

## Suicide ideation among Sudanese adults cross in Khartoum state Sudan

Dr. Radwa Mohamad Ibrahim<sup>1</sup>, Dr. Fath-Alrhman Omer Alsharif<sup>\*2</sup>, Dr. Nadir Elzain Omara<sup>3</sup>

<sup>1</sup> University of Gezira | UAE

<sup>2</sup> University of Gezira | Sudan

<sup>3</sup> Ndera Neuropsychiatric Teaching Hospital | Republic of Rwanda

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\* Corresponding author:

[alshriefath@gmail.com](mailto:alshriefath@gmail.com)

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**Abstract:** Worldwide suicidal behaviors are not uncommon among adults, in Sudan; there is a lack of published data on suicidal behaviors. Yet, no studies to date have examined the prevalence of and risk factors for suicide ideation, plans, and attempts, in the general population. This study aimed to explore the prevalence and the possible risk factors of suicide ideation among Sudanese adults aged 18-35 and to compare the difference in suicide ideation risk factors between young and older adults. A total of 394 adults were participate dither study, but only 284 first participants were included, socio demographic data, suicidal behaviors, data from 5-item Brief Symptom Rating Subscale (BSRS- 5), and possible risk factors data were collected using online self-administered questionnaire. Suicidal ideation prevalence was reported by 27.1% of the study population sample. Suicidal ideation was more prevalent in females. 6.5% of the participants had one suicidal attempt during the past 12 months and 5.7% of the participants reported more than one suicidal attempt, results showed that family problems, relationship problems, previous sexual assault, and the presence of mental illness are associated with suicidal ideation among adults. The results provide valuable information about Suicidal behaviors and risk factors associated with suicidal ideation among Sudanese adults, more studies regarding suicidal behaviors among adults as they represent society's back bone should be performed to set prevention programs and raise awareness about mental health.

**Keywords:** Behaviors, Sudan, Suicide, Khartoum, Suicidal ideation.

## السلوكيات الانتحارية منتشرة بين البالغين في ولاية الخرطوم السودان

د / رضوى محمد إبراهيم<sup>1</sup>، د / فتح الرحمن عمر الشريف<sup>\*2</sup>، د / نادر الزين عمارة<sup>3</sup>

<sup>1</sup> جامعة الجزيرة | الإمارات العربية المتحدة

<sup>2</sup> جامعة الجزيرة | السودان

<sup>3</sup> مستشفى نديرا للأمراض النفسية والعصبية | رواندا

**المستخلص:** تعتبر السلوكيات الانتحارية شائعة بين البالغين في جميع أنحاء العالم. في السودان هناك نقص في البيانات المنشورة حول السلوكيات الانتحارية. ومع ذلك، لم تفحص أي دراسات حتى الآن انتشار وعوامل الخطر المتعلقة بالتفكير الانتحاري وخطته ومحاولاته في عموم السكان، هدفت هذه الدراسة إلى استكشاف مدى انتشار وعوامل الخطر المحتملة للتفكير في الانتحار بين البالغين السودانيين الذين تتراوح أعمارهم بين 18 و35 عامًا ومقارنة الاختلاف في عوامل الخطر للتفكير في الانتحار بين البالغين اليافعين والبالغين الأكبر سنًا، شارك في الدراسة ما مجموعه 394 بالغًا، وتم جمع بيانات اجتماعية ديموغرافية وسلوكيات انتحارية وبيانات من المقياس الفرعي لتصنيف الأعراض الموجز المكون من 5 عناصر وبيانات عوامل الخطر المحتملة باستخدام استبانة ذاتية، بينت النتائج أن 27.1% هو معدل انتشار الأفكار الانتحارية من قبل عينة الدراسة. كان التفكير الانتحاري أكثر انتشارًا عند الإناث. 6.5% من المشاركين لديهم محاولة انتحار واحدة خلال الـ 12 شهرًا الماضية و5.7% من المشاركين أبلغوا عن أكثر من محاولة انتحار، وأظهرت النتائج وجود علاقة وارتباط بين المشاكل الأسرية، ومشاكل العلاقات، والاعتداء الجنسي السابق، ووجود مرض نفسي وعقلي والتفكير الانتحاري بين البالغين.

**التوصيات:** وفرت النتائج معلومات قيمة حول السلوكيات الانتحارية وعوامل الخطر المحتملة المرتبطة بالتفكير الانتحاري بين البالغين السودانيين، وينبغي إجراء مزيد من الدراسات حول السلوكيات الانتحارية بين البالغين لأنهم يمثلون العمود الفقري للمجتمع لوضع برامج الوقاية وزيادة الوعي حول الصحة النفسية والعقلية.

**الكلمات المفتاحية:** السلوكيات، السودان، الانتحار، الخرطوم، التفكير الانتحاري.

## 1- Introduction and background.

Suicide was defined as “death from injury, poisoning, or suffocation where there is evidence that the injury was self-inflicted and that the decedent intended to kill himself/herself”. Suicide attempt was defined as “potentially self – injurious behavior with an on fatal outcome, for which there is evidence that the person intended at some level to kill himself/herself” and which may or may not result in injuries”. (Heisel and Duberstein, 2005).

