PLAGIARISM DECLARATION

PLAGIARISM

This means that you present substantial portions or elements of another's work, ideas or data as your own, even if the original author is cited occasionally. A signed photocopy or other copy of the Declaration below must accompany every piece of work that you hand in.

DECLARATION

1.   I know that Plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.

2.   I have used the American Psychological Association formatting for citation and referencing. Each significant contribution to, and quotation in, this essay/report/project from the work or works, of other people has been attributed, cited and referenced.

3.   This essay/report/project is my own work.

4.   I have not allowed and will not allow anyone to copy my work with the intention of passing it off as his or her own work.

NAME: Timmy Joji

SIGNATURE: T. Joji

STUDENT NUMBER: JJXTIM001

Gender Differences in the Prevalence and Manifestation of

Depression and Suicidal Ideation in South African University Students

Timmy Joji

ACSENT Laboratory

Department of Psychology

University of Cape Town

Supervisor: Kevin G. F. Thomas
Co-Supervisor: Michelle Henry
Word Count: 5674

Abstract

Globally, both depression and suicide are more common in university students than in the general population. Extant literature also suggests there are gender differences in the presentation and manifestation of major depressive disorder and suicidal ideation (e.g., men tend to present with anger, irritability, and escaping behaviours, whereas women tend to present with anhedonia, guilt, and self-disappointment) and that these differences are more salient in communities and families where stereotypes and cultural norms regarding gender roles are more strongly present. However, there is scant data focused on how depression in university students manifests, and specifically as to whether these same gender-patterned symptom differences are present in that population. Hence, this study investigated the prevalence and presentation of depressive and suicidal symptomatology within the population of university students ($N = 952$) who called the South African Depression and Anxiety Group (SADAG) student helpline between 1 January 2015 and 30 June 2019. Analyses detected significant differences between male and female students in the ways they reported on the manifestation of their depression. Specifically, an analysis of data from all students presenting with depression indicated that males presented more frequently with anger, escaping behaviours and irritability. In the sub-sample of suicidal students, males presented more frequently with escaping behaviours, irritability, anger, and depressed mood. These findings are consistent with literature on cultural stereotypes and stigma and their effects on males with depression and should be accounted for in, (a) gender-aligned screening procedures; (b) psychoeducation programmes in communities that enforce such gender based stereotypes.

Introduction

Concerns about the mental health of members of the South African university community have been brought into sharp relief by several recent events. Student support centres around the country are overwhelmed with the number of students in need of therapeutic intervention, and a number of universities have reported a spike in the number of suicide attempts and completed suicides by students over the past few years (Mabasa, 2018; Peter, 2018). The suicide of University of Cape Town Professor Bongani Mayosi contributed further to public discourse around depression in the academy (Rabe, 2018). The 2015-16 Fees Must Fall protests illuminated the challenges students face on campus, including but not limited to the presence of financial pressures and ever-present risks of homelessness and sexual violence (Jansen & Walters, 2019; Maphasa, 2017; Naidu, 2018; Riddle, 2019). In short, it is now clear that there is significant strain placed on the mental health of students at this country's universities.

Previous research, both locally and globally, suggests there are significant gender differences in depression and suicidal ideation prevalence, severity, and symptom manifestation (Bennett, Ambrosini, Kudes, Metz, & Rabinovich, 2005; Meissner, Bantjes, & Kagee, 2016; Naidoo, Naidoo, & Naidoo, 2015; Schrijvers, Bollen, & Sabbe, 2012). However, few of those studies focus on university students, and still fewer emerge from low- and middle-income countries (LAMICs) such as South Africa. As a result, there is a serious lack of research evaluating mental illness in university students, particularly in terms of the prevalence of the different disorders, the presentation and manifestation of depression, and use of mental health services. This study focuses on depression and suicidal ideation in South African university students, with the primary goal of exploring how gender differences - particularly in a cultural context such as South Africa where many communities endorse relatively strong gender stereotypes (Jason Bantjes, Kagee, & Meissner, 2016; Meissner et al., 2016; Mohamed-Kaloo & Laher, 2014; Padayachee & Laher, 2014), may influence the prevalence and manifestation of depressive symptoms and suicidal ideation in that community.

Epidemiology and Presentation of Depression

Recent estimates from the World Health Organisation (WHO) indicate that approximately 300 million people worldwide experience depression, and that the global prevalence of the disorder increased by more than 18% between 2005 and 2015 (WHO, 2014, 2017, 2018). No comparable epidemiological data exist for the South African population. However, separate data from the South African Stress and Health Study ($N = 4351$;

Tomlinson, Grimsrud, Stein, Williams, & Myer, 2009) and the National Income Dynamics Study (*N* = 9664; Adjaye-Gbewonyo, Avendano, Subramanian, & Kawachi, 2016), both of which were nationally representative household surveys, suggest the prevalence of depression in this country almost tripled, from 9.7% to 27.1%, in the period 2004-2012.

