

Psychiatric features in perpetrators of homicide-unsuccessful-suicide at Weskoppies Hospital in a 5-year period

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Background. In the absence of medical literature reporting on homicide-unsuccessful-suicide (HUS), those cases in which the perpetrator is referred for forensic psychiatric observation present an opportunity to explore psychiatric features pertaining to the event.

Objective. To identify possible contributing psychiatric features in HUS cases.

Method. A retrospective, single-centre, descriptive study was conducted, in which we reviewed clinical records of HUS subjects referred for observation to Weskoppies Hospital from December 2005 to January 2011. We reviewed socio-demographic and psychiatric information.

Results. Nine cases were reviewed. The median age of the subjects was 29 years and 7 subjects were male. Five cases involved family members. Cases involving couples demonstrated male subjects and cases involving filicide demonstrated female subjects. Only 1 case involved the use of a firearm. At the time of the incident, 4 of the cases had no psychiatric diagnosis, but did have notable interpersonal difficulties. Psychotic disorders were diagnosed in 3 subjects, a depressive disorder in 1 subject and a depressive and anxiety disorder in 1 subject.

Conclusion. Subjects commonly used less lethal methods than shooting. The high rate of psychiatric disorders diagnosed is in keeping with court referrals occurring when a mental illness is suspected. Some cases may require specialised probing before psychosis becomes apparent. Identification of psychosocial stressors and failure of coping mechanisms during periods of strife within an intimate relationship may be a focus of future research in homicide-suicide cases. Separation should possibly be investigated as an independent factor which promotes the interpersonal difficulty associated with homicide-suicide.

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People in South Africa who allegedly commit homicide and subsequently attempt suicide without success (HUS) are often referred for psychiatric observation in terms of sections 77, 78 and 79 of the Criminal Procedure

Act (Act 51 of 1977; as amended in 1998). They serve as a relatively unique study population that may inform on these events, for which we could not find previous studies published in the medical literature.

In this context, the unsuccessful suicide creates an opportunity to conduct a psychiatric evaluation of the individuals in person, as opposed to cases of completed suicide. Furthermore, these evaluations of the subjects' physical and mental status are routinely performed during a period of forensic psychiatric observation.

Homicide-suicide (HS), i.e. homicide followed by completed suicide, is relatively uncommon globally, averaging 0.2 - 0.3 per 100 000 persons.^[1] The annual incidence of HS events in the Pretoria region of the Gauteng Province of South Africa, from 1 January 1997 to 31 October 2001, averaged 1 per 100 000.^[2] While these events are rare, they remain devastating to those closely associated with them. The 9th revision of the *International Statistical Classification of Diseases* (ICD-9) defines HS as a homicide committed by a person who subsequently commits suicide within 1 week of the homicide.^[3]

The interval of 1 week between homicide and suicide is important, distinguishing the group in which suicide appears to be linked with a prior homicide from a group of violent persons with a history of assaults and murders who eventually commit suicide. A close temporal proximity between homicide and suicide – most of the time a few minutes or few hours – demonstrates that neither act is incidental to the other. Many such events were carefully planned as a unified 2-stage sequential act.^[4]

The available literature often focuses on the epidemiology and socio-demographics of HS, with a relative paucity of information related to psychiatric features such as mental state findings and specific psychiatric diagnoses as they relate to the course of events leading up to the HS.

This study aims to describe psychiatric features in HUS cases referred to Weskoppies Hospital for observation, and to serve as a pilot study to pave the way for research into completed HS cases. This was called for previously following a psychiatric study of family murders in SA.^[5]

Method

A retrospective, descriptive study was conducted at Weskoppies Psychiatric Hospital in Gauteng. Clinical records of HUS cases, where the alleged perpetrator was referred for observation in terms of sections 77, 78 and 79 of the Criminal Procedure Act (No. 51 of 1977 and amendment 1998), were obtained from the administrative archives for review.^[3,6,7] These comprise all recorded cases from December 2005 to January 2011, in which alleged perpetrators attempted suicide as part of a HUS. Exclusion criteria comprised: (i) threatened suicide without an attempt, as well as (ii) a suicide attempt following more than a week after the homicide.

These subjects underwent several assessments of their mental status during a period of observation. Evaluations were conducted by a multidisciplinary team and included repeated psychiatric interviews, physical examinations, psychosocial reports and access to the court proceeding reports. In some cases psychometric tests and special investigations were done. The data were sourced directly from observation records of the subjects.

Socio-demographic information about the study subjects and victims was collected if available, and included gender, age, employment history, marital status, relationship between the subject and victim, criminal record, methods used during the HUS (including anatomical sites involved), the time of committing the HUS, the day on which the HUS was committed, the season during which the HUS was committed or reported, the number of victims, the number of children, and the place at which the HUS occurred.

Psychiatric information was obtained regarding the history of psychiatric symptoms and of psychiatric illness and treatment, as reported by the family, the subject or the hospital involved with treatment. Information pertaining to the history of psychiatric symptoms during the week prior to the offence and at the time of the offence, psychiatric symptoms observed or reported during the observation period, as well as diagnoses made at the end of the observation period were also obtained.

