Associations between family suicide and personal suicidal behaviour among youth in KwaZulu-Natal, South Africa

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Abstract

Background: For every suicide, a minimum of six people are affected. Given the increasing number of suicide deaths in South Africa, the associations between the suicide of a family member and personal suicidal behaviour were explored in grade 8 students.

Method: Grade 8 students were asked to participate with parental consent and child assent. Demographic questionnaires were completed and formal psychometric assessment instruments were used.

Results: Thirty-five (15.98%) students reported knowing that a family member had committed suicide. The mean age was 13.3 years (range 13–15 years). There were significant associations between family suicide and students' self-reported involvement in physical fights, use of alcohol and concerns about physical health. Family suicide was associated with personal suicidal ideation, suicidal plans and suicide attempts. Higher scores were reported on the scales assessing depression, perceived stress and feelings of hopelessness by those having had a family member commit suicide. There were low scores for having a sense of mastery, self-esteem and perceived social support among those who had experienced a family member commit suicide.

Conclusion: Significant associations were found between the suicide of a family member and personal suicidal behaviour among the participants. There appear to be negative associations at a psychological level for the youth in a family in which a family member has committed suicide. Family practitioners play an important role in the identification and management of suicidal behaviour. While there are organisations in South Africa that offer help to the family and friends of those who have committed suicide, specific programmes directed towards child/adolescent survivors appear to be limited, and this needs to be addressed. The limitations of the study are discussed.

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Introduction

Suicidal behaviour (suicidal ideation, plans and attempts to commit suicide, and completed suicide) is increasingly becoming a public health problem. The World Health Organization (WHO) estimates that in the year 2020, approximately 1.53 million people will die from suicide.[1] The suicide of a family member is especially significant, given that the family is one of the earliest and most significant influences in a young person's development.[2] It has been reported that a minimum of six individuals are affected for every suicide death.[3]

Vicarious exposure to the suicidal acts of others and being made aware of the suicide of a close relative may be a facilitator of suicidal behaviour in the youth, with approximately 7.7% of children reporting personally knowing someone who had committed suicide.[4]

Regarding suicidal behaviour in South Africa, the only source of epidemiological suicide mortality data currently available, the National Injury Mortality Surveillance System (NIMSS), indicates that nationally there were 3 125 suicides in 2008.[5] Estimates given for suicide in South Africa indicate that the rate is 15.4 per 100 000.[6] Little research has been conducted on the context in which suicide occurs and its impact on juvenile survivors, and particularly their own suicidal behaviour.[7] Various studies have, however, linked the risk of suicide with a family history of suicide, and it has been documented that a family history of attempted suicide makes a significant independent contribution to adolescents' suicidal phenomena.[8,9]

The impact of suicide on family and friends ranges from pain and grief to various health consequences and may take many years to subside. Suicide may also be stigmatising for families, particularly in cultures where suicide is regarded as sinful.[10] Significant others also usually have more guilt reactions after a suicide than a regular death. They generally try to find some explanation as to why their relative committed suicide and they often do not receive any support in their grief.[11] Survivors of suicide suffer from emotional sequelae and are at risk for depression, suicidal ideation and other forms of distress.[12] Children and adolescent survivors of suicide also appear to be more at risk for major depressive disorder, post-traumatic stress disorder and impaired social adjustment.[13] However, research on the suicidal behaviour of the youth is limited in developing countries, particularly in terms of community studies of the youth who do not present to health care or mental health care professionals for management.

Regarding suicidal behaviour among young people generally, various emotional states have been identified as risk factors for suicidal behaviour.[14] A depressed mood was the factor most strongly related to future suicidal ideation and attempts. Strong associations were also established between feelings of hopelessness and suicidal behaviour. Similarly, suicidal adolescents reported higher levels of anger and hostility than their non-suicidal counterparts.

Among other factors, personality traits such as aggression and acting out in the face of frustration and interpersonal conflict, negativism, perfectionism and low self-esteem have also been identified. Various life stressors including bereavement, interpersonal problems, financial difficulties and legal or disciplinary problems have also been identified as being related to suicidal behaviour.[15]

This study was undertaken with the aim of establishing what exposure to family suicide there has been in a sample of youth and what, if any, the associations are with their personal suicidal behaviour (suicidal ideations, plans and attempts).

Method

A number of co-educational state-run secondary schools with students in grades 8 to 12 were approached to participate in the Durban metropolitan area in South Africa. The first school to respond to the investigator was accepted as the study site. The school serves members of previously disadvantaged ethnic groups. This school predominantly serves members of the Indian and black ethnic groups, with very few coloured students and no white students present. In order to obtain a representative sample, all students in Grade 8 in the school were approached to participate in the study after parental consent was obtained. Child assent to participate in the study was also obtained.