Depression is more common in university student populations than in the general adult population, with the global prevalence rate estimated at 30.6% (Ibrahim, Kelly, Adams, & Glazebrook, 2013). Moreover, a recent study from the United States reported a 35.5% increase between 2009 and 2015 in the prevalence of depression among university undergraduates (Oswalt et al., 2018). Again, however, there are no epidemiological data for South African students comparable to those that exist for students in high-income countries of the global north. Relatively small-scale African studies place their prevalence estimates at between 21% and 41.3% (Nalugya-Sserunjogi et al., 2016; Othieno, Okoth, Peltzer, Pengpid, & Malla, 2015; Othieno, Okoth, Peltzer, Pengpid, & Malla, 2014). South African studies of relatively small samples (*N*s ranging from 230 to 686) report prevalence estimates between 16% and 76.5%, suggesting that students in this country are at least as prone to depression (and may be more so) than their counterparts elsewhere on the continent and in the world (Mall et al., 2018; Pillay, Ramlall, & Burns, 2016; van Zyl et al., 2017).

Of particular interest here are several seminal studies suggesting there are significant gender differences in the manifestation of depressive symptoms. For instance, whereas men often present with signs and symptoms of anger and irritability, as well as tendencies toward domestic abuse, infidelity, immersion in work, and escaping behaviours masking more expected reactions such as sadness, crying, and appetite changes, women most often present with anhedonia, guilt, and feelings of failure and self-disappointment (Bennett et al., 2005; Hill et al., 2018; Ogrodniczuk & Oliffe, 2011; Salk, Petersen, Abramson, & Hyde, 2016). These differences in manifestation tend to be particularly clear in environments where men are raised with strong gender norms, such as South Africa (J. Bantjes & Kagee, 2013; Meissner et al., 2016). When seeking treatment, such men may describe their symptoms in ways that they perceive are consistent with traditional gender-role norms (Jithoo, 2017). For example, they may resist expressing emotional distress, choosing instead to appear stoic, independent, and in control (Berger, Addis, Green, Mackowiak, & Goldberg, 2013). Hence, diagnostic screening may erroneously indicate that men displaying such signs do not meet conventional criteria for depression such as anhedonia, feelings of worthlessness, inability to concentrate, and desire for death (Azorin et al., 2014; Ogrodniczuk & Oliffe, 2011; Sigurdsson, Palsson, Aevarsson, Olafsdottir, & Johannsson, 2015).

Because these gender differences tend to arise in adolescence (Bennett et al., 2005; Salk et al., 2016), it is particularly pertinent for university-based studies to examine them and to describe their consequences for screening and treatment-seeking among students. Unfortunately, no such studies have been published.

Suicidal Ideation and Related Behaviours

Annually, almost 800 000 deaths might be attributed to suicide (WHO, 2014, 2018). Numerous studies suggest that psychiatric illness is involved in 90% of suicide attempts, and that in most of those cases the illness in question is a mood disorder (J. Bantjes & Kagee, 2013; Korb & Plattner, 2014).

University students are at particularly high risk for suicide and suicidal ideation (J. Bantjes, Kagee, McGowan, & Steel, 2016). The term *suicidal ideation* refers to emotions and actions that are consciously experienced or committed with the desire to die (J. Bantjes & Kagee, 2013). Suicidal ideation strongly predicts suicidal behaviour, and depressive symptoms strongly predict suicidal ideation both globally and in low-resource South African communities (J. Bantjes et al., 2016; 2018; Lara et al., 2018; Sun et al., 2017; Zeng et al., 2018).

As is the case with the manifestation of depressive symptomatology, there are significant gender differences in the presentation of suicidal ideation, non-fatal suicidal behaviour (e.g., self-harming), and rates of completed suicide. Canetto and Sakinofsky (1998) first described variations in these differences as the Gender Paradox in suicide: Although the female:male ratio of suicidal ideation is estimated at 2–4:1, and higher rates of non-fatal suicidal behaviours are present in women, men have higher rates of completed suicides (see also Schrijvers et al., 2012).

