

FACTORS ASSOCIATED WITH INTENTIONAL SELF-HARMING BEHAVIOURS AMONG PATIENTS ADMITTED TO AN EKURHULENI DISTRICT HOSPITAL

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A submissible article as research report submitted to the Faculty of Health Sciences,
University of the Witwatersrand, in partial fulfilment of the requirements for the degree
of
Master of Medicine in Family Medicine (M. Med in Fam. Med)

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Johannesburg, 2021

Declaration

I, Dr Elsie MUGISHA, student number 300023, hereby declare that this research is my own unaided work, except where due acknowledgement for assistance received has been made. It is being submitted for the degree of Master of Family Medicine at the University of the Witwatersrand, Johannesburg. It has not been submitted previously for any other degree or examination at this or any other University.

Signed:



Dr E. MUGISHA
August 2021

(Signature of candidate)

Date:

Dedication

To my Heavenly Father for giving me the strength and courage to complete this research report.

To my wonderful husband Matthew Mugisha thank you for your endless love, comfort and counsel.

In loving memory of my late grandmother Leah Kibuuka who never attended school but through her sacrifices inspired me to persevere.

To my loving parents Prof Paul Kibuuka and Mrs Ruth Kibuuka, thank you, for your unconditional love, support and encouragement

To my mother-in-law Dr Stella Mugisha, thank you for the constant care, prayers and reassurance.

To my siblings Michelle Kibuuka and John-Paul Kibuuka, thank you for your friendship and thoughtfulness.

Acknowledgements

Prof H.S Schoeman: Statistical analysis.

Prof S Moosa: Supervision, support and guidance for the completion of the research report

Dr S Agbo: Supervision during the protocol development and data collection

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Abstract

Background: The single most important predictor of death by suicide is having engaged in one or more acts of self-harming behaviours. Annually, 7 582 people in South Africa die from self-harm; with as many as 151 646 suicide attempts.

Aim: The aim of this study was to explore the factors associated with intentional self-harming behaviour among patients admitted to a district hospital.

Methods: This was a descriptive cross-sectional study of all patients' medical records admitted for intentional self-harm between June 2016 and June 2018 at Bertha Gxowa Hospital, a district hospital in Ekurhuleni Health District which provides level one health care service to Germiston. A modified version of the World Health Organization (WHO) Practice Manual data collection tool was used. The data recorded on collection sheets was then entered into Microsoft Excel and analysed using SAS®.

Results: One hundred and thirty-six patient records were reviewed. Patients prone to self-harming behaviours were mostly black single females aged 14-24 years who were unemployed but did not use alcohol. The method most commonly used was self-poisoning (93,4%). The commonest reason for attempt was interpersonal conflict (74,3%). Statistically significant factors associated with self-harming behaviours were employment status, alcohol use or not as well as history of attempts

Conclusion: Health care workers working in primary and mental healthcare settings should have a higher index of suspicion for young black single female patients especially with a history of unemployment, no alcohol use and first self-harm attempt. Besides being a medical problem, this should be a societal problem.

Keywords: Self-harm, Behaviour, Methods, Reason, Sociodemographics, Clinical profile, Associated factors

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Nomenclature

AIDS:	Acquired immunodeficiency syndrome
HIV:	Human immunodeficiency virus
MDD:	Major depression disorder
NSSI:	Non-suicidal self-injury
SSI:	Suicidal self-injury
WHO :	World Health Organisation

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An article submitted according to the style guide and requirements of the **African Journal of Primary Health Care & Family Medicine** (PHCFM). An appropriate title was selected and an application for title change will be submitted in conjunction with the examination process-

Introduction

Social value

Intentional self-harm may be defined as injurious or harmful behaviour that is self-directed and purposely results in injury or the potential for injury to oneself, often as a reaction to feelings of extreme psychological distress or emotional pain¹. It includes cutting, burning or hitting oneself; bingeing or starvation, abuse of drugs or alcohol; and overdosing on prescription medications²⁻⁴. This risky behaviour can have a fatal outcome⁵. Intentional self-harming behaviour encompasses parasuicide and attempted suicidal behaviours; terminology that are often used interchangeably in literature¹. Parasuicide is referred to as non-suicidal self-injury (NSSI) and attempted suicide is suicidal self-injury (SSI)⁵ but often in a complex and overlapping relationship^{14,17}.

Scientific value

The global burden of intentional self-harm has increased by 24% and it was found to be the 18th leading contributor worldwide to disease burden²⁴. These numbers are predicted to increase over the coming decades⁶. With Africa being the largest and second populated continent in the world, there is scarcity of information on self-harming behaviours. A systematic review reported that data on self-harming behaviours were only available from 11 countries on the African continent⁶. Self-harming behaviour incidence rates varied from 0.7% in Nigeria to 6.0% in Liberia while South African estimates ranged from 2.9%-3.4%. Reported records indicate that self-harming behaviours were recorded among the top 10 causes of deaths in many countries⁹. It has been assessed that up to 7 582, people in South Africa die from self-harm; with as many as 151 646 suicide attempts annually²⁴

An international metanalysis of the rates of suicide for psychiatric illnesses revealed an increased risk of suicide among patients with eating disorders. The risk of suicide is seven times higher for those with personality disorder and post-partum psychiatric disorders. The risk of suicide is increased especially during the first year and the lifetime risk of suicide for those individuals who have schizophrenia is 10%. Patients with cancer have twice the suicide rate compared to the general population and it is five times more common in those with epilepsy. Studies have also shown increased rates of suicidal ideation in patients with chronic pain and human immunodeficiency virus (HIV)/ acquired immunodeficiency syndrome

(AIDS)⁵. A study in Limpopo in 2004 revealed that there is a higher risk for suicide attempts amongst individuals who are younger, female and less educated¹³. This is in agreement with studies done in Africa where more females attempted suicide compared to males⁵. A study from Limpopo in 2014 suggests that the single most important predictor of death by suicide is having engaged in one or more acts of self-harming behaviours.²²

Naidoo and Schlebusch⁹ showed that a wide variety of methods are used by the people committing suicide, the methods used are dependent on different factors such as, knowledge of lethality, availability and accessibility to the method by the patient. It showed that hanging and shooting are the preferred methods, trailed by self-poisoning with agents such as insecticides, drug overdoses, deliberately inhaling toxic gasses and setting fire to oneself.¹⁰

Conceptual framework

A study on household factors associated with self-harm in Johannesburg in 2016 revealed potential risk factors or reasons for self-harming behaviours include experiencing judgement or feeling isolated in society, abuse or exposure to violence²⁴. This is in correlation with the international metanalysis showing that the reasons identified included elevated numbers of negative life events, feelings of guilt or shame, feelings of loneliness sexual problems, childhood abuse/trauma, poor self-esteem parents with mental health problems and a family history suicidal behaviour⁵.

Aims and objectives

There has been no study within Ekurhuleni, a highly urbanised centre of South Africa. The aim of this study was to explore the factors associated with intentional self-harming behaviour among patients admitted to a district hospital. To fulfil this aim, the following were the objectives of the study: Explore the socio-demographic and clinical profile of patients admitted with intentional self-harming behaviour, as well as determine the methods used, the reasons documented and the associations between all these and intentional self-harming behaviour.

Research methods

Study design

This was a descriptive cross-sectional record review of patients admitted for intentional self-harm between June 2016 and June 2018 at Bertha Gxowa Hospital.