Ethical approval was obtained from the Research Ethics Committee of the University of KwaZulu-Natal and the Institutional Review Board of the University of California, Los Angeles. The students who agreed to participate were approached in small groups and requested to fill in a demographic questionnaire and several self-report psychometric questionnaires anonymously and confidentially. Mechanisms were put in place to ensure that if a student reported any suicidality, this would be identified by the investigator and the student could discuss this with either the school counsellor or the investigator. Family members/caregivers were informed that they would be contacted and/or arrangements would be made for the student to be sent to the nearest government hospital where trained health professionals would see him/her free of charge. The school counsellor would see the student for ongoing monitoring and support in the school environment.

The demographic questionnaire covered age, gender, any failures, history of substance use, family history of suicide, personal history of suicidal behaviour and impact (if any) of a friend's or peer's suicidal behaviour. The participants were also asked to complete the Beck's Depression Inventory (BDI-11),[16] a 21-item self-report inventory measuring characteristic attitudes and symptoms of depression, to assess any depressive symptomatology.[16] The Beck Hopelessness Scale, a 20-item true-false self-report scale, was also administered to assess feelings about the future, loss of motivation and expectations.[17] The Perceived Stress Scale, a 10-item measure, was used to measure the degree to which situations in one's life are appraised as being stressful. It can also be viewed as an outcome measure examining the experienced level of stress as a function of objective stressful events, coping processes and personality factors.[18]

The Aggression Scale, a 29-item scale, was used to assess the multiple aspects of aggression including physical aggression, verbal aggression, anger and hostility.[19] The Mastery Scale, a seven-item scale answered on a four-point scale, was used to assess personal control or mastery.[20] A self-esteem scale consisting of 10 items was used as a measure of self-esteem.[21] The Perceived Support Scales, consisting of two 20-item scales, one for family support and the other for support from friends, were used as a measure of social support. These two instruments are designed to measure the degree of support one perceives oneself to be receiving from friends and family, with higher scores reflecting more social support.[22]

[§]The tests were scored and interpreted by the researcher and analysed with the help of a biostatistician using the Statistical Package for Social Sciences® (SPSS®). Data analysis was done using SPSS®, and bivariate cross-tabular analyses were undertaken.

Results

The total sample consisted of 219 Grade 8 students randomly selected from a school. Of these, a subset of 15.98% (n = 35) reported awareness that a family member had committed suicide. This study reported on the findings of the group who had a family member commit suicide as compared to those who did not have a family member commit suicide. Comparisons were also made on psychometric measures with those who did not have a family member commit suicide. The mean age was 13.3 years [standard deviation (SD) 0.57], with the age ranging from 13 to 15 years. There were an almost equal number of male and female students in the sample. Those who reported a family suicide had significant associations with involvement in physical fights (χ^2 = 4.259, df 1, P = 0.039), alcohol use (χ^2 = 4.476, df 1, P = 0.034) and concerns about physical health (χ^2 = 4.067, df 1, P = .0437) as compared to those who had not had a family member commit suicide. The sociodemographic characteristics of the participants who reported a family member's suicide are presented in Table I.

Further analysis of the results presented in Table II indicate that there were significant associations between the teenagers' reports of their own suicidal behaviour and the self-reports of a family member's suicide. Family suicide was associated with students' personal suicidal ideation (χ^2 = 3.6543, df 1, P = .055), suicidal plans (continuity-adjusted chi square: χ^2 = 3.5336, df 1, P = .060) and suicide attempts (continuity-adjusted chi square: χ^2 = 13.786, df 1, P < .001).

Analyses also indicated correlations between the personal suicidality of young people who had a family member commit suicide and those students who did not have a family suicide and various psychometric measures. The results presented in Table III indicate that those students who reported the suicide of a family member also reported higher scores on the depression scales (M = 15.47, SD 10.82) than those students who did not have a family member commit suicide (M = 7.94, SD 8.12, P < .001). The former also had higher scores on the Perceived Stress Scale (M = 18.60, SD 6.946) compared to those students who did not have a family member commit suicide (M = 13.13, SD 7.097, P < .001).