In South Africa, 80% of suicides are committed by men, even though both global and local studies suggest that women are 1.75 times more likely than men to develop depression (J. Bantjes et al., 2016; 2018; Meissner et al., 2016). Again, gender norms and stereotypes may play a part in this discrepancy. For instance, where women may see suicidal behaviours and ideation as a cry for help and an expression of vulnerability, men may directly oppose such vulnerability, with suicide representing a means of recapturing what they perceive as lost power in their lives (Berger et al., 2013; Jithoo, 2017). In one particularly striking study, Nowotny et al. (2015) reported that, in their sample of 13,186 American schoolchildren in grade 7–12, prevalence rates for suicidal ideation in boys displaying feminine-typical traits (13%) and in girls displaying feminine-typical traits (17%) were higher than those for boys and girls displaying masculine-typical traits (both 7%). The importance of these gender traits

and norms for exhibiting and reporting suicidal ideation may be even more pronounced in communities that emphasize traditional gender stereotypes.

The Current Study: Rationale, specific Aims, and hypotheses

The literature reviewed above suggests there are gender differences in the prevalence and manifestation of depressive symptoms (Bennett et al., 2005; Berger et al., 2013; Hill et al., 2018; Meissner et al., 2016) and of suicidal ideation (Canetto & Sakinofsky, 1998; Nowotny et al., 2015; Schrijvers et al., 2012), and that the appearance of these differences may be closely associated with the presence of stereotypes and cultural norms regarding gender. Students who reside in environments characterized by strong gender norms and cultural stereotypes may manifest the influence of these factors by behaving in ways consistent with their gender roles (e.g., men may show a proclivity toward stoicism, whereas women may be more comfortable displaying vulnerability). Such differences lead to complications in identifying the classical symptoms of depression, as well as evaluating the existence and severity of suicide risk.

Current literature on symptom differences (a) is largely based on North American populations that may have different cultural norms to South African populations, and (b) has not focused on student groups. Similarly, there is a lack of recent literature on gender differences in suicidal ideation and suicidal behaviours that focuses on university students in non-Western contexts. Universities are not only miniature communities and unique environments that exert enormous pressure on their citizens; they also often reflect the sociocultural stereotypes of the societies containing them. Hence, it is useful to examine patterns of depression and suicidal ideation within South African universities not only because students are at higher risk for both, but also because universities are a test environment for how culturally influenced gender norms can impact upon manifestation and expression of mental disorders.

The proposed study investigates the presentation of depression symptoms and suicidal ideation in South African students. The goal is to explore whether there are gender differences in depressive symptom presentation and suicidal ideation in individuals resident in a social context that is characterized by relatively strong gender norms and cultural stereotypes. Although there is already a fairly large literature on gender differences in manifestation of depressive symptomatology, this study's focus on a university student population differentiates it from previously published work. Moreover, its focus on gender differences in depression and suicidal ideation in a young adult sample is important because previous research suggests that these differences originate during adolescence and, if left

unaddressed, persist through adulthood. The study is different from other local studies that primarily focus on depression in student populations in that it focuses on gender differences in the manifestation of depression, and looks at cultural stereotypes and norms as a potential explanation for these differences.

Methods

Design and Setting

The study adopted a descriptive and relational cross-sectional design, using archival data analysis to identify and analyse differences in self-reported depressive symptoms between male and female callers to a student mental health helpline. Specifically, data were collected from calls made between 1 January 2017 and 31 June 2019 to a university student hotline run by the South African Depression and Anxiety Group (SADAG). Coding of individual call logs and subsequent statistical analyses were completed at the University of Cape Town (UCT).

Participants

The data used in the study were retrieved from a national database provided by SADAG, a non-governmental organization based in Johannesburg that provides counselling and intervention for university students across the country. When a student calls into the SADAG telephonic counselling hotline, a trained counsellor collects that individual's identifying information and obtains a brief patient history on prior diagnoses and any ongoing pharmacotherapy or psychotherapy. Typically, the counsellor then proceeds to assist the student (e.g., by providing advice and referrals); in more severe cases of suicidal ideation or other at-risk behaviour, the counsellor engages in critical intervention (e.g., requesting emergency services or contacting next of kin). Each call is logged as a case on the SADAG database, and the counsellor completes a case record form and files it in the university student database. Each case record includes the demographic details of the caller, a description of the presenting problem and symptoms described by the caller, as well as information on treatment and other recommendations.

Case records logged between 1 January 2017 and 31 June 2019 were included in the analyses. The analyses were limited to records of calls from individuals who, at the time of the call, (a) were university students, (b) were aged between 17 and 26 years, and (c) reported having been diagnosed with depression previously, or who reported symptoms of depression and/or suicidal ideation, or any other mental health related problem. The first two criteria were set in place because the focus of the study was on university undergraduates, and the findings are meant to be generalized to that population. The other criterion is set in place

because, although the focus of the study was on depression and suicidal ideation, there is a lack of relevant data regarding student mental health in South Africa, and I therefore planned to evaluate the data as broadly as possible before focussing specifically on gender differences in the manifestation of depression and suicidal ideation.