Setting

The Bertha Gxowa Hospital is the only district hospital in the Ekurhuleni Health District in Gauteng Province. The hospital has 230 approved beds. It provides level one health care service to Germiston - a town with a population of 394,2533 and surrounding communities. Ekurhuleni Health District is one of the five health districts in Gauteng Province. There is currently no documented data with regards to intentional self-harming behaviours within the local area.

Study population

The study population included all patients who were admitted with intentional self-harming behaviour to the Bertha Gxowa Hospital during June 2016 and June 2018. The details of patients were identified from the hospital admission record archives with the assistance of the hospital records clerk. A total of 207 patients admitted to the adult medical ward of the hospital were identified with the diagnostic label of parasuicide or attempted suicide. However, only 136 patient's folders were available in the in-patient filing cabinets of the hospital and included in the study. The data of 136 patient files from the admissions register were examined to capture socio-demographics attributes, history of attempts, social habits, clinical profile, methods used and the documented reason for the attempt for each patient. The patient folders with inadequate data and those with completely illegible records were excluded from the study as decided by the researcher and reviewed by the supervisor to avoid bias.

Data collection

Data collection was done using a modified data collection tool from the World Health Organization (WHO) Practice Manual, a tool used for establishing and maintaining surveillance systems for suicide attempts and self-harm⁶. The modified tool collected the following data sets: diagnosis, socio-demographic aspects, clinical profile, self-harming methods, and documented reasons. The researcher recorded data on data collection sheets. Confidentiality was maintained with a study number allocated to each patient record in a separate coding sheet for the patients file number. The data was then entered into Microsoft Excel software, saved, password protected and used for analysis.

Data analysis

Descriptive and inferential statistical analysis was done using Statistical Analysis Software®. Fisher's exact test was utilised to perform associations between intentional self harming behaviours among patients admitted to an Ekurhuleni district hospital. A p-value of < 0.05 was considered to be statistically significant.

Ethical considerations

Permission to perform the research was granted by the management at the Bertha Gxowa Hospital and Ekurhuleni Health District (GP_201903_028). Ethical clearance was given from the Health Research and Ethics Committee of the University of the Witwatersrand, Johannesburg (M190104). Confidentiality was preserved by coding each patient record with a special number.

Results

Results are presented as socio-demographics attributes, history of attempts, social habits, clinical profile, methods used and the documented reason for the attempt for each patient.

Sociodemographic attributes of patients

Out of 136 patient records, 50.7% of the study sample were female while 49.3% were male. Black patients comprised the majority (75%). This was trailed by white, coloured and Indian patients. In terms of gender and race, black women (79,7%) and black men (70,2%) dominated. With regards to age and gender - a majority of patients were women in the age range of 14-24 years (63,9%). Majority (93,4%) of the patients were single, with 5.2% of the patients married, and the rest widowed or divorced. Furthermore, only 20,6% of the patients were employed. Data on education and religion was incomplete and had to be left out of the study. Detailed socio-demographic data is laid out in Table 1.

Table 1: Socio-demographic data of patients

	Men n=67(%)		Women n=69(%)		Total n=136(%)	
Age groups n (%)						
14–24	25	(37,3)	44	(63,9)	69	(50,7)
25–34	23	(34,3)	15	(21,7)	38	(27,9)
35–44	14	(20,9)	5	(7,3)	19	(14,0)
>45	5	(7,5)	5	(7,3)	10	(7,4)
Mean	30		25.6		27.7	
Median	27		24		24	
Mode	22		24		24	
Race						
Black	47	(70,2)	55	(79,7)	102	(75,0)
White	18	(26,8)	10	(14,5)	28	(20,6)
Coloured	2	(3,0)	3	(4,4)	5	(3,7)
Indian	0	(0,0)	1	(1,4)	1	(0,7)
Marital status						
Single	63	(94,0)	64	(92,7)	127	(93,4)
Married	4	(6,0)	3	(4,3)	7	(5,2)
Widowed	0	(0,0)	1	(1,5)	1	(0,7)
Divorced	0	(0,0)	1	(1,5)	1	(0,7)
Employment						
Employed	20	(29,8)	8	(11,6)	28	(20,6)
Unemployed	47	(70,2)	61	(88,4)	108	(79,4)

Documented social habits of patient sample

The majority of patients (78,7%) did not consume alcohol as per documented records. In terms of gender distribution this constituted 68,7% of men and 88,4% of women. (Table 2).

Table 2: Documented social habits of patient sample

Description	Men = n (%)	Women =n (%)
Smoker Yes	14 (21)	6 (9)
Smoker No	53 (79)	63 (91)
Total	67 (100)	69 (100)
Cannabis	3 (37,5)	2 (33,3)
Cannabis and Opioid	0 (0,0)	2 (33,3)
Opioid	5 (62,5)	2 (33,4)
Total	8 (100)	2 (100)
Alcohol No	46 (68,7)	61(88,4)
Alcohol Yes	21 (31,3)	8 (11,6)
Total	67 (100)	69 (100)

Recorded clinical classification of patients

A majority of the patients diagnosed with attempted suicide (65.2%) were women, followed by men (55,2%). Figure 1 shows an overview of the diagnosis recorded on files according to gender.

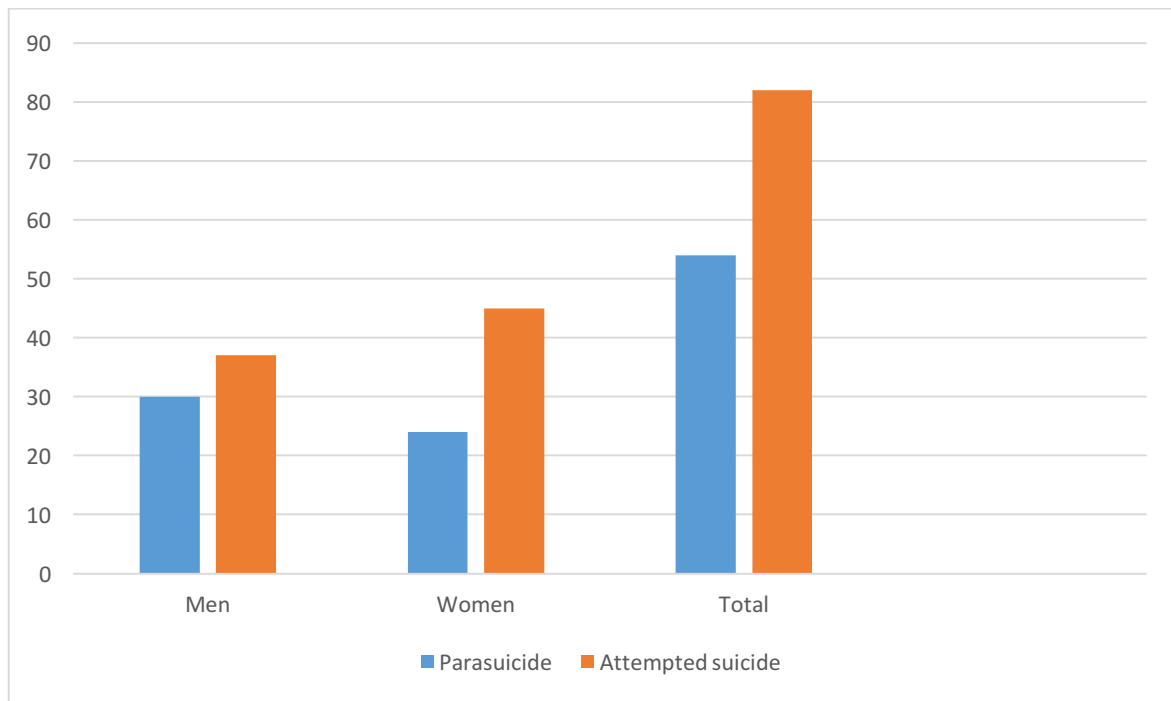


Figure 1: Recorded clinical classification of patients

History of attempts

Most patients were documented as a first attempt (79,4%) of parasuicide/attempted suicide. Most of these were women (82.6%) who attempted parasuicide/suicide for the first time with the rest of the women (17,4%) having previous attempts. This was then followed by men (76.1%) who attempted parasuicide/suicide for the first time and 23.9% of men who had previous parasuicide/attempted suicide. (Figure 2)

