that all living things will eventually die. Death can occur naturally, for example, due to old age or a certain disease, and it can also occur unnaturally, such as suicide. Based on data from the World Health Organization (WHO), in 2019 it is estimated that there were 703 thousand cases of suicide globally. The rate of suicide cases in men is 2.3 times higher than in women. Suicide is the 4th leading cause of death in the world in young people (15-29 years). Suicide incidents occur more often in low-middle-income countries [1]. In Indonesia, the number of suicide cases increased from 613 in 2021 to 826 in 2022 [2]. Based on Databoks, the number of cases from January-October 2023 has increased to 971 cases [3].

The stigma associated with suicide is still present in society, which makes discussing it nearly identical to discussing mental illnesses like depression. Suicide victims are frequently described as "an unbeliever," "insane," and other derogatory terms in articles we read on social media or in the real world. People who are suffering from such things may become reluctant to express their genuine emotions to others before taking their own lives. Suicide is not an easy thought to have, as the world actually shows. Anyone, without exception, can also experience suicide.

There are many factors behind someone committing suicide. O'Rourke et al (2023) stated that many factors make someone prone to suicide, such as old age, chronic illness, financial difficulties, loss of job, negative life experiences, divorce, stress, and mental disorders (such as depression, post-traumatic stress disorder) [4]. A previous meta-analysis study found that patients after psychiatric hospitalization had a suicide rate of 2950 and 2060 cases, respectively, within 1 week and 1 month, per 100,000 person-years [5]. Prevention is the main key to reducing suicide cases. The purpose of this article is to provide an overview of suicide cases in Indonesia and also inform about the role that clinicians in preventing suicide cases in Indonesia.

REVIEW

Definition and Epidemiology

There are several terms used when discussing suicide (table 1).

Table 1. Definition of terms in the study of suicide [6].

Terms	Definitions
Suicide	Circumstances intentionally to end one's own life
Suicidal behaviour	Behaviours that result at the end of a person's life, whether fatal or non-fatal
Suicide attempt	Self-injurious, non-fatal behaviour with inferred or actual intent to die
Suicidal ideation	Any thoughts of ending one's own life. Can be active, with clear plans to commit suicide or passive, with thoughts of wishing to die
Self-harm	Self-injurious behaviours with or without the intention to die. Does not differentiate between suicide attempts and non-suicidal self-harm
Non-suicidal self-injury	Self-injurious behaviours without the intention to die

In 2019, around 1 in 100 deaths were suicides. Around 703 thousand cases of suicide occur in the world with an average rate of suicide cases of 9.0 cases per 100,000 population. Around 77% of suicides occur in low-middle-income countries. More than 58% of global suicide cases occur in the age group < 50 years. Suicide is also the number four trigger in the world as a cause of death in the young age group (15-29 years). The rate of suicide cases in Southeast Asia is even higher than globally (10.2 vs 9.0 cases per 100,000 population) [1].

In Indonesia, data regarding the prevalence of suicide is not known for certain. Based on police data, in 2021 the rate of suicide cases will be 0.23 cases per 100,000 population, while based on WHO data it reaches 2.4 cases per 100,000 population. This means that police data has high underreporting, reaching 859.10% (when compared to WHO data).

This high incidence of underreporting could be due to the possibility that families request that suicide cases that have occurred not be reported, field officers often do not carry out investigations related to suicide cases. Based on analysis by Onie et al (2024), the provinces with the highest rates of suicide cases (per 100,000 population) are Bali (1,851 cases), Riau Islands (1,175 cases), and the Special Region of Yogyakarta (0,951 cases). The average age at which suicide occurs is 43 years old with a peak at 26-30 years old. Based on gender, men experience more suicide cases than women with a ratio of 1.69:1 (2018) and 2.11:1 (2019) [7].