The National Institute of Mental Health defined suicidal ideation as “any self-reported thoughts of engaging in suicide-related behavior”. Suicide ideation is common in all communities but research on suicidal behavior in Sub-Saharan Africa is rare. (Ovuga, Boardman and Wassermann, 2005).

Suicide is a preventable tragedy, although Suicide rates globally are under-reported, because sometimes it is classified as accidents or not classified at all (Greydanus, Bacopoulou and Tsalamani, 2009), suicide is among the twenty leading causes of death worldwide, and it is considered a major health problem in most countries and cultures. (Ellis and Lamis, 2007) approximately 800000 people die by suicide every year (Who, 2019).

Suicidal ideation ranging from relatively mild general thoughts about death and wishes that one were dead or simply thoughts that life is not worth living to intensive delusive obsession in form of serious ideation about specific plans and means of taking one's life. (Jr and Whitley, 2010).

Suicidal ideation considered the first step toward the completed suicidal acts. It is necessary but not sufficient precursor for attempted suicide and suicide. (Goldney *et al.*, 2000).

According to previous studies, suicide ideation prevalence in adults varies among countries. In a study conducted in Sudan in 2007, 5% of respondents reported suicidal ideation, and 2% reported personal suicide attempts over the previous year, also 2% of households had a member that committed suicide during the past year. (Kim, Torbay and Lawry, 2007). In 2016 the rate was 8.1%. (Who, 2019), With today's increasing life stress or sand risk factors, suicide behaviors remarkably increased.

Factors associated with suicide classified as non-modifiable risk factors which include age, sex, race, and ethnicity. Potentially modifiable risk factors include presence of suicidal thoughts and behavior, presence of mental illness, difficulty adjusting to transitional life events, social support problems, personality vulnerability factors, and access to lethal means. (Heisel and Duberstein, 2005). All these factors were categorized into: demographic factors such as age, gender, sexuality, race, and ethnicity; environmental factors including lack of social and familial support, imprisonment, poor life skills Personality traits and, family history, the Internet, and mass media; and psychological factors including diagnosed mental disorders, adverse life events and abuse in childhood, academic stress, use of drugs and alcohol, and cyber bullying. (Simbar M, Golezar S, Alizadeh Sh, 2020).

An association between suicidal ideation and psychiatric illness, the psycho social and traumatic events have been established and demonstrated in clinical samples, but not examined in a general population sample. (Goldney *et al.*, 2000).

The gap in the literature highlights the significance of exploring the prevalence and contributing factors of suicidal behavior in general population settings, particularly in regions like Sub-Saharan Africa where data is scarce.

### 1-2-Problem statement and justification

Suicide rate is increasing dramatically among adults as they appear to be at high risk for suicidal behaviors (SBs) in their twenties that may increase individual vulnerability to suicide. (Brezo *et al.*, 2006).

There are broad changes in social, cultural and economic factors in Sudan that might explain such trends in a conservative irreligious environment with highly stigmatized view toward suicide and mental health issues therefore will remain under reported or undiagnosed.

There is lack of reported data from whole Africa and Sudan in particular regarding suicide. Suicide prevention requires changing factors and behaviors that precede suicidal behavior.

As suicide behaviors regarding as marker of mental health, better understanding of suicide ideation origin and risk factors suicide can be prevented. By knowing suicide risk factors in adults, appropriate preventive measures can be carried out.

### 1-3-Justification

Suicidality among young adults 18- 24 has increased recently. (Blader, 2018) even though older adults have high rates of suicide worldwide; rates vary markedly by gender, race, and ethnicity. (Heisel and Duberstein, 2005).

Many epidemiological studies have analyzed suicidal ideation in clinical samples, but only a few have been performed in the general population. (Gili-Planas *et al.*, 2001).

It may be more beneficial to utilize risk factors for suicide or suicidal ideation with in population-based approaches, Therefore, informed decisions can be made about public health intervention programs. (Goldney *et al.*, 2000).

### 1-4-Aim and specific objectives

#### General Objective

This cross-sectional study is aimed to estimate the prevalence of suicide ideation among Sudanese adults, in Khartoum State in Sudan.

#### Objectives

1. To estimate the prevalence of suicidal behaviors among Sudanese adults 18-35 years.
2. To assess the risk factors for suicide ideation among adults.
3. To compare suicide ideation risk factors between young adults 18-24 and older adults 25-35.

## 2- Methodology.

A cross-sectional online survey was conducted among Sudanese adults in Khartoum State, Sudan, from February to June 2021. The study aimed to estimate the prevalence of suicidal ideation and identify associated risk factors, comparing suicide ideation risk factors between young adults (18-24) and older adults (25-35). A non-probability convenience sample of 384 adults aged 18-35 was collected. The sample size was determined using the following formula:

$$n = \frac{Z^2(p)(1 - p)}{C^2}$$

where:

n = sample size,

Z = standard normal deviation at a 95% confidence level,

P = estimated population proportion,

C = margin of error (0.05).