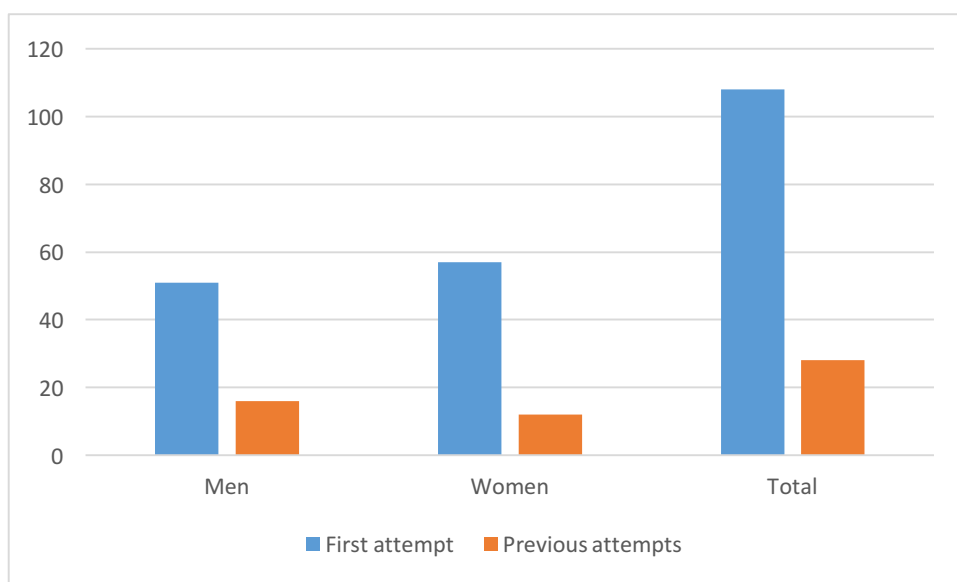


Figure 2: History of attempts

Clinical profile

With regard to the psychiatric clinical profile, (16 %) patients were known to have had major depression disorder (MDD): women (64,2%) and men (58,3%). This was followed by 30,8% of the patients with newly diagnosed MDD, a personality disorder (3,8%) and schizophrenia (3.8%). With regard to the medical clinical profile, patients had the following: HIV/AIDS (41,7%), other illnesses [such as diabetes mellitus, hypertension and thyroid disease (33,3%)], epilepsy (12,5%), chronic pain (4,2%), both epilepsy and Chronic pain (4,2%).