The sense of mastery also appeared to be lower among those who had a family member commit suicide (M = 18.85, SD 4.634) vs. those who did not (M = 21.02, SD 4.189, P < .001). Similarly, self-esteem also appeared to be lower among those students who had a family member commit suicide (M = 18.80, SD 7.242) compared to those who did not (M = 21.43, SD 5.842, P = .0201). Perceived social support from the family also appeared to be lower in the students who reported that a family member had killed him- or herself (M = 10.25, SD 5.05) vs. those who did not (M = 13.12, SD 4.79, P = 0.003). Feelings of hopelessness were also higher among those who had a family member

Table I: Sociodemographic characteristics of the sample

Youth characteristics		Family suicide				Total		P value
		Yes		No				
		n	%	n	%	n	%	
Gender	Male	18	8.26	95	43.58	113	51.83	0.95
	Female	17	7.80	88	40.37	105	48.17	
Grades repeated	Yes	1	0.46	13	5.96	14	6.42	0.88
	No	34	15.60	170	77.98	204	93.58	
Parent/caregiver employed	Yes	26	12.94	135	67.16	161	80.10	0.85
	No	6	2.99	34	16.92	40	19.90	
Contact with police/ offences	Yes	3	1.39	7	3.24	10	4.63	0.20
	No	31	14.35	175	81.02	206	95.37	
Involvement in physical fights	Yes	17	7.80	56	25.69	73	33.49	0.04
	No	18	8.26	127	58.26	145	66.51	
Alcohol use	Yes	13	5.94	38	17.35	51	23.29	0.03
	No	22	10.05	146	66.67	168	76.71	
Concerns about physical health	Yes	11	5.14	30	14.02	41	19.16	0.04
	No	24	11.21	149	69.63	173	80.84	

Table II: Completed suicide by family and personal suicidal behaviour

Personal suicidality		Family suicide				Total		P value
		Yes		No				
		n	%	n	%	n	%	
Suicidal thoughts	Yes	12	5.50	36	16.51	48	22.02	0.05
	No	23	10.55	147	67.43	170	77.98	
Suicide plans	Yes	5	2.29	8	3.67	13	5.96	0.05
	No	30	3.76	175	80.28	205	94.40	
Suicide attempts	Yes	7	3.20	5	2.28	12	5.48	< 0.001
	No	28	12.79	179	81.74	207	94.54	

Table III: History of family suicide and associations on psychometric tests

Psychometric test	Family suicide	n	Mean	Standard deviation	Standard error	P value
Depression	Yes	34	15.47	10.82	1.85	< 0.001
	No	177	7.94	8.12	0.61	
Perceived stress	Yes	35	18.60	6.94	1.17	< 0.001
	No	183	13.13	7.09	0.52	
Mastery	Yes	35	18.85	4.63	0.78	< 0.001
	No	182	21.02	4.18	0.31	
Self-esteem	Yes	35	18.80	7.24	1.22	0.020
	No	180	21.43	5.84	0.43	
Perceived social support: family	Yes	35	10.25	5.05	0.85	0.003
	No	182	13.12	4.79	0.35	
Perceived social support: friends	Yes	35	11.02	4.68	0.79	0.452
	No	182	11.69	4.84	0.35	
Hopelessness	Yes	35	4.91	3.82	0.64	0.002
	No	183	2.77	2.60	0.19	
Anger total	Yes	34	71.38	25.25	4.33	0.390
	No	183	67.89	20.96	1.54	
Physical aggression	Yes	33	22.81	6.83	1.19	0.066
	No	181	20.38	6.76	0.50	
Verbal aggression	Yes	33	13.63	4.66	0.81	0.298
	No	180	12.70	4.67	0.34	
Anger	Yes	33	18.09	7.32	1.27	0.257
	No	181	16.53	6.12	0.45	
Hostility	Yes	33	18.93	7.18	1.25	0.902
	No	180	18.77	6.78	0.50	

commit suicide (M = 4.91, SD 3.82) than those who did not (M = 2.77, SD 2.60, P < .001). While anger in total was not significant among those who had a family member commit suicide, further analysis of the various subscales indicated that while not statistically significant, physical aggression was higher among those who had a family suicide (M = 22.81, SD 6.83) as opposed to those who did not have a family suicide (M = 20.38, SD 6.76, P = 0.902).

Discussion

This study indicates that almost 16% of the young participants in this study had knowledge that a family member had committed suicide, and while other factors such as personal disposition may play a role and causation cannot be established, there appears to be an association with personal suicidality (suicidal ideation, plans and attempts).