The study received ethical approval from the Institutional Review Board (IRB) at Al Gezira University. To ensure participant confidentiality, an anonymous survey was used, and an informed consent was obtained from each participant prior to the completion of the self-administered questionnaire, which included a brief explanation of the study's objectives.

The questionnaire, initially constructed in English and translated into Arabic (with back-translation to resolve discrepancies), comprised 23 items divided into three sections

1. Sociodemographic measures, age, gender, residence, education, employment status, monthly income, and marital status.
2. Suicidal behaviors, assessed using the 5-item Brief Symptom Rating Scale (BSRS-5) and additional questions on lifetime suicidal ideation, serious thoughts of suicide, and suicide attempts in the past 12 months.
3. Risk factors for suicidal ideation, explored variables such as financial, family, and relationship issues, chronic diseases, substance abuse, sexual assault history, mental illness diagnosis, and social support.

Participants completed the BSRS-5 to evaluate psychological distress and suicidal ideation within the past week. The BSRS-5 is a 5-item Likert scale that screens for psychological symptoms, including insomnia, depression, anxiety, hostility, and feelings of inferiority. It has demonstrated good reliability and validity in identifying psychiatric morbidity and suicidal ideation in community and medical settings.

Data were analyzed using SPSS version 22. Descriptive statistics, Chi-square tests, and independent t-tests were used to assess the associations between suicidal ideation and risk factors, with a p-value < 0.05 indicating statistical significance. Additionally, comparisons of suicidal ideation risk factors between young and older adults were conducted at the bivariate level.

### 3- Results.

#### 3.1 Socio demographic measures and variables

The mean age of the participants was 26.2 years with a standard deviation of 4.5. The majority of the participants were females, accounting for 262 (68.2%) of the study population, while males represented 122 (31.8%).

Most participants were single (83.9%), followed by married individuals (14.1%). Divorced participants accounted for 2.1% of the sample.

Regarding employment, 37% of respondents were employed, and 31.8% were students. The remaining participants included the unemployed (15.4%), private business owners (11.7%), and workers (16%). Approximately one-third of the participants (33.9%) reported earning less than the minimum living wage (Table 1).

**Table (1) Socio-demographic measures and characteristics and mean age**

Socio demographic variable		Frequency	Percentage
Sex	Male	122	31.8
	Female	262	68.2
Marital	Single	322	83.9
	Married	54	14.1
	Divorced/separated	8	2.1
Employment/profession	Student	122	31.8
	Employee	142	37
	Worker	16	4.2
	Private business	45	11.7
	Unemployed	59	15.4
Monthly salary	Lessthan3000SDG	130	33.9
	Morethan3000-6000SDG	49	12.8
	Morethan6000-10000SDG	43	11.2
	Morethan10000-17000SDG	66	17.2
	Morethan17000-24000SDG	26	6.8
	Morethan24000SDG	70	18.2
Mean age $\pm$ Standard deviation (26.2 $\pm$ 4.5)			

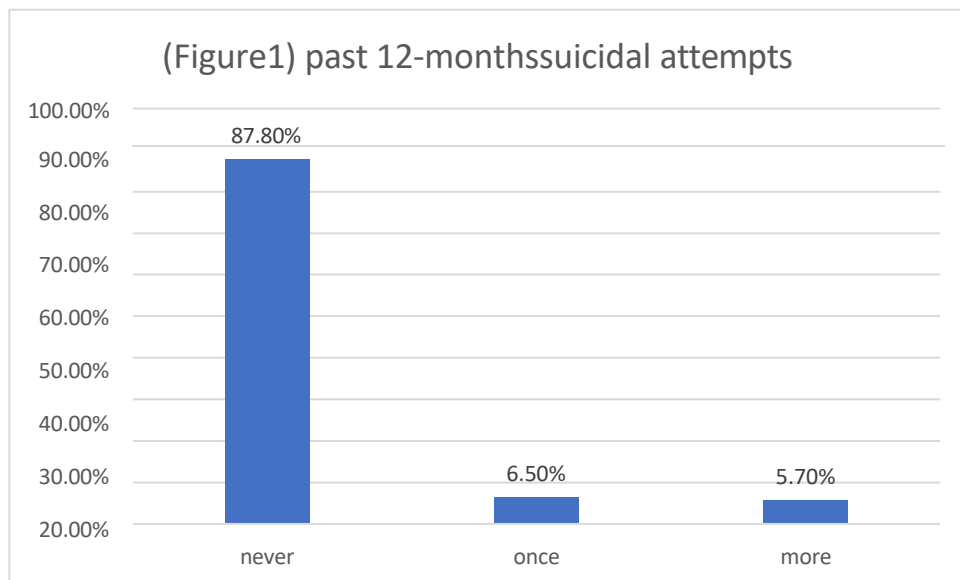
#### 4.2 Suicidal behaviors patterns

A total of 104 participants out of 384 reported suicidal ideations, representing 27.1% of the study population. Suicidal ideation was more prevalent among females, with 79 out of 104 (76%) reporting suicidal ideation, compared to 25 males (24%) (Table 2).