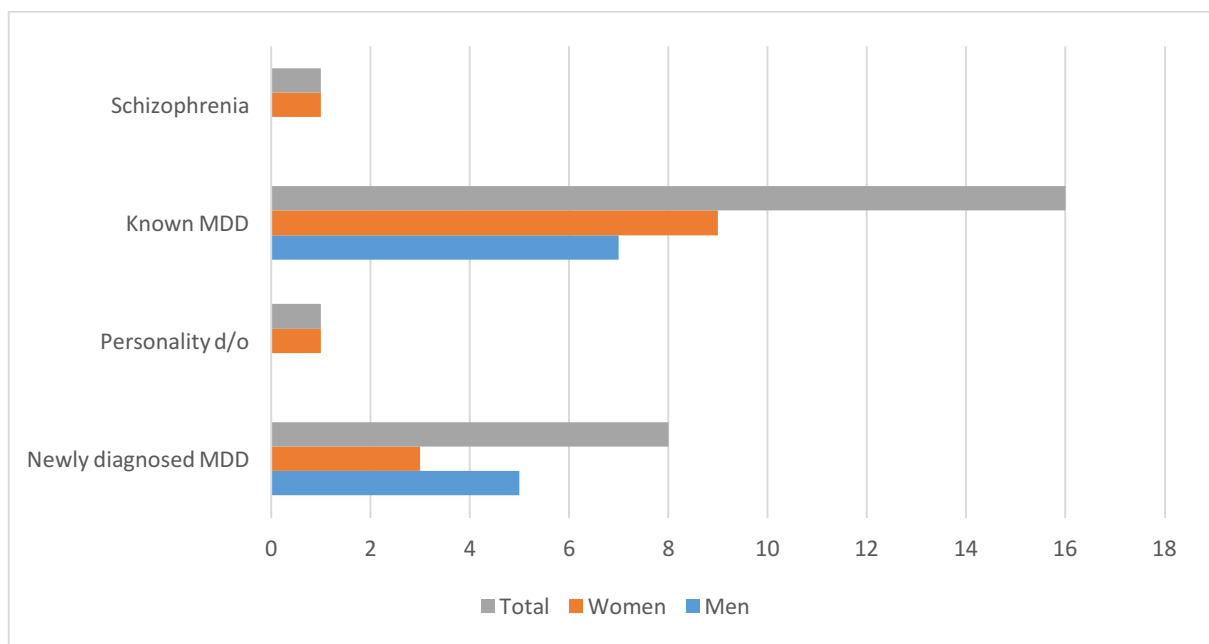


Figure 3: Documented psychiatric clinical profile

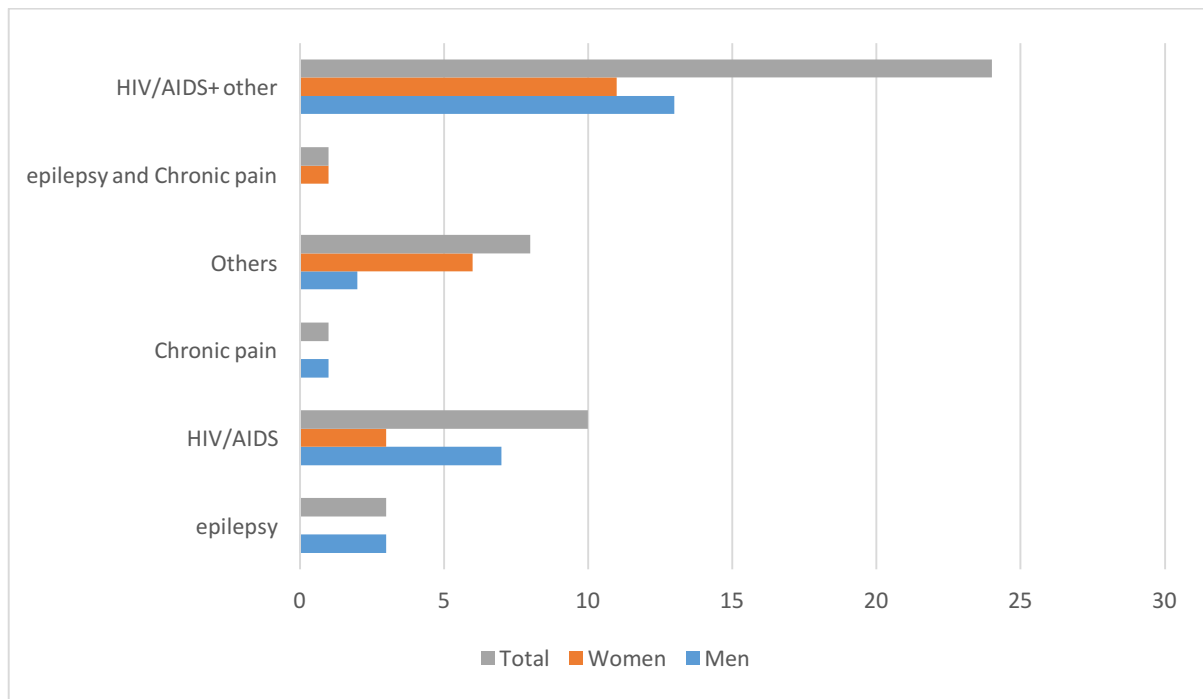


Figure 4: Documented medical profile

Methods used and documented reasons for attempts

In respect of the methods used, 93,4% of the patients used self-poisoning, men and women comprising 88,1% and 98,6% respectively. This was followed by blunt or sharp objects (3,7%), hanging (0,7%), and other methods such as drinking crushed glass (1,4%) and self-poisoning with hanging (0,7%). (Table 3) The methods mentioned were accompanied by the following documented reasons as listed in Table 3 some patients: battled with childhood adversity (4,4%); personal loss of loved ones (2,9%); interpersonal conflict (74,3%) comprising 68,7% and 79,7% for men and women respectively; financial difficulties (7,4%), experience of crime or trauma or abuse (2,2%), interpersonal conflict and financial difficulty (2,2%); financial difficulty and experience of crime trauma or abuse (0,7%) while the rest had other reasons (5,9%). (Table 3)

Table 3: Methods used and documented reasons for attempts

	Men		Women		Total	
	n=67(%)		n=69(%)		n=136(%)	
Methods Used n (%)						
Self-poisoning	59	(88,1)	68	(98,5)	127	(93,4)
Hanging	1	(1,5)	0	(0,0)	1	(0,7)

Blunt or sharp object	5	(7,5)	0	(0,0)	5	(3,7)
Other methods (drank crushed glass)	2	(2,9)	0	(0,0)	2	(1,5)
Self-poisoning and blunt or sharp object	0	(0,0)	1	(1,5)	1	(0,7)
Reasons for Attempt						
Childhood adversity	5	(7,5)	1	(1,4)	6	(4,4)
Personal loss of loved ones	3	(4,4)	1	(1,4)	4	(2,9)
Interpersonal conflict	46	(68,6)	55	(79,7)	101	(74,3)
Financial difficulty	5	(7,5)	5	(7,2)	10	(7,4)
Experience of crime trauma or abuse	1	(1,5)	2	(3,0)	3	(2,2)
Other reasons	5	(7,5)	3	(4,3)	8	(5,9)
Interpersonal conflict and financial difficulty	1	(1,5)	2	(3,0)	3	(2,2)
Financial difficulty and experience of crime trauma or abuse	1	(1,5)	0	(0,0)	1	(0,7)

Factors associated with self-harming behaviours

Factors statistically and significantly related to self-harming behaviours were: employment status (p value 0,030), alcohol use or not (p value 0,002) as well as history of attempts (p value <0,0001). There were no other variables amongst demographics, clinical profile, methods used and documented reasons that had statistical significance.

Table 4 Factors associated with self-harming behaviours

Parameter	Diagnosis Attempted (%)	Parasuicide (%)	P value
n	82	54	
Mean (±)	27,7 (±10,9)	28,1 (±9,76)	0,835
Median IQR	24 (21-33)	26 (21-33)	0,631
Min/min	14/74	15/61	
Male	37 (45,1)	30 (55,6)	0,293

Female	45 (54.9)	24 (44,4)	
Total	82 (100)	54 (100)	
black	64 (78.1)	38 (70.4)	0,275
coloured	4 (4,9)	1 (1.9)	
Indian	1 (1,2)	0 (0,0)	
white	13 (15.8)	15 (27.7)	
Total	82 (100)	54 (100)	
Divorced	1 (1.2)	0 (0,0)	0.797
Married	3 (3.7)	4 (7.4)	
Single	77 (93.9)	50 (92.6)	
Widowed	1 (1.2)	0 (0,0)	
Total	82 (100)	54 (100)	
Employed	22 (26.8)	6 (11.1)	0.030*
Unemployed	60 (73,2)	48 (88.9)	
Total	82 (100)	54(100)	
Smoker	8 (100)	12 (100)	0,405
Total	8 (100)	12 (100)	
Cannabis	2 (50)	3 (30)	
Cannabis and opioid	1 (25)	1 (10)	
Opioid	1 (25)	6 (60)	
Total	4	10	
Alcohol yes	72 (87.8)	35 (64,8)	0.002*
Alcohol no	10 (12,2)	19 (35.2)	
Total	82 (100)	54 (100)	
New MDD	5 (41,7)	11 (78.6)	0,066
Known MDD	6 (50,0)	2 (14.3)	
Personality	1 (8,3)	0 (0,0)	
Schizophrenia	0 (0,0)	1 (7.1)	
Total	12 (100)	14 (100)	
Chronic pain	1 (5,9)	0 (0,0)	0,195
epilepsy	1 (5,9)	0 (0.0)	
Epilepsy and chronic pain	1 (5,9)	2 (28.6)	
HIV/AIDs	9 (52.9)	1 (14,3)	
HIV/AIDS and other	1 (5,9)	0 (0,0)	
Other	4 (23.5)	4 (57,1)	
Total	17 (100)	7 (100)	
First attempt	76 (92.7)	32 (60.4)	<.0001*
Previous attempts	6 (7.3)	21 (39.6)	
Total	82 (100)	53 (100)	
	1 (1,2)	5 (9,3)	0,182
Childhood adversity			
Crime/trauma	3 (3,7)	0 (0,0)	

Financial difficulties	5 (6,1)	5 (9,3)	
Financial difficulties and crime/trauma	1 (1,2)	0 (0,0)	
Interpersonal conflict	64 (78,1)	37 (68,5)	
Interpersonal conflict and financial difficulties	1 (1,2)	2 (3,7)	
Personal loss of loved ones	3 (3,7)	1 (1,8)	
Other	4 (4,8)	4 (7,4)	
Total	82 (100)	54 (100)	
Blunt or sharp object	1 (1,2)	4 (7,4)	0,088
Hanging	1 (1,2)	0 (0,0)	
Other	2 (2,4)	0 (0,0)	
Poison	78 (95,1)	49 (90,7)	
Poison and blunt or sharp object	0 (0,0)	1 (1,9)	
Total	82 (100)	54 (100)	

*statistically significant

Discussion

Key findings

The aim of this study was to explore the factors associated with intentional self-harming behaviour among patients admitted to an Ekurhuleni district hospital. Therefore, this study showed that the most common characteristics of patients records reviewed was that of black single unemployed females aged between 14-24 years, who did not consume alcohol. This is in agreement with studies done in Limpopo in 2013 where more females attempted suicide compared to males. The three factors found to be associated with self-harming behaviours were: employment status, history of attempts and alcohol use this is in correlation with the study done in Johannesburg in 2016²⁴.

