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Adolescents**

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Abstract

Purpose: Secondary school students face numerous challenges as they balance academic challenges, parental and peer pressures, emotional issues related to puberty changes and adolescence expectations. They also grapple about not knowing what the future holds in terms of career paths. As a result of these challenges, it is common for adolescents to have suicidal thoughts that may lead to suicide attempts.. Suicide is among the leading cause of death in young people and is prevalent worldwide. Suicidal behavior has been associated with attachment security in studies but few of these studies have been done in Kenyan adolescents. This study filled this gap by investigating whether attachment styles predicted suicidal behavior in students attending secondary schools in Nairobi, Kenya.

Methodology: The study was correlational in design and was based on the attachment theory. Three hundred and sixty seven randomly selected students completed self-report measures consisting of the Attachment Styles Questionnaire and a Suicidal Behavior Scale.

Findings: Results of multiple regression showed that attachment styles significantly predicted suicidal behavior ($F = 36.125, P < .000$) and 30% of variance in suicidal behavior was attributed to the attachment styles ($R^2 = .300$). Preoccupied ($\beta = .487, P < .001$) and dismissing ($\beta = .122, P = .018$) attachment styles predicted suicidal behaviors.

Unique Contribution to Theory, Practice and Policy: The contribution to knowledge of this paper is that it provides a theoretical and practical contribution on the importance of attachment styles in predicting suicidal behaviours. The results of the study show that attachment security plays an important role in adolescents' suicide behavior as insecurely attached students have a higher risk of suicide. Basically, the study contributed to a theoretical enhancement of the current level of knowledge on the existing literature on attachment styles and suicidal behaviours, achieved by testing empirically the adolescent behaviour. Therefore, suicide prevention programs should take into account adolescents' attachment styles.

Keywords: *Suicide, Suicidal Behavior, Attachment Styles, Secure Attachment, Insecure Attachment*

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INTRODUCTION

Suicide is an issue of public health concern not only in developed countries but also in developing countries (Wasserman et al, 2005). According to Greydanus and Calles (2007), youth suicide is a global tragedy that ends the lives of young people in their prime. The World Health Organization estimates that a life is lost by suicide every 40 seconds (WHO, 2014). It is estimated that 1.4% of deaths annually are suicidal deaths and that between 15- to 19-year-olds; suicide is among the five leading causes of death (Bitta et al, 2018).

Suicidal behavior can be broken down into three stages. The first one is suicidal ideation or having thoughts about committing suicide. The second stage is making a suicide plan where a person decides on what actions to take in order to end their lives. Finally, they may make a suicide attempt by executing the plan (Bertolote & Wasserman, 2009). Even though thoughts of committing suicide are common, not everyone thinking about suicide will make a suicide plan or attempt suicide. Thinking about suicide is the first step on the road to suicide and is an important predictor of future suicide attempts (Wichstrom, 2000).

In the United States, suicide ranked third in the causes of death in adolescents aged between 15 and 19 years and fifth in younger (10 to 14 year old) adolescents (Greydanus et al, 2009). Nock et al., (2013) examined prevalence of suicide in American adolescents. Twelve percent of the adolescents they surveyed reported having had thoughts of committing suicide, 4% had made suicide plans and 4% had attempted suicide at one point in their lifetimes. One third of respondents who had been thinking about suicide went ahead to make suicide plans and one third of respondents who made suicide plans carried out those plans. A survey by Souza et al (2009) revealed that 14.1% of 11 to 15 year old Brazilian adolescents had suicide ideations whereas Chan et al (2016) reported a prevalence rate of 6.2% of suicide ideations in Malaysian adolescents.

Palmier (2011) sought to find out how prevalent suicidal ideation was in school going adolescents living in sub-Saharan African countries by analyzing the Global School-Based Student Health Survey data. The data revealed highest prevalence of suicidal ideation in Zambian students (31.9%) followed by Kenyan students (27.9%) and students from Botswana (23.1%) and Uganda (19.6%).