Serious thoughts about committing suicide were reported by 81 participants (21.1%). Among the participants, 25 (6.5%) reported attempting suicide once, and 22 (5.7%) had more than one suicide attempt within the past 12 months (Figure 1).

**Table (2) Gender distribution and suicide ideation prevalence**

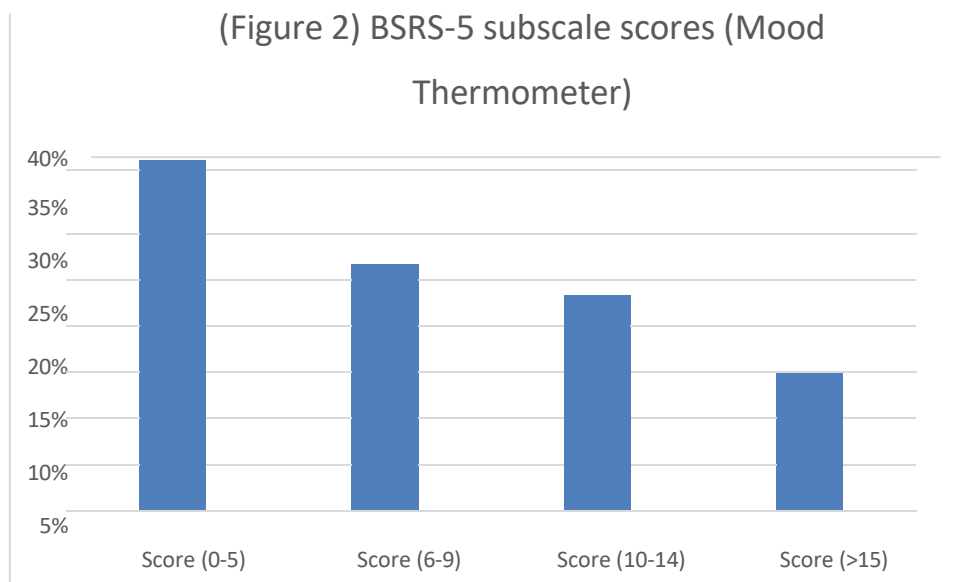
Gender	Having	No SI	Total
Male	25(20.5%)	97(79.5%)	122(100%)
Female	79(30.2%)	183(69.8%)	262(100%)
Total	104(27.1%)	280(72.9%)	384(100%)



In terms of the BSRS-5 subscale scores, 138 out of 384 participants (35.9%) scored 0-5, 102 participants (26.6%) scored 6-9, 89 participants (23.2%) scored 10-14, and the remaining 55 participants (14.3%) scored above 15 (Table 3 and Figure 2).

**Table (3) BSRS-5 subscale scores frequencies and percentage among participants**

BSRS-5sub-scalescores	Frequency	Percentage
Score(0-5) physical and mental fitness is in good condition	138	35.9
Score(6-9)some emotional distress and it is recommended that you talk to family or friends	102	26.6
Score(10-14) Your emotional distress makes you uncomfortable and it is recommended that you should seek professional advice	89	23.2
Score (>15) emotional distress makes you very uncomfortable	55	14.3
<b>Total</b>	<b>384</b>	<b>100</b>



### 3.3 Suicidal ideation risk factors

Table 4 presents the frequency and percentage of suicide ideation (SI) risk factors and their association with SI prevalence. A chi-square test was used to evaluate the significance of each risk factor, with a p-value < 0.05 considered statistically significant.

The risk factors significantly associated with SI were family problems, relationship problems, previous sexual assault, and the presence of mental illness. Risk factors such as financial problems, chronic illness, and alcohol or drug problems did not show a statistically significant association with SI.

**Table (4) Risk factors and their association with suicide ideation**

Risk factors						Having SI	No SI	Total	P value
Financial problems	yes	55(25.7%)		159(74.3%)	214(100%)	0.494			
	no	49(28.8%)		121(71.2%)	170(100%)				
Family problems	yes	58(41.1%)		83(58.9%)	141(100%)	0.001*			
	no	46(18.9%)		197(81.1%)	243(100%)				
Relationship problems	yes	65(36.3%)		114(63.7%)	179(100%)	0.001*			
	no	39(19%)		166(81%)	205(100%)				
Chronic illness	yes	20(35.1%)		37(64.9%)	57(100%)	0.141			
	no	84(25.7%)		243(74.3%)	327(100%)				
Drug/alcohol problems	yes	6(24.0%)		19(76.0%)	25(100%)	0.720			
	no	98(27.3%)		261(72.7%)	359(100%)				
Sexual assault	Yes	31(41.9%)		43(58.1%)	74(100%)	0.001*			
	no	73(23.5%)		237(76.5%)	310(100%)				
Mental illness	yes	34(69.4%)		15(30.6%)	49(100%)	0.001*			
	no	70(20.9%)		265(79.1%)	335(100%)				
Chi square test was performed. *A p-value of<0.05 was considered statistically significant.									