Discussion of key findings

A study done in Spain revealed similar findings with regards to the gender of patients, where females are more prone to self-harming behaviours. They found that 58.4% of suicide attempts were committed by women. The age group of patients in this study were younger, in the age bracket of 14-24, which is in alignment with many other studies that show a majority of suicide attempters are at a younger age (< 40 years) ^{6,9,10,12}. With regards to social habits the majority

of patients in this study did not consume alcohol. This differs from the study in Durban in 2013 where a substantial number of patients smoked cigarettes and consumed alcohol.⁹

Most patients in this study sample did not have chronic illnesses or any psychiatric conditions. The clinical profile of patients in terms of psychiatric illness showed insignificant findings in this study with regard to self-harming behaviours. This does not correlate with the study done in Johannesburg in 2016²⁴ which suggested that experiencing a chronic illness not only increases the risk of self-harm in the affected patient but could also raises the risk in other household members. This difference could be attributed to the mostly younger sample in this study, as younger patients are unlikely to suffer from chronic illnesses

The most prevalent method used in this study sample was self-poisoning, though not poison-type specific, as it was not indicated by the records. The finding correlates with the Africa-wide study⁶ that suggested that pesticide poisoning is a prominent method in Africa. This could be due to easy accessibility as compared to other methods. These findings differ from Naidoo and Schlebusch's⁹ study where hanging surfaced as the leading method in the majority of suicide sufferers, all racial groups, both sexes and all ages, excluding the over-65-year age group.

This study showed that the commonest documented reason for self-harm was interpersonal conflict. These findings differ from Obida, Clark and Govenders⁵ qualitative study which found that the commonest reason for suicide attempts was poverty and financial difficulties. However, the Durban study in 2013 found that interpersonal tribulations, poor family functioning and occurrence of previous attempts respectively may be a contributor in precipitating the impulsive suicidal behavioural action. The similarities between this study and the Durban study could be attributed to the urban setting of where the studies were done as opposed to the rural setting of the Limpopo study.

Implications

The majority of patients in this study had their first attempt of self-harming behaviour, this being the opposite of South African studies which show that majority of patients being both genders have had previous attempts of self-harm^{9-10,13}. This difference may be credited to the much younger sample of patients in this study starting at the tender age of 14 years old compared to the South African studies which show the majority of youth committing self

harm are between 25-44^{9,10,13}.

Strengths and Limitations

Whilst this study is the first in Ekurhuleni that looks at documented factors relating to patients of self-harming behaviour the presented data is of one district hospital and so cannot be extrapolated to the rest of the district. The distinction between parasuicide and attempted suicide may have been confused as this is reliant on the clinician. The Failure to document some information in an emergency setting can also be seen as a limitation.

Conclusions

As human beings are made up of many complex aspects so are their behaviours. This study was able to point out important documented sociodemographic and clinical aspects of patients who are prone to self-harming behaviours. Furthermore, it was able to distinguish documented factors between attempted suicide and parasuicide which differs from previous studies on self-harm. As more studies show a shift in change towards the younger population committing self harm, including this one, should this not be an alarm on a human level about the challenges and outcry for help amongst this age group, who is yet to experience more challenges in their later life. This could be an indication that young black women who are unemployed feel like there is no reason to live if they loose or argue with a partner/family member. Besides being a medical problem, this should be a societal problem. In this regard in-depth qualitative studies looking specifically at the younger black female patients, can help find the specific challenges they face and how society can support them through those challenges.

Acknowledgements

Prof H.S Schoeman: Statistical analysis.

Prof S Moosa: Supervision, support and guidance for the completion of the research report

Dr S Agbo: Supervision during the protocol development and data collection

The authors also wish to extend their gratitude to the hospital management at Bertha Gxowa Hospital for permission to perform the study.

Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Author contributions

This article was submitted by E.M as a requirement for the partial fulfilment of the degree of MMed (Family Medicine). E.M was the main author and S.M was the primary supervisor. All mentioned authors reviewed the drafts and approved the final version to be published.

Funding contributions

This study did not receive a grant from any funding agency in the public, commercial or not-for-profit agency.

Data availability statement

Data sharing is not applicable to this article, as no new data were created or analysed in this study

Disclaimer

The opinions and views of this article are those of the authors and do not reflect the official policy or position of any affiliated agency of the authors.

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Appendices

Appendix I: Data collection tool

A modified Data collection tool from Practice Manual for Establishing and Maintaining Surveillance Systems for Suicide Attempts and Self-Harm ⁴:

*Please see MS Excel attachment (Appendix I)

Appendix II: Ethical clearance



EKURHULENI HEALTH DISTRICT RESEARCH PERMISSION

Research Project Title: Factors associated with Intentional Self-Harming behaviours among patients admitted in Bertha Gxowa Hospital.

NHRD No: GP_201903_028

Research Project Number: 18 /04/2019-01

Name of Researcher(s): Dr Elsie Mugisha

Division/Institution/Company: University of the Witwatersrand

Date of review by the EHDRC: 18 April 2019

DECISION TAKEN BY THE EKURHULENI HEALTH DISTRICT RESEARCH COMMITTEE (EHDRC)

- This document certifies that the above research project has been reviewed by the EHDRC and permission is granted for the researcher(s) to commence with the intended research project.
- Facilities approved for the research: Germiston Hospital.
- Participants' rights and confidentiality must be maintained throughout the study period and when disseminating the findings.
- No resources (financial, material and human resources) from the health facilities will be used for the study. Neither the district nor the health facilities will incur any additional cost for the study.
- The study will comply with Publicly Financed Research and Development Act 2008 (Act 51 of 2008) and its related regulations.

Title: Factors associated with Intentional Self-Harming behaviours among patients admitted in Bertha Gxowa Hospital.

- The EHDRC must be informed in writing before publication or presentation of research findings and a copy of the report/publications/presentation must be submitted to the EHDRC
- The district must be acknowledged in all the reports/publications generated from the research.
- The researcher will be expected to provide the EHDRC with
 - Six monthly progress updates including any adverse events
 - The final study report in electronic format
 - Present the final research findings at the annual Ekurhuleni research conference if possible.
- The EDHRC reserves the right to withdraw the approval, if any of the conditions mentioned above have being breached
- The research committee wishes the researcher(s) the best of success.

DR. J. SEPUYA
DEPUTY CHAIRPERSON: CITY OF EKURHULENI

Dated: 18/4/2019

Dr. R. Kellerman
CHAIRPERSON: GAUTENG DEPARTMENT OF HEALTH (EKURHULENI HEALTH DISTRICT)

Dated: 18 April 2019.



R14/49 Dr Elsie Mugisha

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M190104

NAME: Dr Elsie Mugisha
(Principal Investigator)
DEPARTMENT: Family Medicine
Bertha Gxowa hospital
Ekurhuleni District

PROJECT TITLE: Factors associated with intentional self-harming
behaviours among patients admitted in Bertha
Gxowa hospital

DATE CONSIDERED: 25/01/2019

DECISION: Approved unconditionally

CONDITIONS:

SUPERVISOR: Dr Agbo

APPROVED BY: 
Dr CB Penny, Chairperson, HREC (Medical)

DATE OF APPROVAL: 08/03/2019

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary on the Third Floor, Faculty of Health Sciences, Phillip Tobias Building, 29 Princess of Wales Terrace, Parktown, 2193, University of the Witwatersrand. I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report.** The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed in **January** and will therefore be due in the month of **January** each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Principal Investigator Signature _____

Date _____

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix III: Permissions

PERMISSION LETTER TO CONDUCT MMED RESEARCH AT BERTHA GXOWA
HOSPITAL

02 July 2018

The Chief executive officer
Bertha Gxowa hospital
Germiston

Dear sir/Madam

Request for permission to conduct MMed research at Bertha Gxowa hospital

My name is Dr Elsie Mugisha, a second year registrar in the department of family medicine at the university of the Witwatersrand.