This study was approved by the Faculty Health Sciences Research Ethics Committee of the University of Pretoria. Permission to access the records held by the Weskoppies Hospital was obtained from the hospital's Chief Executive Officer. The identity of alleged perpetrators was kept confidential throughout the study, even though most of the information was in the public domain.

Results

Nine subjects were included in the study. Seven were males and 2 were females. Their ages at the time of the alleged offence ranged from 20 to 48 years, with an average age of 33.4 years and median age of 29 years. At the time of the alleged crime, 4 of the subjects were married, 2 were divorced, 2 were single and 1 was separated. Secondary school education was the highest level of education for 7 of the subjects, while 1 subject had received tertiary education and another only primary school education. Four of the subjects were formally employed at the time of the HUS.

One case involved the use of a firearm, both for the homicide and the suicide attempt. Three of the homicides involved stabbing; 1 case involved poisoning; 1 case involved blunt trauma; 1 case involved strangulation; 1 case involved medication overdose and suffocation; and another case involved suffocation. In addition to the use of a firearm in 1 attempted suicide, 3 cases involved hanging, 2 cases involved medication overdose, 2 cases involved poisoning and 1 case stabbing. In 4 cases the homicide methods were similar to or the same as the method used for the attempted suicide.

The subjects were all charged with murder, with 2 cases involving 2 murder victims each. One of the latter cases was a filicide case with the subject accused of murdering 2 of her children. In the other case the subject was accused of murdering his wife and child. Five cases involved family members. Four cases involved intimate partnerships, with or without marriage. All the cases involving couples demonstrated male subjects. Those cases involving female subjects comprised maternal filicide-suicide.

Seven of the subjects were involved in previous criminal activity, but had no criminal records. There were no data related to the existence of criminal records for 2 of the subjects. No data on blood alcohol concentrations of the subjects could be obtained. One subject admitted to having consumed a 'quart' of beer and an unspecified amount of wine, and another was reported as being 'drunk'.

Only 1 of the subjects was a known psychiatric patient receiving continuous psychiatric medication. Two of the subjects had received previous psychiatric treatment. Four of the 9 cases had no psychiatric diagnosis at the time of the incident and were assessed as being accountable (capable of appreciating the wrongfulness of the act and of acting in accordance with the appreciation of wrongfulness) and triable (Table 1). One of these cases developed a DSM IV-TR diagnosis, namely adjustment disorder with depressed mood, subsequent to the incident (Table 1).^[8]

Five of the 9 cases had at least 1 DSM IV-TR diagnosis at the time of the incident.^[8] Three of these cases suffered from a psychotic disorder, 1 from a depressive disorder and 1 from a depressive and anxiety disorder (Table 1). One of these cases was assessed as being unaccountable (incapable of appreciating the wrongfulness of the act, and/or of acting in accordance with the appreciation of wrongfulness) and not triable, while 4 of these cases were assessed as having diminished accountability but still being triable (Table 1).

One of the depressive disorder cases involved a female subject (attempted maternal filicide-suicide) with a DSM-IV major depressive

disorder, severe.^[8] The other case with a depressive disorder was a male subject with an irritable mood.

Subjects diagnosed with psychotic disorders included a known patient with schizophrenia. This subject reported being 'confused, seeing a ghost, asking security guards to shoot it' at the time of the homicide. The week before the HUS the subject also reported that 'some people wanted to kill them (him and his girlfriend)'. Another subject diagnosed with a psychotic disorder not otherwise specified quarrelled with neighbours during the week before the HUS. The neighbours reportedly threatened the subject with forced removal of his shack. The subject demonstrated violent behaviour towards family members and 'spoke alone' during the week before to the HUS. The records for the aforementioned 2 subjects suggest that psychosis was present at the time of the HUS. The subject diagnosed with a psychotic disorder due to epilepsy was not reported to be psychotic at the time of the HUS or during the week before the incident.

Three out of the 9 cases were found to have no psychiatric diagnosis during the observation period. In 1 case a DSM-IV-TR diagnosis of adjustment disorder with depressed mood, which developed after the HUS, was made. The case involved attempted maternal filicide-suicide.^[8] Partner estrangement was common to all 4 of these cases: in 2 cases separation between the victim and subject had occurred, and in the other 2 one partner had worked away from home for a substantial amount of time.

Discussion

The study population comprised HUS cases. Given the lack of data related to HUS, research data treating HS (i.e. with completed suicides) were used in this study for comparative purposes. The inclusion and exclusion criteria included critical elements of the ICD-9 definition of HS and thus support the comparisons.^[3]

According to various researchers, HS perpetrators are typically older than homicide perpetrators and male and, in 75 - 90% of cases they kill a current or ex-spouse or intimate partner.^[9-13] In a South African study by Jena *et al.*, spanning a 5-year period and involving 46 HS cases, 45 perpetrators were male and 1 female. The mean age of the perpetrators was 35.1 years.^[2] Our study reflects similar data: the average age of subjects was 33.4 years; 78% (7) subjects were male; and 67% (6) cases involved the alleged homicide of a current or ex-spouse or an intimate partner.^[2,9-13]

According to the literature, female perpetrators most frequently kill their children (maternal filicide-suicide) and rarely kill adult victims.^[4,9,10] In this study, both female subjects killed 1 or more of their children.