Using those methods, I retrieved a total of 1079 cases from the SADAG database. Of those cases, 81.20% of calls ($n = 876$) were received from callers who called in a single time. The remaining 18.80% of calls ($n = 203$) were made by individuals who accessed the hotline more than once. The 1079 calls made to the helpline were from 952 different callers.

Power analysis. G*Power software (Faul, Erdfelder, Lang, & Buchner, 2007) suggested that an N of 222 would be required to detect a small effect size (Cohen's $f^2 = .05$) using a multivariate linear regression with $\alpha = .05$, number of predictors = 3, and power (1 - β) = .80. The total number of cases in the sample exceeds this requirement, and is made up of 1052 cases from 952 different callers.

Materials and Procedure

Case data for each student counselling call is captured on a record form referred to as the *SADAG Helpline Log Sheet* (Appendix A). This log sheet consists of a set of questions formulated by SADAG to assist their helpline staff in counselling and intervention processes.

Pertinent information from each Helpline Log Sheet was entered into an MSExcel database using a *Coding Questionnaire* (Appendix B). The questionnaire contained separate sections for (a) demographic information (e.g., caller sex, age, university), (b) previous diagnoses, (c) presenting symptoms, and (d) reasons for calling. The presenting symptoms section was made up of 16 symptoms - each of the 7 DSM-5 symptoms for major depressive disorder (viz., depressed mood most of the day, diminished interest or pleasure in activities, significant weight loss or gain or changes in appetite, slowing of thought or physical movement, fatigue, feelings of guilt or worthlessness, and diminished ability to concentrate or make decisions); 4 of the ICD-10 symptoms for major depressive disorder (viz., headaches, self-esteem problems, disturbed sleep and pessimism over the future); anger, irritability, infidelity, or escaping behaviours (although these are not included among the DSM-5 or ICD-10 criteria, previously published research (Hill et al., 2018; Ogrodniczuk & Oliffe, 2011) suggests they present often in men who are experiencing depression); and suicidal ideation. The reasons for calls section was made up of 15 commonly reported reasons for callers seeking assistance (viz., clinical depression (presenting with 5 or more symptoms of depression- as per DSM 5), sub-clinical depression (presenting with between 4

and 1 symptom of depression), anxiety, ADHD, Schizophrenia, HIV, relationships, substance abuse, general stress, academic stress, sexual abuse, personality disorder, trauma, eating disorder and other).

Data Management and Statistical Analyses

      Screening. The main SADAG database had filters that allowed me to categorize calls from university students separately from other calls received. Hence, I used the filtering function to create a database containing only student calls. I then removed all cases that did not fit the date, age and symptom criteria specified previously by using a combination of the filtering function and manual inspection of the case data.

      Coding. The Helpline Log Sheet for each of the remaining cases was obtained and coded onto the coding questionnaire. These were entered into a MSExcel database to create the final database of cases for statistical analyses. This final database was made up of 1079 cases, which were from 952 different callers. A research assistant (another graduate) also additionally coded 20% of that sample of log sheets for a comparison. I then calculated an estimate of inter-rater reliability using the Kappa statistic, and found a moderate strength of agreement between the two sets of data.

      Each of the 1079 cases from the database are included to form Sample A, and is made up of 952 callers. The final database of 1079 was then filtered to create a database of cases made up only of students presenting with suicidal ideation. This database was made up of 145 cases, and formed Sample B.

      Deriving variables. The Chi-Squared analysis outcome variable for both Sample A, on the differences in depression symptoms between genders, and Sample B, on symptom differences in depression symptoms between genders in students that present with suicidal ideation, was the frequency of presentation of each cluster of symptoms as specified in the Coding Questionnaire (Appendix B).

      Descriptive statistics. I created frequency tables to make face comparisons between (a) reasons males and females called the SADAG Helpline over the entire period of study, and (b) year-on-year call volumes and reasons for calling. A set of descriptive analyses were also compiled to ensure that the assumptions of the relevant statistical tests were met.

      Inferential analyses. I ran two identical analyses on two different samples of callers. The first sample ($n = 952$) included all callers, while the second sample ($n = 145$) included only students who expressed suicidal ideation. The analysis run on each of these samples was a chi-squared test of contingency investigating whether there were significant gender

differences in the frequency of presentation of each of the 16 clusters of symptoms specified in the Coding Questionnaire.

