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Missed opportunities in the assessment and management of suicidal youth in a developing country

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Background: High rates of suicide reported for youth in South Africa. As suicide attempters share similarities with suicide completers, it is important to establish their characteristics as this has implications for the provision of services and intervention programmes in a developing country.

Aim: The aim was to identify youth at high risk for future attempts and to provide guidelines for the management of at risk youth

Material & methods: A 5 year retrospective chart review was undertaken to establish the socio-demographic profile and associated factors of suicide attempters aged 18 and underseen at the Psychology and Psychiatry departments of a tertiary public hospital in the Durban, South Africa. The Diagnostic and Statistical Manual of Mental Disorders (DSM) system was utilized.

Results: Of the 555 patients under the age of 18 who were seen over a five year period, 13.3% (n =74) were seen following a suicide attempt. The majority reported previous suicide attempts, but less than one third of these had seen a mental health care professional (MHCP) for these previous attempt/s. Relationship problems with parents or partners constituted the majority of the diagnoses but severe mental illnesses, mood disorders in particular, were also present.

Conclusion: All youth presenting to health facilities with a suicide attempt should be admitted and referred to MHCP for further assessment and management in order to prevent further attempts. Health care providers, such as emergency personnel should also be capacitated to screen and identify high-risk youth. Issues addressing the gaps between needs and services are discussed.

Keywords: suicide attempts, children, LAMIC, mental illness, relationship issues

Background

Suicidal behaviour which encompasses suicidal ideation, plans, attempts and completed suicide is a significant public health problem globally and in South Africa [1]. Approximately 86% of the 800 000 of global suicides occur annually in low and middle-income countries (LAMIC) [2] such as South Africa. The national suicide statistics in South Africa indicate that the rate for children and adolescents between the ages of 5 to 14 years is 1.4 per 100, 000, but increases significantly to 17.6 per 100 000 for those aged between 15 to 29 years [3]. The estimated ratio of a suicide to a suicide attempt is 1: 20 for all age groups [4].

Suicide statistics for the city of Durban indicate that 2.4% of those who committed suicide between 2006 and 2007 were under 14 years of age[5]. While these statistics may be low, they may not be indicate the true extent of the problem due to poor surveillance and reporting systems [2] and the use of outdated data [3,5]. Factors such fear of stigmatizing the survivors of suicide and cultural and religious taboos on suicide also prevent accurate reporting [6].

These high suicide rates have led to the establishment of a national suicide prevention programme as one of the key areas identified by the South African Department of Health National Mental Health Policy

Framework Strategic Plan, 2013 to 2020 (www.health-eorg.za). Successful implementation of this program requires the identification of "at risk" individuals, which presents some challenges. While much research has been conducted on suicidal behavior, including suicide in high-income countries, research in developing countries such as South Africa is limited[7,8]. This is partly due to the marginalization of non- communicable diseases such as mental illness when faced with pandemics of infectious diseases such as HIV/AIDS and tuberculosis [10]. The research conducted on suicidal behavior in South Africa has shifted away from clinical or hospital based studies to assessing suicidal behavior in community samples [7,8,9]. However, hospital based research on suicidal behavior is necessary as it provides information to inform and improve clinical care/services, plan targeted public health prevention and intervention strategies as well as healthcare policies, including teaching and training of various healthcare and other professionals in this area.

Clinical studies indicate that up to one-third of non-fatal suicidal attempts involve children and adolescents [11]. Further, as suicide attempters share remarkable similarity with suicide completers[12] and that persons who have made a suicide attempt frequently re-attempt and are at significant risk of subsequently demising from suicide [12.13], it is crucial that those challenged by the problem of youth suicide need to understand the characteristics of young suicide attempters in their local contexts.

In both community and clinical studies conducted in various parts of South Africa, factors such as family conflict [14], interpersonal conflict [15], school-related problems such as failure and bullying [1] and rigid problem-solving behavior, over-controlling parental styles and lack of tolerance by parents or caregivers for developmental/ role changes[14] have all been identified as correlates of suicidal behavior. Other correlates such as parental loss through divorce or parental death, a family history of psychopathology (including substance use) [1], poor perceived parental support and negative feelings about the family [7], and past peer and family suicide attempts [16] all play a role.

However, some research has been conducted with small, qualitative community samples in other parts of South Africa [16], while much of the hospital research has been conducted in the late 1990's and mid 2000's more current research is needed [11, 14].

Aim

The aim was to undertake a five-year retrospective chart review of all under 18-year-olds admitted to a public, tertiary hospital following a suicide attempt. This is in order to develop a better understanding of suicide attempters' socio-demographic and associated factors in a clinical sample to assist in intervention and prevention measures.