### 3.4- Risk factors among different age groups

Table 5 summarizes the differences in SI risk factors between young adults (18-24) and older adults (25-35). A chi-square test was conducted to assess the associations.

Family problems were associated with SI in both age groups, with a stronger association observed in young adults (p-value = 0.001) compared to older adults (p-value = 0.031). Relationship problems were significantly associated with SI in older adults (p-value = 0.001), but no association was found in young adults (p-value = 0.126). Chronic illness was associated with SI in young adults (p-value = 0.031), but no association was found in older adults (p-value = 0.623).

Previous sexual assault was significantly associated with SI in both age groups, with a stronger association in older adults (p-value = 0.017 for older adults and p-value = 0.048 for young adults). The presence of mental illness was similarly associated with SI in both age groups (p-value = 0.001 for both).

No significant association was found between financial problems, alcohol, or drug problems and SI in either age group.

The BSRS-5 subscale scores were higher among participants with suicidal ideation, with higher scores being associated with a higher percentage of SI (see Figure 3).

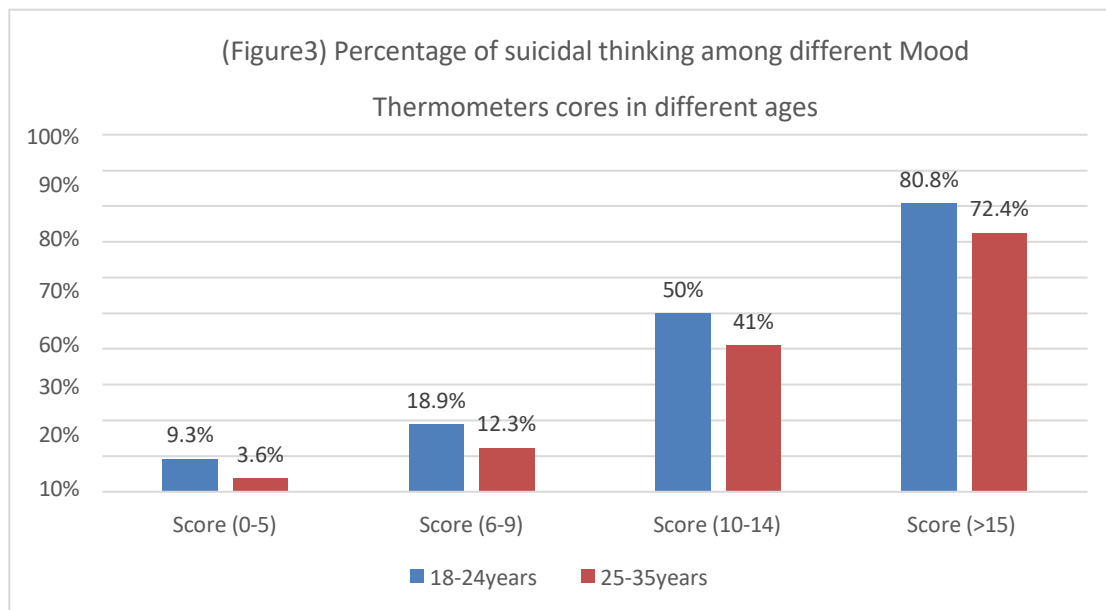


Table (5) Differences between SI risk factors among young adults 18-24 and older adults 25-35

Age group	Risk factors		Having SI	No SI	P value
18-24 years	Financial problems	Yes	26(31%)	58(69%)	0.659
		No	21(34.4%)	40(65.6%)	
25-35 years	Financial problems	Yes	29(22.3%)	101(77.7%)	0.541
		No	28(25.7%)	81(74.3%)	
18-24 years	Family problems	Yes	33(51.6%)	31(48.4%)	0.001**
		No	14(17.3%)	67(82.7%)	
25-35 years	Family problems	Yes	25(32.5%)	52(67.5%)	0.031*
		No	32(19.8%)	130(80.2%)	
18-24 years	Relationship problems	Yes	27(38.6%)	43(61.4%)	0.126
		No	20(26.7%)	55(73.3%)	
25-35 years	Relationship problems	Yes	38(34.9%)	71(65.1%)	0.001**
		No	19(14.6%)	111(85.4%)	
18-24 years	Chronic illness	Yes	9(56.3%)	7(43.8%)	0.031*
		No	38(29.5%)	91(70.5%)	
25-35 years	Chronic illness	Yes	11(26.8%)	30(73.2%)	0.623
		No	46(23.2%)	152(76.8%)	
18-24 years	Alcohol/drug problems	Yes	3(50%)	3(50%)	0.347
		No	44(31.7%)	95(68.3%)	
25-35 years	Alcohol/drug problems	Yes	3(15.8%)	16(84.2%)	0.390
		No	54(24.5%)	166(75.5%)	
18-24 years	Sexual assault	Yes	15(46.9%)	17(53.1%)	0.048*
		No	32(28.3%)	81(71.7%)	
25-35 years	Sexual assault	Yes	16(38.1%)	26(61.9%)	0.017*
		No	41(20.8%)	156(79.2%)	
18-24 years	Mental illness	Yes	17(85%)	3(15%)	0.001*
		No	30(24%)	95(76%)	
25-35 years	Mental illness	Yes	17(58.6%)	12(41.4%)	0.001*
		No	40(19%)	170(81%)	

Chi square test was performed. \*A p-value of <0.05 was considered statistically significant.