As part of the MMED studies, the department of Family medicine requires that I undertake a research at a health care center. The title of the research is “Factors associated with parasuicide among patients in Bertha Gxowa hospital”. The aim of this study is to determine the factors associated with parasuicide among patients admitted to the hospital.

The study will be a cross sectional study using the medical records of patients admitted between June 2016 and June 2018. Data will be collected by means of a data collection tool which includes sociodemographic characteristics, clinical profile, method used and reason for parasuicide. There will be no contact with patients during this study and confidentiality will be maintained at all times.

I would like request permission to conduct my Mmed research at Bertha Gxowa Hospital and access files from the records department once I have obtained approval from the Ekurhuleni research committee and WITS Health research ethics committee.

I look forward to your positive response.

Kind Regards,

Dr ENV Mugisha
Registrar
Ekurhuleni district



GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

ENQUIRIES
Office of the CEO
M | 079 264 8411
T | 010 344 2997
E | Jatin.Ganda@ @gauteng.gov.za

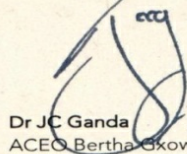
23rd of July 2018

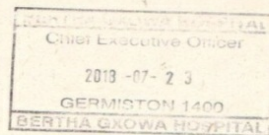
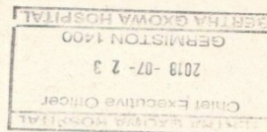
To: Dr Mugisha
From: Dr JC Ganda, ACEO Bertha Gxowa Hospital.
Re: Research into Factors Associated With Parasuicide

The above noted protocol has been reviewed and approved. The research may be under taken at Bertha Gxowa Hospital.

Bertha Gxowa Hospital pledges to provide the required support in terms of access as well as guidance should it be required.

Yours Sincerely,


Dr JC Ganda
ACEO Bertha Gxowa Hospital.



BERTHA GXOWA HOSPITAL
Angus Street, Germiston. 1401.
T | 011 089 8569

Appendix IV: Turnitin report

300023:final_Mmed_turnitin_report_for_admission.docx			
ORIGINALITY REPORT			
5%	2%	2%	3%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS
PRIMARY SOURCES			
1	research-information.bris.ac.uk Internet Source	1	1%
2	Submitted to Murdoch University Student Paper	1	1%
3	Rachel Parker. "A small-scale study investigating staff and student perceptions of the barriers to a preventative approach for adolescent self-harm in secondary schools in Wales—a grounded theory model of stigma", Public Health, 2018 Publication	1	1%
4	www.jrmds.in Internet Source	1	1%
5	Submitted to University of Pretoria Student Paper	1	1%
6	journals.lww.com Internet Source	<1	<1%
7	phcfm.org Internet Source	<1	<1%

Exclude quotes On

Exclude matches Off

Exclude bibliography On

Appendix V: Proofreading certificate

From the desk of
F. E. Meyer
P. o. box 885
2041 HOUGHTON
e-mail: meyer.fe576@gmail.com
<https://meyerfe576.wixsite.com/editormysite>
(Note: two full stops: one after 576 and one after wixsite)

January 27th, 2021

ENGLISH PROOF-READING/EDITING

To Whom It May Concern

The journal article entitled, 'Factors associated with intentional self-harming behaviours among patients admitted to Bertha Gxowa Hospital' to be submitted by Dr E.N.V. MUGISHA et al has been proof-read and edited for proper English language, syntax, grammar, punctuation, British English spelling and overall style by F.E. MEYER. As requested, document formatting was applied to the journal article according to the Journal of Primary Health Care & Family Medicine (PHCFM) guidelines for authors. The 24 references were checked according to the Vancouver referencing style as per the journal's guidelines. The research content and/or the authors' intentions were not altered during the process.

Blue and yellow highlighting will require the corresponding author's attention. The date on the footnote on this page corresponds with that of the attached proof-read and edited sections of the journal article. Any further proof-reading or editing required by the author(s), due to changes or amendments to this journal article will be accompanied by an updated covering page and will replace this covering page.

F.E. Meyer

F.E. MEYER
B.A. (UNISA)

Footnote: Proof reader's/Editor's covering page

Edited journal article

2020/01/27

MUGI/02

Appendix VII: Research proposal

**FACTORS ASSOCIATED WITH INTENTIONAL
SELF-HARMING BEHAVIOURS AMONG
PATIENTS ADMITTED IN BERTHA GXOWA
HOSPITAL.**

Dr ENV Mugisha

Student no: 300023

Department of Family Medicine

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Intentional self-harm may be defined as self-injurious/harmful behaviour that is self-directed and deliberately results in injury or the potential for injury to oneself, often as a response to feelings of extreme psychological distress or emotional pain (1). It includes cutting, burning or hitting oneself, bingeing or starvation, abuse of drugs or alcohol, and overdosing on prescription medications (20-22). This risky behaviour can have a fatal outcome (13). Intentional self-harming behaviour encompasses parasuicide and attempted suicidal behaviours that are often used interchangeably in literature (1). Parasuicide is referred to as nonsuicidal self-injury (NSSI) and attempted suicide as suicidal self-injury (SSI) (13). The relationship between parasuicide and attempted suicide is a complex one and there is an overlap consensus between the two (14,17). Research findings indicate that parasuicide behaviour predicts suicide attempts and high co-occurrence are encountered (15,19). Thus, differentiation between the two relies more on the lethal nature, method, prevalence, frequency and function (16,18).

In 1985, the WHO European regional multicentre study was launched to monitor and examine non-fatal suicidal behaviour. Researchers from 15 countries agreed that one of the main problems for epidemiological research in this area was the lack of a common terminology (4). Moreover, they agreed that there was a need for reasonable terms and definitions of non-fatal suicidal acts from a theoretical point of view that could at the same time be used and applied to surveillance of the aforementioned. The WHO European multicentre study group used 'parasuicide' as an umbrella term that covered terms such as 'attempted suicide', 'deliberate self-harm' and 'self-poisoning'. As the study expanded to more countries, the term 'parasuicide' was found to be challenging in practice as it was difficult to translate in some cultures (4).

During 1994, the term 'parasuicide' was replaced with 'attempted suicide' as the term adopted at the WHO European multicentre study. However, even in relation to hospital data records, the use of the term 'attempted suicide' was fluid because it meant very different things to different people (4).

Intentional self-harming behaviours have increased globally over the past decade and have been identified as one of the major contributors to the high disease and

healthcare burden in many low- to middle-income countries (10). Patients who engage in intentional self-harming behaviours are 38 times more likely commit suicide (2).

Motivation/ justification

The justification of this study is to document the patterns of intentional self-harm cases which will contribute to the understanding of self-harming behaviours more fully and thereby assist health care workers with the best ways of identifying, reaching and treating those who struggle with self harming behaviours. This research may assist on a provincial and national level in regard to relevant documentation and proper follow-up of patients with self-harming behaviours.