Material & Methods

A retrospective chart review of all patients under the age of 18, a total of 555, who had attended the Psychology and Psychiatry departments of a public tertiary hospital over a randomly chosen five-year period were screened to identify those admitted following a suicide attempt. A total of 74 charts (13.3%) of patients admitted to a tertiary hospital following a suicide attempt were reviewed and their data extracted. Ethical approval was obtained from the Biomedical Research Ethics Committee (BREC), University of KwaZulu Natal (BE Number: 325/13).

All 74 patients were first admissions to this particular hospital for a suicide attempt and were admitted to the relevant wards (generally medical and surgical wards). They were assessed by clinical psychologists and /or psychiatrists (mental health care practitioner-MHCP) as inpatients, once medically stable and prior to discharge. The investigators recorded clinical interviews detailing socio-demographic factors, the attempt, diagnoses and management plans. The Diagnostic and Statistical Manual of Mental Disorders (DSM IV TR) was used for diagnoses. Data has been analyzed using SPSS Statistics®.

Results

Of a total of 555 patients under the age of 18-year who were assessed by the Psychiatry and Psychology Department of a major tertiary hospital over a 5-year-period, 13.3% (n=74) were assessed after being admitted for a suicide attempt. This paper presents the data of these 74 suicide attempters below.

The mean age of the suicide attempters (n =74) was 14.64 (SD 2.25; range: 9 - 17.11 years). Females constituted the majority of the sample at 77% (n=57). In terms of ethnicity, the sample was a diverse one. The majority were Blacks (68.9%; n= 51), followed by Caucasians (13.5%; n= 10), Indians (descendants of settlers from the Indian subcontinent) (12.2%; n =9) and then "Coloured" South Africans (descendants of mixed Black and Caucasian ethnic origin) [17] (5.4%; n=4). The majority of the sample (87.8%; n=65) self- identified as following the Christian faith, followed by those practicing Islam (6.8%; n=5), with Hinduism and African traditional religion at 2.7% (n =2) each.

Just over 35% (n =26) had previous contact with a MHCP. Of these, almost 26% (n=19) had a past psychiatric diagnosis. Of the total sample (n=74), 37.8% (n=28) reported previous suicide attempts, ranging from 1 to 6, with the majority 64.3% (n=18) reporting more than 2 previous suicide attempts. Of those reporting prior attempts, only 32% (n=9) had been seen by a MHCP following the attempt/s. A family history of mental illness was reported by 28.4% (n =21) of the suicide attempters, most involving parents (17.6%; n=13). A family history of suicide was reported by 4.1% (n =3), while 8.1% (n=6) reported that family members had made suicide attempts.

Ingestion of substances (n=55; 74.3%) such as over – the-counter medication, paraffin and pesticides was most common method used for the attempt, followed by hanging (n=8;11%), cutting (n=6; 8%) and jumping from heights (n=2; 3%). Four percent used combinations of the above methods.

The most common precipitants for the attempt were conflict with family at 44.6% and self-reported depression and perceived lack of support from family at 10.8% each, respectively. Sexual abuse and physical or emotional abuse was reported by (16.2%, n =12) of the sample. School problems such as poor academic performance and bullying were reported at 9.50% while conflict

with others (at school and with friends etc.) was at 4.10% and grief-related issues were at 2.70%. Almost 15% reported the use of substances such as alcohol, cigarettes, including 6.8% who reported the use of other illegal substances (marijuana, ecstasy).

In terms of provisional psychiatric diagnoses using DSMIV-TR, comorbid diagnoses were evident. V Code diagnoses such as Relationship issues between parent and child or partner relationship problems predominated at 43.2% (n=32). The second largest category were mood disorders: Major Depressive Disorder (MDD) and Dysthymia which were reported in 29.8% (n=22) and Bipolar Mood disorder in 8.1% (n=6) of the sample.

Borderline personality traits (28.4%, n =21) and Adjustment disorder was diagnosed in 10.8 % (n=8) of the sample. Attention Deficit Disorder was diagnosed in 6.8 % (n=5). Post -Traumatic Stress Disorder (n=3) and Acute Stress Disorder (n =1) was diagnosed in a total of 5.5 % of the sample. Conduct disorder in 8.1% (n=6) of the sample and Oppositional Defiant Disorder constituted 5. 4 % (n=4) of the diagnoses. Schizophrenia and schizoaffective disorder constituted the remainder at 1.4% (n =1) each respectively. Substance induced and substance intoxication each constituted 1.4 % of the diagnoses. Intellectual disability was diagnosed in 2.7 % (n=2) of the sample.

In terms of management, 17.57% (n=13) were admitted to either a child or an adult psychiatric unit (if over the age of 12 years) for further holistic management. Outpatient treatment was provided to the others (n=16; 82.43 %). Almost 93% (n= 68) of suicidal youth received psychotherapy as inpatients and continued this as outpatients upon discharge. Of the sample, 34 % (n= 25) were prescribed psychotropic medication, while 38% (n =28) were referred to social workers. The findings are presented in Table 1.