Independent sample's test was performed to compare between the means of BSRS-5 subscales cores of participants with and without suicidal ideation, a significant statistical difference was found between the means of the two groups. Suicidal ideations showed 12.7 score means with 4.4 standard deviation, the non-ideations showed 6.6 mean and 4.0 SD. P value was 0.001 (Table 6).

**Table (6) Comparison between the mean of BSRS-5 score of individuals with suicidal thinking and those without**

Suicide ideation	Number	Mean	SD	P value
Have suicidal	104	12.7	4.4	0.001
No suicidal thinking	280	6.5	4.0	
Independent sample's T test performed p value is significant				

## 4- Discussion

### 4-1-Prevalence estimation

This study contributes valuable insights into the prevalence of suicidal ideation (SI) and the risk factors associated with suicidal behaviors among Sudanese adults. With 27.1% of the study population reporting suicidal ideation, this prevalence is relatively high, highlighting a significant public health concern. Notably, suicidal ideation was more prevalent among females, who constituted 76% of the suicidal ideators. This gender disparity aligns with findings from several contemporary studies, suggesting that females in Sudan may be more vulnerable to mental health challenges and suicidal thoughts.

When comparing SI prevalence with global data, the findings from this study fall within an average range, as evidenced by the 36.1% prevalence in Uganda (Ovuga, Boardman, and Wassermann, 2005). However, the results are higher than those reported in the United Kingdom, Norway, France, and Australia, where SI prevalence ranged from 13.3% to 21% (Aschan et al., 2013; Sivertsen et al., 2019; Macalli et al., 2018; Johnston, Pirkis, and Burgess, 2009). Conversely, lower SI prevalence was observed in countries like Hong Kong (6%) (Yip et al., 2003), Sri Lanka (4%) (Samaraweera et al., 2010), the United States (3.6%) (Brook et al., 2006), and China (3.1%) (Lee et al., 2007). Denmark reported the lowest SI prevalence at 0.5% (Kjølner Mette and Marie Helweg-Larsen, 2000).

The higher prevalence in Sudan could be attributed to various socio-economic factors, cultural dynamics, or a potential underreporting in countries with lower prevalence. These findings offer crucial data for developing preventive measures, raising awareness, and promoting mental health programs targeting suicidal behaviors in Sudan.

### 4-2-Suicide ideation risk factors

This study has highlighted significant risk factors associated with suicidal ideation, with female gender emerging as a particularly strong predictor. Historically, studies suggested that males were more likely to exhibit suicidal behaviour (Lj, Malus, and Lj, 1996); however, the findings of this study align with more recent research indicating a higher prevalence among females (Johnston, Pirkis, and Burgess, 2009; Aschan et al., 2013). This shift may reflect changing societal pressures or cultural expectations faced by women in Sudan, necessitating targeted mental health interventions for this demographic.

Surprisingly, financial problems, which are typically a significant risk factor for suicidal behaviours in many studies (Wunderlich et al., 2008; Sivertsen et al., 2019), did not show a significant correlation with suicidal ideation in this study. This suggests that other stressors, such as family and relationship problems, may play a more critical role in Sudanese communities. Likewise, alcohol and drug problems, commonly associated with suicidal behaviours in the literature (Wunderlich et al., 2008), were not found to be significant risk factors among this population.

A notable finding was the strong association between relationship problems and SI, particularly among older adults. This mirrors results from prior studies (Yip et al., 2003) and underscores the need for emotional support systems, especially in the context of marriage or partnership breakdowns. On the other hand, chronic illness was associated with SI only in young adults, an observation that has also been reported in other studies (Van Tilburg et al., 2011; Ferro et al., 2017). This might be due to the greater psychological burden young adults face when dealing with long-term health conditions, leading to feelings of hopelessness and despair.



The association between previous sexual assault and suicidal ideation was significant across both age groups, with older adults exhibiting a stronger association. This finding reinforces the long-lasting mental health effects of trauma and the importance of trauma-informed care in suicide prevention programs (Brook et al., 2006; Bernal et al., 2007).

Mental illness, another well-established risk factor for suicidal ideation (Wunderlich et al., 2008), was significantly associated with SI in both age groups. This underscores the critical need for accessible mental health services to address the psychological needs of individuals in Sudan.

#### **4-3-Risk Factors Among Different Age Groups**

A comparison of risk factors between young adults (18-24) and older adults (25-35) revealed some age-specific trends. Family problems were associated with SI in both age groups, but the association was stronger in younger adults. This could be due to the developmental stage of young adults, who may be more dependent on family support and experience more acute distress from familial conflict. Relationship problems, however, were more significantly associated with SI in older adults, possibly due to the more serious nature of relationships or marital issues in this age group.