High rates of suicidal behavior have been reported among students attending secondary schools in Nairobi County. Ngondi (2016) carried out a study to find out whether grades obtained in the national examinations would predict symptoms of depression, anxiety and suicidal thoughts among 16 to 19 year old school leavers who had just received results from the Kenya Certificate for Secondary Education exams. The researcher hypothesized that performance in the national examination affects the mental wellbeing of school leavers. The study found, however, that 17% of the respondents had had suicidal thoughts before the results were announced and that suicidal thoughts were not associated with the grades they obtained. In another study, Mugambi et al (2020) examined suicidal behavior in 14 to 22 year old secondary school students living in informal settlements in Nairobi County. In total, 21.5% of the respondents manifested suicidal behaviors. The study revealed that 12.6% of the students had made suicide plans and 4.8% had attempted suicide. Suicidal behavior was more prevalent in students with depression and posttraumatic stress with 51% of those students making suicide plans and 22.9% making suicide attempts.

Attachment and Suicide

The attachment theory of John Bowlby (Bowlby, 1969) emphasizes the importance of the relationships between children and their caregivers. Bowlby asserts that these relationships have a lasting impact on children because children form mental representations of attachment relationships that reflect the quality of their interactions with caregivers. These mental models include a “self-model” and an “other model” which capture how children view themselves in relation to their caregivers and remain stable for the entirety of a person’s life (Bowlby, 1973). These mental models act as templates that influence various aspects of one’s life including how they relate with other people (Fraley, 2002; Hazan and Shaver, 1987) and their risk for psychopathology (Allen et al, 2007; Muris et al, 2003; Sroufe, 2005; Ward et al, 2006).

Secure or insecure attachment may form depending on the quality of care and responsiveness from caregivers (Ainsworth et al, 1978). Attachment anxiety and attachment avoidance are the features of insecure attachment styles which result from caregivers being unresponsive, harsh, unavailable or generally uncaring towards the child (Mikulincer & Shaver, 2012). Individuals who have secure attachment styles have neither attachment anxiety nor avoidance at high levels. They have positive view of themselves and of attachment figures (Mikulincer & Shaver, 2012).

A high level of attachment anxiety is present in individuals with preoccupied attachment styles (Bartholomew & Horowitz, 1991). They typically have a low sense of self and rely on approval or acceptance by other people to boost their self-worth. They however view others highly and have a high need for attention which they feel underserving of. They constantly fear abandonment so they are ever vigilant for any signs that people they are close to are distancing themselves and will adopt hyper-activating strategies to maintain proximity to significant others (Mikulincer & Shaver, 2012). On the other hand, a high level of attachment avoidance is seen in individuals with avoidant attachment styles (Bartholomew & Horowitz, 1991). They have positive view of themselves but distrust other people. They downplay the need for intimacy with other people because they expect to be hurt or rejected. As a result, they adopt deactivating strategies such as maintaining independence and concealing their emotions (Mikulincer & Shaver, 2012). Another insecure attachment style is the fearful attachment style in which attachment anxiety and avoidance are both present. In this attachment style, a person craves close relationships with other people but also desists from getting close to them out of fear of rejection (Mikulincer & Shaver, 2012).

Insecure attachment has emerged as an important risk factor for suicide. For instance, a history of suicide attempts was more common in adolescents who rated attachment to both parents lower (Sheftall et al, 2013) and in adolescents with high levels of attachment avoidance or anxiety (Sheftall et al, 2014). Likewise, attachment anxiety and attachment avoidance predicted suicidal ideation in college students whereas secure attachment was associated with less suicidal ideation (Cuenca, 2013; Davaji et al, 2010; Khosravi & Kasaeiyan, 2020). In a study examining attachment and suicidal ideation in undergraduate students, Pereira and Cardoso (2017) found that suicidal ideation was highest in students with fears of abandonment, low levels of interpersonal trust and discomfort with intimacy all of which were indicative of insecure attachment styles.

