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Analysis of Anxiety and Depression in Young Adult Patients with Suicide Attempts in the Emergency Department RSUP Prof. Dr. IGNG Ngoerah Denpasar

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Abstract---*Suicide is a major public health problem worldwide. Attempted suicide (AT) is a deliberate act of self-harm that has the intent to die but does not result in death. Young adults are less likely to receive mental health care than younger and older individuals. This study aims to determine the description of anxiety and depression and provide an analysis of patients who attempted suicide who entered the Emergency Unit at Prof. Dr. IGNG Ngoerah Hospital Denpasar. The research was conducted at Prof. Dr. IGNG Ngoerah Hospital Denpasar. The research method was descriptive-analytic, cross-sectional using demographic questionnaires, Mini International Neuropsychiatry Interview (MINI), Beck Depression Inventory (BDI), and Beck Anxiety Inventory (BAI). Data were processed using SPSS software. The study found that the mean age of 30 years and female gender were the most common. There is a close relationship between anxiety and depression with suicide risk.*
Keywords---*anxiety, depression, mental health care, suicide, young adults.*

Introduction

In a study on suicide prevention in Indonesia, it was mentioned that the phenomenon of suicide in Indonesia is mostly caused by mental disorders, especially depression, family problems, alcohol and illicit substances, to social life and economic factors. Unfortunately, suicide is often difficult to predict because it is not always visible. Often, individuals who have committed suicide before seem to remain normal in their daily activities. There are not always visible symptoms of depression or talk of harming or ending life even to those closest to them. As many as 30% of attempted or completed suicides are not preceded by a cry for help. It is important to remember that the dynamics of suicide are complex and multifactorial, but this phenomenon can be prevented (Wirasto, 2011).

One of the most common causes of suicide is depression and anxiety (Mirzae et al., 2019). In their development, anxiety disorders are almost always the primary condition, with onset usually occurring in childhood or adolescence. The comorbidity of anxiety and depression is largely explained by shared genetic susceptibility to both disorders, or one disorder being an epiphenomenon of the other. Elevated corticotropin-releasing factor in cerebrospinal fluid has been reported in both anxiety and depression, but other peptides or hormones of the hypothalamic-pituitary-adrenal spinal cord have different roles in the two disorders. Recently, neuroinflammatory, oxidative and nitrosative pathways have been linked to depression and its comorbidities (Middlecorp et al., 2005). Most likely, the first episode of deep depression is caused by psychosocial stressors. After three or more episodes, subsequent episodes are likely to be spontaneous (Boyer, 2000).

Suicide attempts are still a problem in Indonesia. In 2020, the suicide rate in the country had reached 3.5 per 100 thousand population. The World Bank report shows that the suicide rate in Indonesia reached 2.4 per 100 thousand

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population. This means that there are 2 people who commit suicide out of every 100 thousand residents in Indonesia. This ratio tends to be stable from 2014 to 2019.

Within society itself, there are still many stigmas of suicide circulating, one of which is that suicidal ideation is often attached to depression. However, is the cause of suicide always depression or are there other psychiatric conditions that can also trigger suicide. Or are there other psychiatric disorders that can influence a person to attempt suicide. To answer these issues, this study was conducted (Pennant et al., 2015; Gregory et al., 2011; Herman et al., 2022).

During the period young adults continue to explore and form identities, manage changing interpersonal relationships, improve economic capabilities and some young adults also have to deal with disorder conditions that are very common in adulthood that usually appear in young adulthood, such as depressive disorders and certain anxiety disorders (Babajide et al., 2020).

Research on the topic of suicide is limited. This is because suicidal behavior is difficult to study (Prinstein, 2008). The first reason is that very large samples are required because the baseline rates of suicide attempts and deaths are low in the general population (Moscicki, 2001). Secondly, individuals with suicidal behavior are often excluded from clinical trials due to safety concerns from researchers (Rudd et al., 1996). Lastly, individuals who die by suicide are not available for psychological assessment, limiting the methods that can be used by researchers.

The study will be conducted at Prof. dr. IGNG Ngoerah Hospital, Denpasar. The research method is descriptive analytic, cross-sectional using demographic questionnaires, Mini International Neuropsychiatry Interview (MINI), Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI). Data will be processed using SPSS software. This study aims to determine the description of anxiety and depression and provide an analysis of young adult patients who made suicide attempts who entered the Emergency Unit at Prof. Dr. IGNG Ngoerah Hospital Denpasar.