Chronic illness, while associated with SI in young adults, did not show the same association in older adults. This may reflect a different coping mechanism or acceptance of chronic health conditions in older adults. The study also found that alcohol and drug problems did not have a significant association with SI in either age group, which contrasts with global findings that typically link substance abuse to suicidal behaviours (Lj, Malus, and Lj, 1996; Wunderlich et al., 2008).

### **5- CONCLUSION**

This study highlights the prevalence and patterns of suicidal behaviors among Sudanese adults, revealing that suicidal ideation (SI) is not uncommon within this population. The findings emphasize significant gender disparities, with females exhibiting higher rates of SI compared to males. Family problems, previous sexual assaults, mental illness, and psychiatric diagnoses emerged as key risk factors for suicidal ideation across both young and older adults, reinforcing the critical role that these factors play in mental health outcomes. The association between chronic illness and SI, observed only in the younger group, further emphasizes the unique challenges faced by different age demographics. For older adults, relationship problems were strongly linked to SI, suggesting that life stage and relational dynamics might influence mental health risks.

Contrary to expectations, no significant association was found between SI and financial problems, alcohol use, or drug use, which presents an intriguing contrast to global trends. These controversial results suggest that factors contributing to suicidal ideation in Sudan may be influenced by specific cultural or socio-economic contexts that differ from those in other regions. This emphasizes the need for locally adapted mental health strategies and interventions.

#### **Limitations**

Several limitations of this study should be acknowledged. First, the cross-sectional design restricts the ability to establish causality between the identified risk factors and suicidal behaviors. Additionally, the sample size was limited to 384 participants, and the use of non-probability convenience sampling reduces the generalizability of the findings. Furthermore, self-reported data on sensitive issues like suicidal ideation may be influenced by social desirability bias or underreporting, especially in cultures where mental health stigma is prevalent.

### **6- Recommendations**

Future research should investigate suicidal behaviors across broader age groups and more diverse populations to gain a comprehensive understanding of suicide risk in Sudan. Longitudinal studies are recommended to establish causal relationships between risk factors and suicidal behaviors. Further exploration of the role of financial stress, alcohol use, and substance abuse in suicidal ideation is needed to clarify the controversial findings.