Risk Factors Suicide

- Risk Factors in General Population

To improve risk stratification and target interventions to high-risk groups, it is imperative to understand the risk factors linked with suicide. A suicidal idea will usually appear when there is a trigger (risk factor). A person with suicidal ideation may have one or more risk factors (Figure 1).

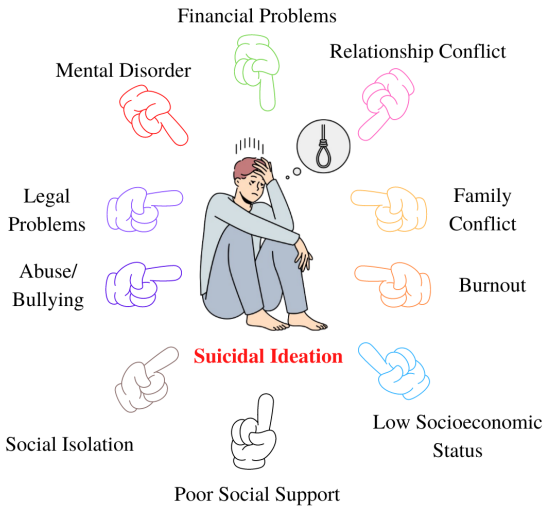

Figure 1. Risk factor suicidal ideation

Identification of risk factors in suicide cases is considered difficult, considering that anamnesis is impossible for someone who commits suicide. One of the most possible approaches to finding out risk factors for suicide in a person is the psychological autopsy method. This is accomplished by gathering data from the deceased person's closest friends and family members as well as from any relevant medical records [8]. Initially, the purpose of psychological autopsies was to look into, explain, and support police inquiries on the cause of death in cases involving ambiguous deaths. Nonetheless, they have been used more frequently recently as a study tool to look into risk variables for completed suicides [9]. Referencing [9] provides an additional reading on a psychological autopsy questionnaire example.

Favril et al (2022) in a meta-analysis study of 37 case-control studies from 23 countries used a psychological autopsy approach. The presence of mental disorders and a history of self-harm are the strongest risk factors for suicide [8]. Other risk factors can be seen in Table 2. Another study by Choo et al (2019) on 460 patients who had suicidal intentions (cross-sectional study), found that the strongest predictor of suicidal intentions was habitual poor coping (8.11 times) and serious financial problems (4.39 times) [10]. Suicide itself rarely occurs without cause. Over 90% of suicide cases involve individuals with psychiatric disorders, and 24% of these cases involve individuals who had psychiatric treatments a year prior but did not receive enough therapy or did not comply with treatment [11].

Table 2. Major risk factors suicide [8].

Risk factors	OR	Risk factors	OR
Sociodemographic domain		**Family history domain**	
• Social isolation	4.0	• Mental disorder	5.2
• Unemployment	3.8	• Suicide	3.7
• Poor socioeconomic status	2.8	• Suicide attempt	2.8
• Low education	2.7		
Clinical domain		**Adverse life events**	
• Any mental disorder	13.1	• Relationship conflict	5.0
- Depression	11.0	• Legal problem	4.8
- Schizophrenia spectrum disorder	7.8	• Family conflict	4.5
- Bipolar disorder	4.6	• Abuse	3.5
- Substance use disorder	3.7	• Financial problems	2.8
• Any personality disorder (PD)	6.8	• Timing of life events	10.4
- PD borderline	9.0	- Within past month	5.3
- PD paranoid	6.2	- Within past 6 months	
- PD dependent	6.1		
• Psychiatric therapy	10.5		
• Self-harm history	10.1		
• Suicide attempt history	8.5		

OR: Odds ratio; PD: Personality disorder

- Risk Factors for Healthcare Workers

Healthcare professionals are not immune to suicidal thoughts or attempts, and suicide incidents can happen to anybody. Even when compared with the general population, the suicide rate for male doctors is more than 40%, while the suicide rate for female doctors is more than 130% [12]. A meta-analysis study conducted by Dutheil et al (2019) of 61 studies found that the most cases of suicide among doctors occurred in general practitioners (32%), followed by internal medicine specialists (16%), and psychiatrists (11%). Apart from that, they also found that the mortality ratio of female doctors was higher than that of the general population (1.94 vs 1.44, $p < 0.041$) [13].