Methods & Procedures

Design study

This research is descriptive analytic with the cross sectional method, which is a research design by measuring or observing the variables in the study once at a certain time. Descriptive research is used to collect, summarize and interpret the data obtained, which is then processed again so that it is expected to produce a clear, directed and comprehensive picture of the problem that is the object of research.

Time and place

This research was conducted at Prof. dr. IGNG Ngoerah Hospital Denpasar. This research starts from designing the theme, preparing the framework, collecting and processing data, analyzing and types of data, and making research reports. The research was completed in six months from April to September 2022.

Population study

The target population was young adult patients who attempted suicide. The target population was patients who attempted suicide who entered the emergency room at Prof. Dr. IGNG Ngoerah Hospital Denpasar.

Inclusion and exclusion criteria

The samples used in this study were taken from a population with the following inclusion and exclusion criteria. The inclusion criteria in this study are: 1) Young adult patients who enter the emergency room of Prof. Dr. IGNG Ngoerah Denpasar Hospital with suicide attempts, 2) The patient was consulted to KSM Psychiatry, 3) The patient is willing to participate in the study, 4) Patients complete the MINI, BAI, and BDI questionnaires. While the exclusion criteria in this study are 1) Patients did not fill out the research completely, 2) Patients are not willing to participate in the study (Gerber et al., 2014; Liu et al., 2020; McKercher et al., 2009; Mustika et al., 2017).

Research sample

Samples were taken from data on all patients with suicide attempts who were no longer undergoing treatment or who were still undergoing treatment at Prof. Dr. IGNG Ngoerah Hospital in the April-September 2022 period, and met the inclusion criteria and did not meet the exclusion criteria. The sample size was young adults.

Data collection and samples

The data collection instruments sampled all young adult patients with suicide attempts who were admitted to the emergency room of Prof. Dr. IGNG Ngoerah Denpasar Hospital within 6 months from April-September 2022. The questionnaires used were MINI, BAI, and BDI.

Data management plan

Data that has been collected will be entered using computerization and will be analyzed with SPSS.

Results and Discussion

Table 1
Characteristics of the research sample

Characteristics	N (%)
Age (Mean)	30
Gender	
Male	11 (44)
Female	14 (56)

The average age of patients who became research subjects was 30 years consisting of 11 men (44%) and 14 women (56%). There were 25 people who became research subjects. In the research of Babajide et al. (2020), ages 19-29 years are young adults who often experience depression due to major changes in their lives. There are several symptoms that need attention, such as continuous sadness, hopelessness, low self-confidence, difficulty making decisions, and anxiety disorders.

Table 2
Gender and suicide risk

Gender	N/A	Mild	Moderate	Severe	N
Male	0	2	4	5	11
Female	0	2	4	8	14
N	0	4	8	13	25

Women made one to one and a half times more suicide attempts than men during the period April-September 2022.

Table 3
Gender and anxiety

Gender	N/A	Mild Anxiety	Moderate Anxiety	Sever Anxiety	N
Male	3	2	2	4	11
Female	1	5	1	7	14
N	4	7	3	11	25

Table 4
Gender & depression

Gender	N/A	Mild Depression	Moderate Depression	Severe Depression	Extreme Depression	N
Male	1	3	2	4	1	11
Female	2	4	1	7	0	14
N	3	7	3	11	1	25

Female gender anxiety and depression are associated with a higher risk of severe suicide attempts compared to males. Women had more severe depression than men. There was 1 male who experienced extreme depression and died. In anxiety, 7 women experienced severe anxiety, and 5 experienced mild anxiety. This is more than the male gender.

Table 5
Anxiety and suicide risk

		Minimal Anxiety	Mild Anxiety	Moderate Anxiety	Severe Anxiety	Total
Suicide Risk	Not Yet	0	0	0	0	0
	Mild	1	3	0	0	4
	Moderate	0	2	1	5	8
	Severe	3	2	3	6	13
N		4	7	4	11	25

There were 6 respondents with severe anxiety (24%) of all respondents. The highest suicide risk is in respondents with severe anxiety as many as 6 people (46%) of all respondents with a high risk of suicide. All respondents had suicide risk and anxiety. Based on the Chi-Square test, the interaction between anxiety and suicide risk is 0.001, which indicates an association between anxiety and suicide risk.