The most frequently reported reason for homicide in a HS setting is the breakdown of an intimate relationship.^[11,14] In this HUS study this was found in all cases ($n=6$) involving the alleged homicide of a current or ex-spouse or intimate partner. A deluded 'altruism' appears to be the primary motive in maternal filicide-suicide,^[8] and

Table 1. Findings in terms of sections 77 and/or 78 of the Criminal Procedure Act 51 of 1977^[6,7]

Findings	Frequency (N=9)	Diagnosis/es*
Unaccountable and not triable	1	Psychotic disorder not otherwise specified [†]
Accountable and triable	4	3 cases had no psychiatric diagnosis; adjustment disorder with depressed mood (diagnosed subsequent to incident)
Unaccountable but triable	0	
Diminished accountability and triable	4	Schizophrenia; major depressive disorder; major depressive disorder/post-traumatic stress disorder; psychotic disorder due to epilepsy
Accountable but not triable	0	
Unaccountable	0	
Diminished accountability and not triable	0	

* DSM IV-TR diagnosis/es present at time of incident^[8]

[†] Included general medical condition and other DSM IV-TR diagnosis exclusion^[8]

altruistic reasons were found in both maternal filicide-suicide cases in this study. The mothers reported that they were trying to save their children from suffering caused by the deprivation of basic needs.

Shooting is the most frequently used method of both homicide and suicide in most studies, followed by asphyxia and then stabbing.^[11,13] Beating and jumping or pushing from a height and poisoning are also occasionally used.^[4]

In a South African context, Jena *et al.*^[2] found that shooting accounted for 96% of HS cases. In 2% the use of a blunt object and strangulation occurred. This study reported that shooting accounted for 95.7% of the perpetrators' method of suicide and hanging for the remaining 4.3%. The low rate ($n=1$) of shooting found in our study, and the method's relatively high level of lethality, could relate to the uncompleted suicides studied in HUS, as opposed to HS involving completed suicides. It could be hypothesised that the use of a firearm facilitates choosing the same method to commit homicide and suicide, as well as completion of suicide. Further research is required to support these hypotheses.

HS studies found that the perpetrator generally uses the same method to commit suicide as was used in the homicide(s), while in this study, only 4 cases demonstrated this.^[4] In the case in which shooting was the method of homicide, it was the same method used for the unsuccessful suicide.

Depression is a common finding in previous research involving successful HS, involving 20% of the perpetrators, but this is not given much elaboration.^[4] Our study demonstrated a similar finding, with 2 subjects found to be depressed at the time of the HUS (Table 1).^[8] Furthermore, these alleged perpetrators were assessed as having diminished accountability while still being triable.

Three of the cases in our study had psychotic disorders and felt threatened, regardless of whether these threats were actual or delusional in nature. While psychotic disorders are, reportedly, infrequently associated with HS,^[7] the opposite holds true in this study. It seems that in some cases more specialised probing may be required before psychosis becomes apparent. Collateral informants may not have the necessary insight into the perpetrator's mental state to offer useful reports, especially pertaining to delusional states around the time of the HS. Two of the alleged perpetrators with a psychotic disorder were assessed as having diminished accountability but were triable. The remaining perpetrator with a psychotic disorder at the time of the incident was assessed as being unaccountable and not triable (Table 1).

This study found 5 subjects had at least 1 DSM IV-TR diagnosis at the time of the incident. This high rate of psychiatric disorders is in keeping with the court's need to refer the subjects for forensic observation, in keeping with section 77, 78 and 79 of the Criminal

Procedure Act (Act 51 of 1977; amended in 1998) (Table 1).^[6,7]

In 4 of the 9 cases no DSM IV-TR diagnosis was present at the time of the incident. However, it was clear that interpersonal difficulty had existed between the subjects and their partners at the time of the incident and in the period leading up to it. In all 4 cases the subject and victim were separated from each other for substantial amounts of time. Identification of psychosocial resources and related failure of coping mechanisms during periods of strife within an intimate relationship could be a focus of future research into perpetrators of HS, specifically in cases where no psychiatric disorder was present at the time of the incident. While all 4 cases in this category suggested that the separation of the subject and the victim might have been merely incidental, this finding may be explored further as an independent factor exacerbating the interpersonal difficulty associated with HS.

This study's retrospective nature is a limitation, in so far as the detail level of reporting in the records varied across the subjects. This made inter-subject comparisons difficult at times. While we report here on only 9 cases, it should be noted that we could not find any published medical literature reporting on HUS (as distinct from HS). A possible strength of this study is the opportunity it presents to analyse data reported directly by alleged perpetrators of HUS, as opposed to data collected indirectly in HS cases where the alleged perpetrator successfully committed suicide. Although this is only a pilot study, its findings could help direct future research into completed HS cases. Since the findings may be site- and period-specific, collaborative work by multiple sites may serve to further research.

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