## REFERENCES.

- Aschan, L., G. L., C. S., M. P., H. M., & H. S. L. (2013). Suicidal behaviours in South East London: Prevalence, risk factors and the role of socio-economic status. *Journal of Affective Disorders*, 150(2), 441–449. <https://doi.org/10.1016/j.jad.2013.04.037>
- Bernal, M., Haro, J. M., Bernert, S., Brugha, T., de Graaf, R., Bruffaerts, R., Lépine, J. P., de Girolamo, G., Vilagut, G., Gasquet, I., Torres, J. V., Kovess, V., Heider, D., Neeleman, J., Kessler, R., & Alonso, J. (2007). Risk factors for suicidality in Europe: Results from the ESEMED study. *Journal of Affective Disorders*, 101(1–3), 27–34. <https://doi.org/10.1016/j.jad.2006.09.018>
- Blader, J. C. (2018). Suicidal Thoughts and Behaviors Increased Among Young Adults. Why? *Journal of the American Academy of Child and Adolescent Psychiatry*, 57(1), 18–19. <https://doi.org/10.1016/j.jaac.2017.11.005>
- Brezo, J., Paris, J., Tremblay, R., Vitaro, F., Zoccolillo, M., Hébert, M., & Turecki, G. (2006). Personality traits as correlates of suicide attempts and suicidal ideation in young adults. *Psychological Medicine*, 36(2), 191–202. <https://doi.org/10.1017/S0033291705006719>
- Brook, R., Klap, R., Liao, D., & Wells, K. B. (2006). Mental health care for adults with suicide ideation. *General Hospital Psychiatry*, 28(4), 271–277. <https://doi.org/10.1016/j.genhosppsych.2006.01.001>
- Ellis, J. B., & Lamis, D. A. (2007). Adaptive characteristics and suicidal behavior: A gender comparison of young adults. *Death Studies*, 31(9), 845–854. <https://doi.org/10.1080/07481180701537303>
- Ferro, M. A., Rhodes, A. E., Kimber, M., Duncan, L., Boyle, M. H., Georgiades, K., Gonzalez, A., & MacMillan, H. L. (2017). Suicidal Behaviour Among Adolescents and Young Adults with Self-Reported Chronic Illness. *Canadian Journal of Psychiatry*, 62(12), 845–853. <https://doi.org/10.1177/0706743717727242>
- Gili-Planas, M., Roca-Bennasar, M., Ferrer-Perez, V., & Bernardo-Arroyo, M. (2001).
- Suicidal Ideation, Psychiatric Disorder, and Medical Illness in a Community Epidemiological Study. *Suicide and Life-Threatening Behavior*, 31(2), 207–213. <https://doi.org/10.1521/suli.31.2.207.21508>
- Goldney, R. D., Wilson, D., Dal Grande, E., Fisher, L. J., & McFarlane, A. C. (2000).
- Suicidal ideation in a random community sample: Attributable risk due to depression and psychosocial and traumatic events. *Australian and New Zealand Journal of Psychiatry*, 34(1), 98–106. <https://doi.org/10.1046/j.1440-1614.2000.00646.x>
- Greydanus, D. E., Bacopoulou, F., & Tsalamani, E. (2009). Suicide in adolescents: A worldwide preventable tragedy. *Keio Journal of Medicine*, 58(2), 95–102. <https://doi.org/10.2302/kjm.58.95>
- Heisel, M. J., & Duberstein, P. R. (2005). Suicide prevention in older adults. *Clinical Psychology: Science and Practice*, 12(3), 242–259. <https://doi.org/10.1093/clipsy/bpi030>
- Johnston, A. K., Pirkis, J. E., & Burgess, P. M. (2009). Suicidal thoughts and behaviours among Australian adults: Findings from the 2007 National Survey of Mental Health and Wellbeing. *Australian and New Zealand Journal of Psychiatry*, 43(7), 635–643. <https://doi.org/10.1080/00048670902970874>
- Jr, B. E. W., & Whitley, B. E. (2010). *A Short Form of the Expanded Attributional Style Questionnaire A Short Form of the Expanded Attributional Style Questionnaire*. 3891(July 2013), 37–41. <https://doi.org/10.1207/s15327752jpa5602>
- Kim, G., Torbay, R., & Lawry, L. (2007). Basic health, women's health, and mental health among internally displaced persons in Nyala Province, South Darfur, Sudan. *American Journal of Public Health*, 97(2), 353–361. <https://doi.org/10.2105/AJPH.2005.073635>
- Kirmayer, L. J., Malus, M., & Boothroyd, L. J. (1996). Suicide attempts among Inuit youth: a community survey of prevalence and risk factors. *Acta Psychiatrica Scandinavica*, 94(1), 8–17. <https://doi.org/10.1111/j.1600-0447.1996.tb09818.x>
- Kjøler, M., Public, M. H.-L.-S. J. of, & 2000, undefined. (2000). Suicidal ideation and suicide attempts among adult Danes. *Journals.Sagepub. Com*, 28(1), 54–61. <https://doi.org/10.1177/140349480002800110>
- Lee S, Fung SC, Tsang A, Liu ZR, Huang YQ, He YL, Zhang MY, Shen YC, Nock MK, & Kessler RC. (2007). Lifetime prevalence of suicide ideation, plan, and attempt in metropolitan China. *Acta Psychiatr Scand*, 116(6), 429–437. <https://doi.org/10.1111/j.1600-0447.2007.01064.x>
- Macalli, M., Tournier, M., Galéra, C., Montagni, I., Soumare, A., Côté, S. M., & Tzourio, C. (2018). Perceived parental support in childhood and adolescence and suicidal ideation in young adults: A cross-sectional analysis of the i-Share study. *BMC Psychiatry*, 18(1), 1–11. <https://doi.org/10.1186/s12888-018-1957-7>
- Ovuga, E., Boardman, J., & Wassermann, D. (2005). Prevalence of suicide ideation in two districts of Uganda. *Archives of Suicide Research*, 9(4), 321–332. <https://doi.org/10.1080/13811110500182018>
- Samaraweera, S., Sumathipala, A., Siribaddana, S., Sivayogan, S., & Bhugra, D. (2010). Prevalence of suicidal ideation in Sri Lanka. *Crisis*, 31(1), 30–35. <https://doi.org/10.1027/0227-5910/a000010>

- Simbar M, Golezar S, Alizadeh Sh, & H. M. S. (2020). *Suicide Risk Factors in Adolescents Worldwide: A Narrative Review*. 1153–1168.
- Sivertsen, B., Hysing, M., Knapstad, M., Harvey, A. G., Reneflot, A., Lønning, K. J., & O'Connor, R. C. (2019). Suicide attempts and non-suicidal self-harm among university students: prevalence study. *BJPsych Open*, 5(2), 1–8. <https://doi.org/10.1192/bjo.2019.4>
- Van Tilburg, M. A. L., Spence, N. J., Whitehead, W. E., Bangdiwala, S., & Goldston, D. B. (2011). Chronic pain in adolescents is associated with suicidal thoughts and behaviors. *Journal of Pain*, 12(10), 1032–1039. <https://doi.org/10.1016/j.jpain.2011.03.004>
- WHO. (2019). *Suicide in the world; Global Health Estimates*. <https://apps.who.int/iris/rest/bitstreams/1244794/retrieve>.
- Wunderlich, U., Bronisch, T., Wittchen, H.-U., & Carter, R. (2008). Gender differences in adolescents and young adults with suicidal behaviour. *Acta Psychiatrica Scandinavica*, 104(5), 332–339. <https://doi.org/10.1111/j.1600-0447.2001.00432.x>
- Yip, P. S. F., Chi, I., Chiu, H., Wai, K. C., Conwell, Y., & Caine, E. (2003). A prevalence study of suicide ideation among older adults in Hong Kong SAR. *International Journal of Geriatric Psychiatry*, 18(11), 1056–1062. <https://doi.org/10.1002/gps.1014>