Table 6
Depression and suicide risk

		No Depression	Mild Depression	Moderate Depression	Severe Depression	Extreme Depression	Total
Suicide Risk	Not Yet	0	0	0	0	0	0
	Mild	1	2	0	2	0	4
	Moderate	0	3	1	2	1	8
	Severe	2	2	2	7	0	13
N		3	7	3	11	1	25

Respondents with severe depression had the highest risk of suicide, namely 7 respondents (53.8%) out of a total of 13 who experienced a high risk of suicide. There was 1 respondent with extreme depression (4%) who died. All respondents had a risk of suicide and depression. Based on the Chi-Square test, the interaction between depression and suicide risk was 0.012, indicating an association between depression and suicide risk (Han et al., 2018; Gili et al., 2019; Sewall et al., 2021; Blumenthal, 1990).

From the results of the study, the sample characteristics of the respondents were obtained with an average age of 30 years. According to the World Health Organization, this age group is included in early adulthood. Based on the literature, the incidence of suicide is mostly found in the young adult age group. Suicide is the second leading cause of death in the young adult age group and 79% occurs in low and middle income countries. Every 45 seconds a suicide occurs. An estimated 703,000 people per year worldwide. In the case of suicide, 108 million people suffer from the effects of suicidal behavior (World Suicide Prevention Day, 2022).

In 2012, data presented by the WHO showed that in Indonesia, suicide incidents were more common among women, with a percentage of 57.2% of the total 9,105 cases (WHO, 2014). Indonesia, as a middle-income country,

has experienced a sharp increase in suicide rates. According to a 2015 WHO report, the suicide rate in Indonesia reached approximately 4.5% per 100,000 population (WHO Region, 2017). According to data from the National Police Headquarters in 2012, there were about 0.5% or about 1,170 suicides per 100,000 population per year (Kemenkes RI, 2015). In low- and middle-income countries, 75% of deaths by suicide in the world occur in the 20-year age group (World Health Organization, 2017). In Indonesia, the mortality rate due to youth suicide decreased from 2007 (4.5%) to 2017 (3.86%). According to data from the World Health Organization in 2016, suicide is the second leading cause of death among young people, both male and female (World Health Organization, 2019). Therefore, adolescents, including students, are vulnerable to the risk of suicide.

Suicide rates differ by age. In addition, age-related psychosocial stressors and family or developmental issues may influence suicide risk. Patient age can also be relevant to psychiatric diagnosis, as specific disorders vary in their typical age of onset (Raue et al., 2014). The majority of adults who attempt or die by suicide have depression. However, depression alone cannot explain all cases of suicidal ideation or attempts. Other risk factors that have been shown to be associated with suicide in older adults include a history of suicidal ideation, functional impairment, stressful life events (such as the loss of a spouse), substance abuse, and physical illness. Among those with physical illness, the risk of suicide is highest early in the treatment of serious medical illnesses such as end-stage renal disease and initiation of dialysis (Raue et al., 2014). Traumatic experiences during childhood and adolescence can lead to emotional instability and mental maladjustment, which correlate with suicide attempts. In adolescence, issues such as poor academic performance, drinking, stress from school or family problems, lack of emotional support, urges to run, and depression are likely to become problems.

In the 20s, lack of impulse control, uncertainty about the future, academic, financial and relationship problems are often common issues. Therefore, life stressors and factors affecting suicidal ideation will be different. Young adulthood is a period when a person becomes a legal adult, begins to live independently, engages in an active social life, and must adapt to social demands and physiological changes (Carlo et al., 2019).

Gender and suicide risk

In this study, female respondents made more suicide attempts, with a higher risk of suicide compared to males. The relationship between gender and suicide from the literature is that men are more likely to die from suicide and women tend to make non-fatal suicide attempts than men. This is consistent with the study where there was 1 male respondent with extreme depression who died by suicide. (Szücs et al., 2018) Research conducted by Freeman et al which included suicide intention data from 5212 participants explained that there was a significant relationship between suicide intention and gender, where 'Serious Suicide Attempt' (SSA) was rated as significantly more common in men than women ($p < .001$). There were statistically significant sex differences in suicide intention and age groups ($p < .001$) as well as between countries ($p < .001$) (Freeman et al., 1990).