Table 1. Characteristics of research subjects.

Characteristics	n	Percentage (%)
Gender:		
Male	17	23
Female	57	77
Ethnicity:		
Blacks	51	68.9
Whites	10	13.5
Indians	9	12.2
Coloured	4	5.4
Previous contact with MHCP	26	35
Past psychiatric diagnoses	19	25.7
Family history of:		
mental illness	21	28.4
suicide	3	4.1
suicide attempts	6	8.1
Previous suicide attempts	28	37.8
Contact with MHCP following previous suicide attempt/s	9	32
Method used in suicide attempt:		
Ingestion of substances/tablets	55	74.3
Hanging	8	11
Cutting	6	8
Jumping from heights	2	3
Combinations of the above methods	3	4
Provisional Diagnoses (comorbid):		
V Code diagnoses	32	43.2
Major Depressive Disorder (MDD) and Dysthymia	22	29.7
Adjustment disorder	8	10.8
Borderline personality traits	21	28.4
Bipolar Mood disorder	6	8.1
Attention Deficit Disorder	5	6.8
Post -traumatic Stress and Acute Stress Disorder	4	5.5
Oppositional Defiant Disorder	4	5.4
Conduct disorder	6	8.1
Schizophrenia and schizoaffective disorder	2	2.7
Substance induced and substance	2	2.7
Cognitive impairment/Intellectual disability	2	2.7
Conversion disorder	1	1.4
Management:		
Admissions to a child or an adult psychiatric unit	13	17.6
Outpatient treatment (psychiatry and psychology)	61	82.4
Psychotherapy (individual and/or family)	68	93
Psycho-tropic medication	25	34
Referral to social workers	28	38

Discussion

The findings indicate that just over 13% of youth between the ages of 9 and 18 years seen by mental health care professionals (MHCP) over a five year period in a government tertiary hospital were admissions following a suicide attempt.

A significant percentage of suicide attempters had previous contact with MHCP and also had a psychiatric diagnosis. Research indicates that almost any diagnosable psychiatric disorder increases the risk for suicide [18]. Of concern is that less than a third of current youth suicide attempters who had a prior history of suicide attempts had seen a MHCP for these previous attempts. It appears that suicide attempters were either not taken to hospital following previous suicide attempts or were attended to medically but not referred to any MHCP for the prior attempt/s. This indicates missed opportunities for routine screening and clinical detection of youth for suicidal behaviors or related mental disorders in general medical settings. Given that persons who make a suicide attempt, frequently re-attempt and are at great risk of subsequently demising from suicide [12, 13]. This indicates missed opportunities for routine screening and clinical detection of youth for suicidal behaviors or related mental disorders in general medical settings when the initial suicide attempt occurred.

One possible reason for the low numbers referred to MHCP on first attempt could be the severe shortages of health professionals and MHCP in South Africa [2]. Over-burdened health professionals such as emergency medical physicians may not refer as they may not have the skills to assess or screen. South Africa has per 100 000 population: 0.28 psychiatrists, 0.32 psychologists, 0.40 social workers, 0.13 occupational therapists and 10 nurses, most of who are working in urban areas [2]. As far back as 2006 when the population was much lower, research indicated that South Africa was short of 646 psychiatrists and 466 psychologists [19].

Furthermore, resources for children and adolescents are even more limited with only 1.4% of outpatient facilities, 3.8% of acute beds in general hospitals and 1% of beds in psychiatric hospitals being designated for children and adolescents [2]. In the Durban metropolitan area where this study was conducted, only 2 child psychiatrists work in government hospitals [2].

Lack of funding for mental health services prevents the development of key services such as child and adolescent mental health services. This condition currently results in only 4 inpatient child and adolescent psychiatry beds being available in Durban [20]. It creates an "elitist" service, which fragments the limited mental health services available even further. Community based mental health services and psychosocial rehabilitation services are also lacking [2]. This also places the burden of care back again on MHCP in general hospitals already severely under-resourced or on limited non-governmental organizations. Thus, there is a clear gap between mental health needs and services[2], and not much progress has been made since the abovementioned data [20]was published to date.