Literature Review

Research into the epidemiology and cause of intentional self-harming behaviours is hampered by the lack of agreement on terminology and definitions; that is further complicated by the varying levels of suicidal intent and diverse motives reported by people engaging in self-harming behaviours (4). Moreover, there are also major procedural disparities between countries for recording these suicides. During 2014, the WHO's global report on suicide prevention identified a need for guidance on the surveillance of self-harming behaviour cases presenting to hospitals. (6)

A committed hospital-based surveillance system of self-harm incidents range from: countries' registries, such as in Ireland to subnational registries at the regional level, such as in the United Kingdom of Great Britain and Northern Ireland; whereas in Derby, Manchester and Oxford, data are collected on intentional self-harming patients presenting to hospital emergency departments. In most low- and middle-income countries there are no hospital-based surveillance systems for suicide attempts.

Intentional self-harm is usually the last step of a sequence of processes starting with a death wish, suicidal ideation, suicidal contemplation and suicidal behaviours (2). It is the second leading cause of death in the 15-29 years' age group (3). Important contributors to self-harm and suicide in this young age group include a family history

of intentional self-harming behaviours and psychiatric illnesses, psychological, familial, social, and cultural factors. The effects of media are also important, with the internet presently playing an important role. (11)

Annually, at least one million people worldwide commit suicide. Intentional self-harming behaviours outnumber actual suicides by an equally shocking figure ranging from 10-20 times more per year (4). A patient who has engaged in one or more acts of intentional self harm makes it the single most important predictor of death by suicide (4).

In a South African study, it was estimated that the average European rate for attempted suicide in persons aged 15 years and above was 140:100 000 for males and 193:100 000 for females (5). There is scarcity of information on self-harming behaviours in Africa. A systematic review reported that data on self-harming behaviours was only available from 11 countries on the African Continent. The self-harming behaviours incidence rates for seven countries varied from 0.1 per 100000 in Ghana to 100 per 100000 in Namibia, the outstanding four countries reported lifetime prevalence estimates for suicide attempts collected mainly from surveys (6).

In South Africa, age, race and city play independent roles in sex-specific suicide rates (5). Younger age groups of both genders are at a higher risk, with females being at higher risk than males in many studies (8). In South Africa studies have shown that suicide rates have been increasing steadily in all population groups over the past decade, although the prevalence varies considerably across age and race groups. Among the Indian, Black and Coloured race groups/population, the third major cause of death after homicide and natural death is suicide, whereas among the White race group/population suicide is the second major cause of death (9). Research has shown that the risk factors include child adversity, interpersonal loss, interpersonal conflict, recent migration and financial issues (12).

There is a strong association between suicide and mental illness (12). A metanalysis of the rates of suicide for psychiatric illnesses revealed an increased risk of suicide among patients with eating disorders. The risk of suicide is seven times higher for those with personality disorder. The lifetime risk of suicide for individuals who suffer

from schizophrenia is 10 % (13). For *post-partum* psychiatric disorders, the risk of suicide is increased especially during the first year (13). Patients with cancer have twice the suicide rate compared to the general population and it is five times more common in those with epilepsy. Studies have also shown increased rates of suicidal ideation in patients with chronic pain and HIV/AIDS (13).

A wide range of methods are used by the people committing suicide and are dependent on different factors (10). In South Africa, the statistics for the past decade have shown that hanging and shooting are preferred methods followed by self-poisoning with agents such as pesticides and poisons, drug overdoses, self-gassing and self-immolation (10).

Aim and objectives

Aim

The aim of this study is to explore the factors associated with intentional self-harming behaviour among patients admitted to the Bertha Gxowa Hospital.

Specific objectives

- Determine the sociodemographics of patients admitted with intentional self-harming behaviour.
- Explore the clinical profile of patients admitted with intentional self-harming behaviour.
- Determine the methods used by patients admitted to the hospital with intentional self-harming behaviour.
- Determine the documented reasons for the intentional self-harming behaviour by patients admitted to the hospital.
- Determine the association between the demographics, clinical profile, methods used, documented reasons and intentional self-harming behaviour.

Methods

Study design

A descriptive cross-sectional study of patients' medical records will be used. This will involve retrospective review of medical records of patients admitted for intentional self-harm between June 2016 and June 2018.

Site of study:

The Bertha Gxowa Hospital is the only district hospital in the Ekurhuleni Health District. The hospital has 230 approved beds. It provides level one health care services to Germiston - a town with a population of 3942533 and surrounding communities. These services include: primary health care facilities; 24-hour accident emergency and trauma; 72-hour observations for psychiatric patients; medico-legal services; surgery excluding orthopaedics; obstetrics and gynaecology; allied services and pharmacy.

Study population

The study population will include all patients that were admitted with intentional self-harming behaviour to the Bertha Gxowa Hospital during June 2016 and June 2018.

The sample size and sampling

This will be purposive sampling of all medical records of patients admitted during the period June 2016 and June 2018 by the researcher based on the inclusion and exclusion criteria.

Inclusion criteria

- All files/folders with a diagnostic label of parasuicide or attempted suicide on patients admitted to the adult medical wards for intentional self-harm cases/incidents during the period from June 2016 to June 2018.

Exclusion criteria

- Patient folders/files with inadequate data and completely illegible records will be excluded from the study.

Measurement tool/instrument

A modified data collection tool adapted from the World Health Organization Practice Manual for establishing and maintaining surveillance systems for suicide attempts and self-harm will be used (6). This tool was designed by WHO to be used by

countries to establish public health surveillance systems for suicide attempts and self-harm cases presenting to general hospitals, based on medical records (6).

This tool will be used in this research study to collect the following objective variables:

- Diagnosis (attempted suicide or parasuicide);
- Sociodemographic aspects (sex, date of birth, age, nationality, ethnicity, religion, marital status, employment status, alcohol or drug use and educational status);
- Clinical profile (eating disorders, newly diagnosed major depressive disorder, personality disorders, patients known with major depressive disorder, schizophrenia, *post-partum* psychiatric disorder, epilepsy, HIV/AIDS, cancer, chronic pain and, others);
- Intentional self-harming methods used (self-poisoning, hanging, etc...); and
- Documented reasons for intentional self-harm (child adversity, interpersonal loss, interpersonal conflict, recent migration and financial issues, experience of crime, trauma or abuse and others).

Validity will be secured with inclusion of all files except the stipulated exclusion criteria. This will help to eliminate selection bias. All records will be measured in the same way with the same tool which has been modified according to current literature and research findings on intentional self-harming behaviours.

Data collection:

All files of admitted patients with the label of intentional self-harming behaviours between June 2016 and June 2018 will be identified and retrieved from the hospital record archives with the assistance of the record clerks. Inclusion and exclusion criteria will be applied by the researcher.

All patient files that meet the inclusion criteria will have a label sticker adhered to them for identification purposes and to prevent duplication. Confidentiality will be maintained where a study number will be allocated with a separate coding sheet for the patients file number.

The variables will be recorded in the data collection sheets by the researcher on a daily basis until all eligible files have been reviewed. The data will then be entered into a Microsoft Excel software file for analysis by the researcher. During the data collection period, all files will be kept in the hospital record locker and secured. After the completion of the data collection, the files will be handed back to the hospital record staff.

Data analysis:

Microsoft Excel software will be used to capture data. The descriptive and inferential statistics will be done using statistical data analysis software. Data analysis will be mainly descriptive statistics in the form of frequencies and percentages for the categorical data such as age, sex and race. In order to evaluate the differences in proportions between categorical variables (sociodemographics, clinical profile, documented reasons and methods) and intentional self-harming behaviour, the chi-square test will be used.