Fino et al (2014) found that individuals with insecure attachment also reported higher levels of hopelessness and depression and were also more likely to harbor thoughts of committing suicide. Among college students, Langhinrichsen-Rohling et al (2017) found that individuals

with stronger attachment to parents reported less suicidal ideation and proneness to suicide in addition to having less maladaptive self-schemas but those with weaker parental attachment had less favorable self-schemas which in turn increased their suicidality.

The Current Study

The aim of this study was to determine whether attachment styles predicted suicidal behaviors in secondary school students. In light of the extant literature, it was hypothesized that secure attachment styles would predict lower levels of suicidal behavior and the insecure attachment styles would predict higher levels of suicidal behavior.

METHODOLOGY

Participants

Three hundred and sixty seven students attending public secondary schools in Nairobi County were the subjects of this study. Questionnaires were issued to 385 students selected randomly from nine schools in three sub-counties. In total, 367 of these questionnaires were received properly filled and were used in the study. The response rate of 95.3% was satisfactory as per recommendations by Cooper and Schindler (2003). The mean age of the participants was 16.44 years (SD = 1.38, range = 14 – 23) and 50.7% of them were female.

Measures

Attachment styles: The Attachment Styles Questionnaire (ASQ, Van Oudenhoven et al, 2003) was used to measure the attachment styles of participants in the study. The ASQ consists of 24 items which measure four dimensions of attachment: fearful attachment (e.g. *“I would like to have close relationships with other people but I find it difficult to fully trust them”*), preoccupied attachment (e.g. *“I have the impression that usually I like others better than they like me”*), dismissing attachment (e.g. *“I prefer that others are independent of me and I am independent of them”*) and secure attachment (e.g. *“I find it easy to get engaged in close relationships with other people”*). In order to obtain measures of attachment styles, participants rated their agreement with every item on a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*). A factor analysis using the main components method and orthogonal rotation confirmed the four factor structure of the ASQ (KMO = .78; Bartlett’s test of sphericity $\chi^2 = 5309.24$ $p < .001$) and the four factors explained 64% of the variance in attachment styles. The ASQ was also found to be reliable with the Cronbach’s alpha coefficients for the four sub-scales ranging between $\alpha = .74$ to $\alpha = .89$.

Suicidal behavior: A Suicidal Behavior Scale that the authors designed was used to measure participants’ suicidal behavior. The scale comprised of 11 items (e.g. *“I have ever thought about a method I could use to end my life but never planned to do it”*) and participants responded to each item of a five-point scale (1 = *Not at all* to 5 = *Six times or more*). A higher score was indicative of a higher level of suicidal behavior. Before the final version of the scale was arrived at, the items were subjected to pilot testing and refined. The scale was found to be adequately reliable ($\alpha = .79$).

Procedure

In order to conform to ethical and legal research requirements in Kenya, the researchers obtained a permit to undertake research from the National Council for Science, Technology and Innovation then got authorization from the office of the County Director of Education to visit public schools and collect data from students. Participation was voluntary after the aim of

the study was explained to the students. After students completed the questionnaires, they were collected and data from questionnaires that were properly filled was used in the study.

Data Analysis

Descriptive statistics for the study variables were as presented in Table 1. Since the predictive effect of attachment styles on suicidal behavior was tested by using regression analysis, it was necessary to ascertain that the assumptions were not violated. The skewness and kurtosis coefficients for each variable were as shown in Table 1. The coefficients fell within the range recommended by George and Mallery (2019), that is -1 to +1 with the exception of preoccupied attachment style which is slightly above the recommended values. George and Mallery (2019) however advice that the regression analysis can still be done with good results if the coefficient of kurtosis for one predictor variable is slightly greater than what they recommend.