Seo et al (2021) through their meta-analysis study of 25 studies found the strongest risk factors for the emergence of suicidal ideation in medical students, namely depression (OR = 6.87 times), burnout (OR = 6.29 times), comorbid mental disorders (OR = 5.08 times) and stress (OR = 3.72 times). For suicide attempts, the strongest risk factor is depression (OR = 9.34 times) [14]. Other risk factors for the emergence of suicidal ideation in medical students can be seen in Table 3.

Table 3. Risk factors for suicidal ideation among medical students [14]

Risk Factors	OR	Risk Factors	OR
Depression	6.87	Anxiety	3.02
Burnout	6.29	Thoughts of dropping out	3.01
Mental disorder	5.08	Bullying	2.71
Stress	3.72	Sexual abuse history	2.57
Sleeping difficulty	3.72	Parental neglect	2.53
Living away from home	3.68	Difficult in academic	2.23
Physical abuse history	3.30	Living alone	2.15
Poor social support	3.15	Demanding parents	2.04

OR: Odds ratio

The Role of Clinicians in Preventing Suicide

In terms of suicide prevention, of course appropriate strategies are needed so that prevention can be right on target. Like physical illnesses in general, in cases of suicide there are also "warning signs". When warning signals are present, it can be easier to spot suicidal tendencies in people. Apart from that, these warning signs can also be easily identified by ordinary people so this will be very helpful so that people can recognize the signs of a suicide attempt and take the person to medical help immediately [14]. This needs to be socialized to the public so that people understand these signs. The warning signs can be seen in Table 4.

Table 4. Warning signs of suicide [15]

Verbal	Behaviour	Psychological
There is no reason/purpose to live anymore	Engage in risky activities, without thinking	Anxiety, agitation, not being able to sleep or falling asleep all the time
There is no reason/purpose to live anymore	Engage in risky activities, without thinking	Anxiety, agitation, not being able to sleep or falling asleep all the time
Feeling trapped-like and there is no way out	Increases the risk of alcohol/drug use	Drastic mood changes
Feeling like a burden to others	Withdraw from family, friends or society	Hopelessness
Other people would be better off without him	Tidying up affairs, making arrangements	Irritable, seeks revenge, command hallucinations

There are many screening tools for suicide cases, but no single screening tool can be applied to all patients at risk of suicide. A clinician also cannot always rely on screening tools. A clinician must know in depth the patient he is treating and also his past mental health history. Screening itself can improve health outcomes when carried out in conjunction with close follow-up and therapy [4, 16]. Several screening tools to assess suicide risk (can be read further in the references listed), namely Columbia-Suicide Severity Rating Scale (C-SSRS) [17], Suicide Assessment Five-Step Evaluation and Triage (SAFE-T) [18], Public Health Questionnaire-9Adolescent version + Ask Suicide-Screening (PHQ-9A+ASQ) [19], Suicide Behavior Questionnaire-Revised (SBQ-R) [20], and Patient Safety Screener (PSS-3) [21]. In the case of children, the American Academy of Pediatrics recommends universal screening for children aged ≥ 12 years, screening for children aged 8-11 years if there are clinical indications (eg warning signs or history of suicidal ideation/attempts), aged < 8 years there is no need for screening and assessment to be carried out if there are warning signs or family/guardian reports if suicidal behavior is found [22].