Continuous data will be summarised using means with standard deviations if normally distributed. Skewed continuous data will be summarized using median with interquartile range. A multivariable logistic regression will be used to determine the factors from the demographics, clinical profile, methods used and documented reasons for intentional self-harming behaviour. Intentional self harming behaviours will be subdivided into parasuicide and attempted suicide.

Statistical significance will be considered at 2-sided alpha level of 0.05

The data will be stored safely on the researcher's personal hard-disk drive with back-up support and password protected.

Table 1: analysis guide table:

Specific objectives	Variables	Type of data	Data analysis
----------------------------	------------------	---------------------	----------------------

Sociodemographics	1. Age 2. Sex 3. Race 4. Education 5. Employment 6. Religion 7. Drug use 8. Alcohol use 9. Marital status	1. Continuous 2. Categorical 3. Categorical 4. Categorical 5. Categorical 6. Categorical 7. Categorical 8. Categorical 9. Categorical	• Continuous data will be summarised using mean with standard deviations if it is normally distributed. If the continuous data is skewed it will be summarized using median with interquartile range • Categorical data will be summarized with frequencies and percentages and presented in tables or graphs.
Clinical profile	1. Eating disorder newly diagnosed MDD 2. Personality disorder 3. Known MDD 4. Schizophrenia 5. <i>Post-partum</i> psychiatric disorder 6. Epilepsy HIV/AIDS 7. Cancer 8. Chronic pain 9. Others	1. Categorical 2. Categorical 3. Categorical 4. Categorical 5. Categorical 6. Categorical 7. Categorical 8. Categorical 9. Categorical	• Categorical data will be summarized with frequencies and percentages and presented in tables or graphs.
Methods used	1. Self poisoning 2. Hanging 3. Blunt or sharp object 4. Others	1. Categorical 2. Categorical 3. Categorical 4. Categorical	• Categorical data will be summarized with frequencies and percentages and presented in tables or graphs.
Documented reasons	1. Childhood adversity 2. Interpersonal loss	1. Categorical 2. Categorical	• Categorical data will be summarized with frequencies

	3. Interpersonal conflict	3. Categorical	and percentages and presented in tables or graphs
	4. Recent migration	4. Categorical	
	5. Financial difficulties	5. Categorical	
	6. Experience of crime, trauma or abuse	6. Categorical	
	7. other	7. Categorical	
Associations between sociodemographics, clinical profile, documented reasons, methods used and intentional self-harming behaviours.	1. Sociodemographics 2. Clinical profile 3. Documented reasons 4. Methods used	1. Categorical 2. Categorical 3. Categorical 4. Categorical	Univariate logistic regression will be used. Significant variables from the univariate logistic regression will be used in the multivariable logistic regression to determine the association.

Pilot study:

A pilot study will be conducted in a hospital in the district to test if the protocol is feasible. A minimum of ten patient folders will be reviewed The aim of the pilot study is to test the research process (e.g. duration), acceptability, suitability, understanding and the validity of the elements in the data collection tool of the study. This will be done after approval has been obtained from the Human Research Ethics Committee, University of the Witwatersrand, Johannesburg.

Limitations:

- Inadequate record keeping, by health care workers, of required information.
- Loss of patient records/missing continuation notes/sheets from previous years.

- Loss of patient files from the medical wards and emergency department regarding patients admitted for intentional self-harm.
- Patients wrongly diagnosed with intentional self-harm behaviours.

In such a case concerning missing data, loss of records or inadequate record keeping this information will be documented on a daily tracking sheet by the researcher. Once documented on the tracking sheet, all missing data will be reported

Bias

Bias may occur while reviewing patient records through over-interpretation or under-interpretation of data by the researcher. In such a case those records will be reviewed by the supervisor.

Ethical considerations:

Prior to the commencement of the study, permission from the management at the Bertha Gxowa Hospital and the Ekurhuleni District will be obtained. Ethical approval will be obtained from the Health Research and Ethics Committee, University of the Witwatersrand, Johannesburg. All data will be collected in a private room and all information will be locked in a cupboard where access will only be allowed to the researcher and supervisor.

Timing:

As abovementioned, once the researcher has received permission from the management at the Bertha Gxowa Hospital, University of the Witwatersrand Human Research Ethics Committee and the Ekurhuleni District, the study will commence.

The study schedule is as follows:

Table 2: study schedule

	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
	u	u	u	e	c	o	e	a	e	a	p	a	u	u	u	e	c	o	e	a
	n	l	g	p	t	v	c	n	b	r	r	y	n	l	g	p	t	v	c	n
Literature review																				
Preparing protocol																				

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Appendices

Modified Data collection tool from Practice Manual for Establishing and Maintaining Surveillance Systems for Suicide Attempts and Self-Harm (4):

*Please see MS Excel attachment (Appendix II)

Appendix I



GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

ENQUIRIES
Office of the CEO
M | 079 264 8411
T | 010 344 2997
E | Jatin.Ganda@ @gauteng.gov.za

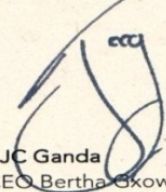
23rd of July 2018

To: Dr Mugisha
From: Dr JC Ganda, ACEO Bertha Gxowa Hospital.
Re: Research into Factors Associated With Parasuicide

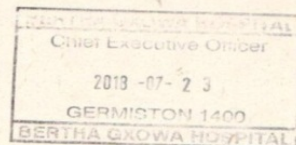
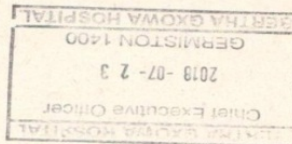
The above noted protocol has been reviewed and approved. The research may be undertaken at Bertha Gxowa Hospital.

Bertha Gxowa Hospital pledges to provide the required support in terms of access as well as guidance should it be required.

Yours Sincerely,



Dr JC Ganda
ACEO Bertha Gxowa Hospital.



BERTHA GXOWA HOSPITAL
Angus Street, Germiston. 1401.
T | 011 089 8569

Appendix III

PERMISSION LETTER TO CONDUCT MMED RESEARCH AT THE BERTHA GXOWA HOSPITAL

02 July 2018

The Chief Executive Officer
Bertha Gxowa Hospital
Germiston

Dear Sir/Madam

Request for permission to conduct MMed research at the Bertha Gxowa Hospital

My name is Dr Elsie Mugisha, a second year registrar in the Department of Family Medicine, University of the Witwatersrand, Johannesburg.

As part of the MMED studies, the Department of Family Medicine requires that I undertake a research study at a health care center. The title of the research is, 'Factors associated with parasuicide among patients in Bertha Gxowa hospital.' The aim of this study is to determine the factors associated with parasuicide among patients admitted to the hospital.

The study will be a cross-sectional study using the medical records of patients admitted between June 2016 and June 2018. Data will be collected by means of a data collection tool which includes sociodemographic characteristics, clinical profile, method used and reason for parasuicide. There will be no contact with patients during this study and confidentiality will be maintained at all times.

I would like request permission to conduct my MMed research at the Bertha Gxowa Hospital and access files from the records department once I have obtained approval

from the Ekurhuleni Research Committee and the WITS Health Research Ethics Committee.

I look forward to your positive response.

Kind regards,

Dr ENV Mugisha

Registrar

Ekurhuleni District