Table 1: Descriptive Statistics of the Study Variables

	Mean	SD	Skewness	Kurtosis
Suicidal behavior	19.59	7.72	..839	..529
Secure attachment	23.33	5.32	-.566	.425
Fearful attachment	15.96	5.40	-.410	-.650
Preoccupied attachment	19.99	7.54	-.419	-1.135
Dismissing attachment	15.33	5.33	-.478	-.581

To check for multicollinearity among variables, the Variance Inflation Factor (VIF) was calculated. The values ranged between 1.004 and 1.271. These values were less than the recommended limit of 2.5 (Allison, 2012). Moreover, the tolerance values (between .787 and .996) were also in the acceptable range (George & Mallery, 2019). The study variables were deemed normally distributed and did not show any multicollinearity that would render regression analysis impractical (p. 211).

RESULTS

Table 2 shows the correlations among suicidal behavior and attachment styles:

Table 2: Correlations between Suicidal Behavior and Attachment Styles

	Suicidal Behavior	
Secure attachment	<i>r</i>	.040
	<i>P</i>	.231
	<i>N</i>	367
Preoccupied attachment	<i>R</i>	.533
	<i>P</i>	<.001
	<i>N</i>	367
Dismissing attachment	<i>R</i>	.312
	<i>P</i>	<.001
	<i>N</i>	367
Fearful attachment	<i>R</i>	.210
	<i>P</i>	<.001
	<i>N</i>	367

As shown in Table 2, suicidal behavior was not significantly correlated with secure attachment style ($r = .040, p = .231$) but it was significantly correlated with dismissing ($r = .312, P < .001$), fearful ($r = .210, P < .001$) and preoccupied ($r = .533, P < .001$) attachment styles. These

bivariate correlations indicate relationships between suicidal behavior and the three insecure attachment styles but not the secure attachment style. Results of the regression analysis carried out to determine the extent to which the attachment styles predict suicidal behavior is presented in Table 3.

Table 3: Results of Regression Analysis Predicting Suicidal Behavior

Variable	<i>B</i>	<i>S.E</i>	β	<i>t</i>	<i>p</i>
(Constant)	4.705	2.104		2.236	.026
Secure Attachment	.095	.066	.065	1.430	.154
Preoccupied Attachment	.499	.052	.487	9.523	.000
Dismissing Attachment	.177	.074	.122	2.387	.018
Fearful Attachment	.001	.072	.001	.014	.989

$R = .548$ $R^2 = .300$ $F = 36.125$ $p < .001$

The results of the regression analysis shown in Table 3 reveal that attachment styles were significant predictors of students' suicidal behavior ($F = 36.125$ $p < .001$) and explained 30% of the variance in suicidal behavior scores ($R^2 = .300$). Looking at the standardized regression coefficients in Table 3, preoccupied ($\beta = .487$, $P < .001$) as well as dismissing ($\beta = .122$, $P = .018$) attachment styles significantly predicted suicidal behavior but secure and fearful attachment styles did not. It is also clear that the regression coefficient for preoccupied attachment style was larger than for dismissing attachment style (.487 vs .122) which implies that attachment anxiety had a greater influence on students' suicidal behavior than attachment avoidance.

Discussion

This study was the first to look into relationships between secondary schools students' attachment styles and suicidal behavior in Nairobi County and, to the authors' best knowledge, in Kenya. Secure attachment style did not significantly predict suicidal behavior in in this study. Secure attachment was not protective against suicidal behavior contrary to existing literature which indicates that individuals with secure attachment representations are less prone to suicidal behavior and other forms of self-harm (Wrath & Adams, 2018). Some studies, however, have found that secure attachment may not have significant influence on suicidal behavior matching the finding made in this study. For instance, Kirša et al (2016) examined determinants of non-suicidal self-injury (NSSI) and suicidal ideation in college students and found that attachment to parents or peers was only protective for NSSI but had no effect on suicidal ideations and the risk of attempting suicide. Venta and Sharp (2014) also reported that suicidal ideation and suicide attempts were not associated with insecure attachment but were predicted by internalizing disorders.