The findings of this study support the literature in the area, which indicates associations between suicidal phenomena and suicide in family members and that the suicide rate of adolescents is highly correlated with the suicide rate among their relatives.[8,9] The literature indicates that familial clustering of suicidal behaviour has a partly genetic basis with heritability estimates of 17–55% for suicidal behaviour and 20% for suicide.[9] Similar results have been found by other researchers who have reported a high prevalence of suicidal behaviour in the biological relatives of people who have committed suicide or attempted suicide with rates ranging from 14–17% to 40%.[23]

While conclusions cannot be drawn from this sample as to the role of genetics, learned behaviour or socio-cultural factors in suicidal behaviour, these findings offer opportunities for further research as those who have had a family member commit suicide appear to constitute a high-risk population for completed suicide.[24,25] The significant association of students who had a family suicide being involved in physical fights is also of concern. The externalising of anger has been identified as a critical factor in suicidal behaviours.[14] The use of alcohol is significant given that intoxication for the purposes of self-medication of anxiety and despondency may trigger suicide in someone who feels shame, humiliation or frustration. Intoxication may also lead to impaired judgement and decreased inhibition and may facilitate suicidality.[26]

While the role of concerns regarding the physical health of the participants in this study appears to be unclear, various theories have been posited about their association with suicidal behaviour. The participants in this study are young people who are in adolescence or moving into that period. While adolescence brings about physical growth, maturation and development, these may cause confusion and difficulties, such as low self-esteem in terms of physical appearance. Low self-esteem (which is apparent in this sample) may, as a negative development outcome, represent a risk factor for suicide in itself and in correlation with depression. Other possibilities are that given the high rates of physical illnesses such as HIV/AIDS, cancer and cardiac conditions in South Africa, the youth have a greater awareness of these medical conditions and their possible impact on their health, especially if family members are also affected. Another more likely possibility is that these physical concerns may be somatic expressions of psychological distress. Many suicidal patients contact health care workers complaining of somatic symptoms in the days, weeks or months preceding the suicide act.[27]

The factors identified in this study, i.e. depression, perceived stress, low self-esteem, low levels of perceived support from family and high levels of hopelessness among those youth who have had a family member commit suicide, are all indicative of psychopathology or at the very least psychological distress. While causal relationships cannot be established (and there may be other factors that could drive the process of suicidality among these students), the identified factors may be important contributors to the youth's own suicidality. This may be particularly the case if parents or caregivers are not emotionally available (if they themselves are attempting to deal with their own feelings of loss, confusion and distress) to provide support and care to young survivors of suicide. Various psychosocial stressors such as recent loss, rejection and failure can accelerate youth suicide, as can depression and feelings of hopelessness.[28]

Other factors such as stigmatisation by the community and embarrassment may result in isolation, loss of social support and a personal sense of ineffectiveness.[25] This could also explain the low sense of mastery or control and the high levels of hopelessness that have been reported by the participants of this study. These stressful experiences may affect youth social adjustment and, in a vicious cycle, intensify feelings of sadness, hopelessness and low self-esteem, which may lead to acting out in the form of physical aggression or the use of alcohol.

As the majority of the population have limited access to mental health services in South Africa, individuals in a suicidal crisis are often more likely to visit a general practitioner than a mental health specialist.[27] Family practitioners play an important role in that they are the first point of call when a member of the community has committed suicide. Family practitioners are often approached to provide immediate crisis intervention and engage in subsequent medical care as primary health care providers. Hence they play an important role in the early identification of youth at high risk for suicidal behaviour and its prevention.

Furthermore, while there are organisations in South Africa that offer help to the family and friends of those who have committed suicide,[29] specific programmes directed towards children and adolescents appear to be limited and this is an area that needs to be addressed. Family practitioners are often influential members of the communities that they practise in and have an important role to play in establishing support groups or services for youth survivors of suicide and in facilitating referrals to other professionals who can assist.

The limitations of this study are as follows: while the participants self-identified that a family member had committed suicide, the researcher did not establish the nature and degree of the familial relationships. Owing to considerations of anonymity, the participants could not be followed up on in the long term to establish future suicidality. The ethnicity and religious affiliations of the sample were also not established. Knowledge of this would have provided a more in-depth analysis of the results in terms of cultural and religious factors. The sample size is small and may not be generalisable to other samples and could also not be analysed using more rigorous statistical techniques. There may be other factors that may account for the findings that the researcher has not considered. It is recommended that any future studies have larger sample sizes to address this limitation.

Conclusion

The findings indicate that there is a percentage of young people who have had exposure to a family member's suicide. While causal relationships cannot be established, there appear to be significant negative associations at a psychological level for young people when family members have committed suicide. Whether these associations persist over time is outside the scope of this study. However, it is recommended that future studies monitor larger samples over the long term in order to assess the development of psychopathology or further suicidal behaviour.

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