One thing to keep in mind while doing screening is that no screening method is completely sensitive. Most screening tools have a sensitivity of 50%-99% and a specificity of 60%-98%, so the choice of screening tool depends on individual preference and clinician experience. When starting a screening program, it is very important to have access to therapy and follow-up. Sometimes there is something that is not good when going to a special health service to serve someone who has depression or other mental disorders, namely that the clinician does not have much time. Some clinicians sometimes only spend less than 15 minutes during a visit, considering that there are still many patients who need to be treated. Unfortunately, most patients with mental disorders require longer visit times so that these patients have enough time to express all their feelings to a clinician they trust [4].

When it comes to achieving effective prevention, no single strategy can achieve this. In a systematic review study conducted by Zalsman et al (2016) [23], a combination

strategy is needed to prevent suicide. These strategies include:

- Restricting access to lethal means

This includes preventing the use of firearms/other weapons, creating barriers at points where freefall occurs, regulating the purchase and storage of pesticides, and tightening the sale of drugs such as barbiturates and caffeine [23]. A clinician must provide education/socialization, especially to children's caregivers (parents/guardians) to keep weapons (such as firearms or sharp objects) or pesticides away from children. If necessary, these weapons must be locked in a cabinet. Because suicides (especially teenagers) tend to be more impulsive than adults. Apart from that, it is necessary to educate teenagers so that they do not get trapped in the world of drugs and can refuse negative advances from their friends. A teenager who has consumed marijuana tends to have an increased risk of developing depression and suicidal behavior even though there are no previous premorbid conditions [24].

- Therapy

Therapeutic management to prevent suicide consists of pharmacological and non-pharmacological therapy. Administration of lithium medication has the efficacy of reducing the risk of suicide in patients with bipolar disorder and major depressive disorder [15, 23]. Administration of fluoxetine and venlafaxine can also reduce symptoms of depression and the risk of suicide in adults and the elderly. More attention needs to be paid to administering antidepressant medication during the first month of treatment, especially in the adolescent population [15]. Ketamine is quickly effective in reducing the incidence of suicidal ideation even in a single dose of 0.5 mg/kg. Clozapine can be used to reduce the incidence of suicide attempts in schizophrenia patients. Giving electroconvulsive therapy (ECT) can reduce suicidal behavior in the short term. The efficacy of ECT is beneficial in acute patients, especially those suffering from major depressive disorder [15, 23].

Guardians/parents/relatives of patients at risk must be taught to be able to accompany and provide social support to the patient. The patient must also be taught to develop a positive hobby that he likes. Clinicians must also remind patients and their guardians to continue carrying out follow-up according to the clinician's direction [4]. The use of medication is to manage acute symptoms such as psychosis, hallucinations, or depression, while psychotherapy is important for long-term management. Cognitive behavior therapy and other therapies such as problem-solving therapy, dialectical behavior therapy, and developmental group therapy have been used to reduce the risk of suicide. Carrying out psychotherapy takes months or even years, so it requires a strong commitment from patients and clinicians to carry it out [4].

- As a creature who has God; health or illness, life or death, are in God's hands. We can only do our best, such as trying to find treatment. As clinicians, we must also remind each of our patients, especially patients with mental disorders, to continue to worship and get closer to God, as well as participate in more religious studies or events. A meta-analysis study conducted by Poorolajal et al (2022) on 63 articles found that people who have a belief in God experience a 17% reduced risk of developing suicidal ideation ($p < 0.001$) compared to someone who does not have that belief. Apart from that, they also found a decrease in planning for suicide by 16% ($p < 0.001$), and the incidence of suicide by 69% ($p < 0.001$) [25].

CONCLUSION

Suicide is a complex problem that requires multisectoral treatment. In Indonesia, the number of suicide cases is not known with certainty because each agency has a different amount of data. As a clinician, there are several things you can do to prevent someone from committing suicide. Steps that can be taken include education and outreach to the public regarding suicide risk factors, warn-

ing signs, restrictions on suicide equipment and screening, especially for patients at risk of suicide. Apart from that, a clinician must also provide pharmacological and non-pharmacological management to patients who are at risk of suicide.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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