It is established that secure attachment to parents or peers and secure attachment styles predict better adjustment and lower risk of psychopathology (Allen et al, 2007; Muris et al, 2003; Sroufe, 2005; Ward et al, 2006). The failure to observe any relationship between secure attachment style and suicidal behavior was unexpected. One would expect lower risk of suicidal behavior among students with secure attachment styles because, among other reasons, they have more satisfying interpersonal relationships, are more trusting, are better in communicating and as a result, receive more social support which makes them more resilient in difficult situations (Brennan & Shaver, 1995; Collins, 1996). They may be less prone to

suicide because they are more likely to reach out for emotional support when they encounter challenges. This is because they have positive self-worth and trust significant others to be available to provide the needed emotional support (Langhinrichsen-Rohling et al, 2017; Zisk et al, 2017).

Insecure attachment styles predicted suicidal behavior in this study. Specifically, preoccupied attachment style and dismissing attachment style predicted higher levels of suicidal behavior in the regression analysis. This finding aligns with findings made in earlier studies where insecure attachments styles or insecure attachment to parents was associated with higher risk of suicidal behavior. For instance, stronger attachment to parents was reported by adolescents who had never attempted suicide when compared to adolescents who had attempted suicide before (Sheftall et al, 2013) and in college students who reported less proneness to suicide and fewer thoughts of committing suicide (Langhinrichsen-Rohling et al, 2017). This study uncovered statistically significant associations between suicidal behavior and both attachment anxiety and avoidance. Attachment anxiety and attachment avoidance have been linked to suicidal behavior in adolescents (Falgares et al, 2017; Sheftall et al, 2014) and adults (Cuenca, 2013; Davaji et al, 2010; Khosravi & Kasaeiyan, 2020; Lizardi et al, 2011; Miniati et al, 2017; Stepp et al, 2008) in previous studies.

The observed associations between suicidal behavior in students and insecure attachment styles may be viewed in light of their mental models of attachment and how they approach interpersonal relationships. Individuals with dismissing attachment styles feel uncomfortable in close relationships, are less open and opt to keep their feelings to themselves because of avoidance (Bartholomew & Horowitz, 1991). Since they are not open to sharing their personal problems with others, whenever they face challenges that are common in adolescence, they receive less social and emotional support and are more vulnerable to thinking about suicide (Green et al, 2021; Zisk et al, 2017). Moreover, people with dismissing attachment styles may prefer to handle their problems on their own to avoid sharing their vulnerabilities with other people to avoid risking rejection. When they run out of coping abilities, they may feel worthless and ending their lives may seem like the only remaining solution (Hope & Smith-Adcock, 2011). Individuals with avoidant attachment may not tell anybody they are thinking of committing suicide, even people who may help. They may not ask for help from friends, parents or teachers so their thoughts of suicide can intensify to the point where they actually commit suicide (Hope & Smith-Adcock, 2011).

Individuals with anxious attachment have little trust in attachment figures yet are desperate for their attention (Mikulincer & Shaver, 2016). To such individuals, making suicide threats or attempts may be distress signals to the attachment figures. In addition, such individuals need to be accepted by attachment figures to boost their self-worth (Bartholomew & Horowitz, 1991). Therefore, if they feel that a relationship is threatened or anticipate abandonment by attachment figures, they could threaten or even make a suicide attempt to dissuade the attachment figure from abandoning them. Hence, suicide, self-harm and other dramatic behaviors can be thought of as tools used by individuals with anxious attachment to maintain proximity to attachment figures (Mikulincer & Shaver, 2016). Individuals with preoccupied attachment styles have negative self-image as a result of which they tend to be critical of themselves and harsh in their self-evaluation (Bartholomew & Horowitz, 1991) and this helps to blunt criticisms they may receive from other people. When this strategy fails and they experience emotional breakdowns, they may feel worthless and decide to end their lives (Cantanzaro & Wei, 2010).