There are several complex factors that may explain why men are more prone to suicide. One of the main factors is differences in emotional expression and ways of coping with psychological distress. Men tend to be more reluctant to express their feelings and seek emotional support, which can leave them feeling isolated when facing mental problems. In addition, men often have higher levels of access to more fatal methods of suicide, such as firearms. This can lead to higher mortality rates if they do attempt suicide. The inability to access adequate mental health support may also be a contributing factor to this higher risk (Barrigon & Cegla-Schvartzman, 2020; Yi-Yang et al., 2019).

Relation of anxiety and depression to suicide risk

Anxiety can increase the risk of suicide. Specifically involved is severe psychic anxiety consisting of subjective feelings of fear or a feeling of unfocused attention. Clinical observations suggest that anxious patients may be more likely to act on suicidal impulses than depressed individuals whose symptoms include psychomotor slowing. Suicide studies in patients with affective disorders have shown that those who died by suicide within the first year after contact were more likely to have severe psychic anxiety or panic attacks. In a sample of hospitalizations, severe anxiety, agitation, or both were found in four-fifths of patients in the week before suicide (Busch et al., 2003).

Since severe anxiety appears to increase the risk of suicide, at least in some subgroups of patients, anxiety should be seen as an often hidden but potentially modifiable risk factor for suicide (Fawcett, 1993). Hopelessness has long been considered a psychological cause associated with increased suicide risk. Hopelessness can have varying degrees of negative expectations for the future. In general, patients with high levels of hopelessness have an increased risk of future suicide (Brown et al., 2000).

Some signs of depression are also signs of suicidal thoughts. Some observations of behaviors that may be helpful in identifying people with suicidal ideation include: changes in eating and sleeping patterns, decreased interest in daily activities, withdrawal from the environment, unusual behavior, drug use, death-fixated thoughts, increased physical complaints, and disregard for daily appearance. (Szücs et al., 2018). Cleare et al's study included 1051 participants, 364 of whom reported experiencing depression. Of these 364 participants, 48% reported having suicidal ideation throughout their lives and 16% reported attempting suicide. Depression severity was a significant factor associated with suicidal ideation in both men and women, but suicide attempts were significantly more common in women who experienced depression onset at a younger age and had more psychiatric comorbidities (Cleare et al., 2018). Depression and substance use disorders, especially alcohol, are the most common diagnoses found in suicide victims. Implementation of suicide prevention guidelines in mental health care institutions is essential in an effort to reduce suicide rates (Mokkenstorm et al., 2018).

Despite an increase in the prevalence of psychiatric disorders from 8.9% in adolescence to 15.9% in young adulthood. However, seeking help in treatment to mental health services is very low (Babajide et al., 2020). The interpersonal theory of suicide (Van Orden et al., 2010), states that for fatal suicidal behavior to occur, individuals must develop through repeated experiences with painful and provocative events.

Today, many people view suicide prevention as a purely mental health endeavor or responsibility, yet there is little research demonstrating the effectiveness of mental health care in suicide prevention (Caine et al., 2013). As mentioned earlier, it is impossible to accurately predict suicide. However, given the large number of risk and protective factors that can influence the likelihood of suicide, a number of statistical models have been developed to try to determine which patients may be at greatest risk. Thus, to identify high-risk patient groups that require more detailed clinical examination. Prevention efforts that can be made by families and communities are to know the risk factors of individuals who are vulnerable to committing suicide or attempting suicide (Freeman et al., 2017; Stanley et al., 2001; Breslau et al., 1991). With appropriate efforts, suicide can be prevented. In the context of secondary prevention, the health care system is critical. About 22 to 88% of individuals who attempt suicide, depending on the culture, seek help afterward by coming to the hospital or to primary care. Every health worker should be aware of this and be able to act appropriately (Monsue et al., 2017; DeLeo et al., 2014).

Conclusions

The highest number of young adults who experienced a suicide attempt was 30 years of age. Women are also associated with the highest suicide attempts. Anxiety and depression are also strongly associated with suicide risk. There is a need to change perceptions, stigmatize the young adult transition and provide appropriate mental health services.

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