Another possible reason for suicide attempters not seeing any MHCP following the attempt, could be that mental health issues in South Africa are generally under-diagnosed and untreated. More than half of South Africans do not consider mental health as a priority [19]. Furthermore, although South Africa is classified as an upper-middle-income country, it has the highest inequality level in the world. It has a GINI coefficient of 0.70, that is, the poorest fifth of the population account for 2% of the country's income and consumption, and the wealthiest fifth for 72% [21]. In the face of poverty, unemployment, violence, trauma and communicable/ non- communicable diseases, mental health is either low or not on the list of priorities. To contextualize this, of the nine provinces in South Africa, KwaZulu Natal has the highest risk for mental illness: it has the highest proportion of people living below the poverty line, highest poverty gap, third-highest unemployment rate, has the highest prevalence of HIV/AIDS in South Africa and the second highest murder rate. Of the six major cities in South Africa, Durban also has the second highest suicide rate for males [20]. Yet, hospital budgets do not reflect this reality in terms of mental health services. Furthermore, social stigma and religious and cultural taboos associated with the use of mental health services may also play a role in access to services[1,2].

Severe mental illness, such as mood disorders, major depressive disorder, dysthymia, and bipolar mood disorder, also emerged as a significant diagnosis in this study. Family histories of mental illness, suicide attempts and suicide were reported in this study. The suicidal behaviour of adolescents is correlated with their relatives' suicide rate [22] with familial clustering of suicidal behaviour having a partly genetic basis with heritability estimates of 17–55% for suicidal behaviour and 20% for suicide [23]. Suicide attempts are also more likely to be associated with a family history of impulsive, aggressive behaviour and mood disorder. Furthermore, research indicates that mental illness among parents and other relatives is a risk factor for suicide attempts among their offspring. A quarter of those who attempt suicide report parental psychopathology [24]. While this study did not explore the nature of parental psychopathology or parental mental illness, suicide and suicide attempts evident in this sample may render parents incapable of addressing normal childhood developmental issues experienced, (such as heterosexual relationships) and parents may be incapable of offering support when their child is experiencing other stressors. Intervention programmes need to provide support for these high risk, vulnerable parents.

Borderline personality traits, conduct and oppositional disorders were also found in this sample. Aggressive, impulsive behaviour is a major risk factor for suicidal behaviour in adolescents. There are high co-morbidity between conduct disorders, mood disorders and suicidal behaviour [18]. Developmental variations in presentation, symptomatic overlap with other disorders, a lack of clinician awareness[18] of comorbidities and/ or an unwillingness to diagnose youth as mentally ill for fear of stigmatizing them, can often contribute to under or misdiagnoses in youth. Such issues also often result in missed opportunities for intervention, especially following the first suicide attempt.

The assessment of suicide attempters should also not only focus on the presence of a diagnosable psychiatric disorder or psychopathology. V Code diagnoses such as relationship issues with parents or partners constituted 43% of the diagnoses in this study. Different life events can have different effects or impacts at different ages with parent-child conflicts common stressors in early adolescence. Romantic relationships and discord therein are stressors in later adolescence. [25]. In such cases, the focus should be the prevention of further suicidal behaviour by addressing underlying precipitating factors[15]. Such stressors could render the children vulnerable to future mental illness, particularly if other cumulative stressors increase the allostatic load. Research indicates that more than 70% of child suicides between the ages of 9 and 14 years had family conflict as a trigger [12].

Youth suicide attempts may be cries for help. However, if these attempts do not have the desired effect on significant others, more attempts may be made using more lethal methods, until some resolution occurs. Some examples of these resolutions are, that the precipitants are appropriately addressed, the problems are resolved or a suicide results. In repeated cases of suicide attempts, the provision of emotional support and teaching of coping skills including the fostering of resilience and hardiness, as well as monitoring of the home situation and mentally ill parents by MHCP (including for example, community nurses) are all viable intervention strategies.

A limitation is the small sample size which may limit generalizability. However, this study adds to the research on child and adolescent mental disorders, which constitutes a small fraction of the 3% to 6% of mental health research conducted in LAMIC [26]. Further, this clinical study provides data for the development and provision of tertiary level inpatient and outpatient services for children and adolescents [20] in a LAMIC.

Conclusion

A significant percentage of youth have made suicide attempts but have not been assessed by any MHCP's, indicating missed opportunities for early intervention and prevention of further suicide attempts. Furthermore, a significant percentage of suicide attempts were diagnosed as being severely mentally ill with family histories of mental illness, suicide attempts and suicide, which renders these youth as a "high risk" group for future suicide, but even they did not receive any mental health services initially. Individuals with such histories should be identified for routine screening and clinical detection of suicidal behaviours and mental illness by health professionals. The latter need to be capacitated in developing these skills through continued education. Given the range of provisional comorbid diagnoses and high environmental and individual risk factors for mental illness, this study indicates the need for more human resources, infrastructure and specialized, coordinated and integrated mental health inpatient and outpatient services for children and adolescents. Despite limited and fragmented mental healthcare resources and budgets in developing countries, it is recommended that youth suicide attempters should be admitted following emergency medical management and then referred to a MHCP in order to identify mental illness, intervene and prevent further suicide attempts.

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