Fearful attachment style was not a significant predictor of student's suicidal behavior in the regression model but was significantly correlated with suicidal behavior. Fearful attachment seemed to be a less important predictor of suicidal behavior in comparison to preoccupied and dismissing attachment styles. A study by Özer et al (2015) found fearful attachment in patients with a history of suicide attempts undergoing treatment for depression and a study by Kidd and Shahar (2008) revealed that homeless youths with suicidal thoughts were likely to have preoccupied and fearful attachment styles. People who have fearful attachment have attachment avoidance and anxiety at high levels. They are similar to those with preoccupied attachment styles in their distrust of attachment figures and fear of abandonment but they are reluctant to get close to attachment figures because they expect rejection (Mikulincer & Shaver, 2016). As far as psychopathology is concerned, individuals with fearful attachment styles often have the most severe symptoms (Wrath & Adams, 2018) but in this study, dismissing and preoccupied attachment styles were more strongly associated with suicidal behavior than fearful attachment style.

Emotional stressors are common during adolescence. Insecure attachment can interact with stressors in students' environment to increase vulnerability to suicidal behavior (Zortea et al., 2020). Other known risk factors for suicide including depression, hopelessness, loneliness and feelings of alienation are more prevalent in individuals with insecure attachment (Brumariu & Kerns, 2010; Fino et al, 2014; Kacmarski, 2016). Fino et al (2014) reported that feelings of hopelessness and depression were more prevalent in young adults who had negative mental models of self and of others and were consequently more prone to suicide. They surmised that such individuals were more likely to become depressed and hopeless when facing interpersonal difficulties, stress and negative emotions.

Higher risks of suicide have been reported in people who fear abandonment, distrust attachment figures or are uncomfortable with intimacy (Pereira & Cardoso, 2017). These are characteristics seen in people with insecure attachment styles. Students with insecure attachment styles can lack satisfying relationships with parents, peers and others (Grunebaum et al, 2010) hence they have no one to approach when they have problems. A study by Hope (2009) revealed that attachment avoidance and anxiety in undergraduate students predicted lower scores on the reasons to live scale and lower scores on that scale predicted higher scores for suicidal behavior. In other words, students with insecure attachment styles were more vulnerable to suicide because they did not see much value in being alive.

Limitations

This study was cross sectional in design hence when considering the findings, it is not possible to conclude that attachment anxiety or avoidance had a causal effect on students' suicidal behavior. Attachment styles and suicidal behavior were measured using self-report measures. Although self-report measures have been used often in similar studies, more thorough assessments of attachment representations can be obtained with less commonly used tools such as the Attachment Interview for Childhood and Adolescence (Ammaniti et al, 2000). Suicidal behavior was assessed as one continuous variable hence it was not possible to discern the influence of attachment styles on particular aspects of suicidal behavior.

CONCLUSION AND RECOMMENDATIONS

Despite these limitations, this study has demonstrated that attachment security is an important factor when it comes to suicidal behavior in adolescents. It has extended previous studies that

implicated insecure attachment as a risk factor for suicidal behavior particularly in an African country where few empirical studies have addressed attachment in relation to adolescent psychopathology.

The main finding in this study was that insecure attachment predicts secondary school students' suicidal behavior. Based on this finding, it is recommended that school guidance and counseling teachers take note of students' attachment styles while providing counseling services in the school setting. Suicide prevention strategies will be enhanced if adolescent's attachment styles are taken into consideration. The study also recommends that parents and guardians be encouraged to nurture secure attachment with their children because insecure attachment styles contribute to suicidal tendencies in school students. Further studies can also be done to investigate other student intrinsic factors that could be influencing that above deciphered extrinsic factors.

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