Results

Table 1 shows the primary reasons male and female students called the SADAG Helpline. As can be seen, reasons for calling varied widely and there were some stark sex differences (e.g., many more females reported experiencing primary symptoms of anxiety). Regarding the diagnostic category that is the main focus of this research, less than 5% of both male and female callers reported clinically diagnosable depression according to DSM 5 (American Psychological Association, 2013) criteria of 5 or more symptoms (either depressed mood/loss of interest and 4 other symptoms. However, more than 40% of both males and females reported sub-clinical depression (between 1 and 4 symptoms).

Table 1

SADAG Helpline Calls from University Students, 1 January 2017 – 31 June 2019: Reasons for calls split by gender (N = 952)

	Gender of Caller	
	Male	Female
Diagnostic Impression	(*n* = 284)	(*n* = 668)
Clinical depression[a]	14 (4.9%)	17 (2.5%)
Sub-clinical depression[b]	121 (42.6%)	320 (47.9%)
Anxiety	30 (10.6%)	134 (20.1%)
ADHD	5 (1.8%)	3 (0.4%)
Bipolar disorder	8 (2.8%)	23 (3.4%)
Schizophrenia	0 (0.0%)	3 (0.4%)
HIV	4 (1.4)	7 (1.0%)
Relationships	20 (7.0%)	78 (11.7%)
Substance abuse	2 (0.7%)	3 (0.4%)
General stress	23 (8.1%)	36 (5.4%)
Academic stress	43 (15.1%)	67 (10.0%)
Sexual abuse	2 (0.7%)	37 (5.5%)
Personality disorder	3 (1.1%)	4 (0.6%)
Trauma	11 (3.9%)	14 (2.1%)
Eating disorder	0 (0.0%)	4 (0.6%)
Other	14 (4.9%)	22 (3.3%)

Note. Data presented are raw frequencies, with percentages in parentheses. ADHD = attention-deficit/hyperactivity disorder. [a]Five or more symptoms of depression. [b]1-4 symptoms of depression.

Regarding changes in call volume over time, in 2017 there were 191 calls (44 [23%] from males, 147 [77%] from females). In 2018, that number increased substantially to 379 (103 [27%] from males, 276 [73%] from females. The prorated figure for 2019, however,

suggests that SADAG can expect almost double the number of calls this year as last year (764; 36% from males, 64% from females). In other words, call volumes from both male and female callers have practically doubled on a yearly basis between 2017 and 2019.

Table 2 shows call volumes and reasons for calling in 2017, 2018, and 2019. As can be seen, reported cases of clinical and sub-clinical depression increased four-fold from across the sample period.

Table 2
SADAG Helpline Calls from University Students, 1 January 2017 – 31 June 2019: Call volumes and reasons for calling by year (N = 952)

Reason for Call	2017	2018	2019[a]
Clinical depression	5 (2.6%)	15 (4.0%)	22 (2.9%)
Sub-clinical depression	90 (47.1%)	171 (45.1%)	360 (47.1%)
Anxiety	34 (17.8%)	72 (19.0%)	116 (15.2%)
ADHD	1 (0.5%)	4 (1.1%)	6 (0.8%)
Schizophrenia	2 (1.0%)	0 (0.0%)	2 (0.3%)
HIV	2 (1.0%)	5 (1.3%)	8 (1.0%)
Relationships	23 (12.0%)	38 (10.0%)	74 (9.7%)
Substance abuse	1 (0.5%)	2 (0.5%)	4 (0.5%)
General stress	10 (5.2%)	22 (5.8%)	54 (7.1%)
Academic stress	21 (11.0%)	47 (12.9%)	80 (10.5%)
Sexual abuse	4 (2.1%)	19 (5.0%)	32 (4.2%)
Personality disorder	1 (0.5%)	3 (0.8%)	6 (0.8%)
Trauma	5 (2.6%)	10 (2.6%)	20 (2.6%)
Eating disorder	3 (1.6%)	0 (0.0%)	2 (0.3%)
Other	6 (3.1%)	12 (3.2%)	36 (4.7%)

Note. ADHD = attention-deficit/hyperactivity disorder. [a]12-month prorated figures because data were only collected for the 6 months ending on June 31.

Table 3 shows the frequency with which male and female callers who presented with symptoms of depression reported the various coded symptoms of depression. Depressed mood was the most common symptom for both male and female callers. In male callers, suicidal ideation, fatigue, and escaping behaviours were the next three most common symptoms. In contrast, suicidal ideation, lack of concentration and decision-making abilities, and fatigue were the next three most common symptoms in female callers. Analyses detected significant gender differences in the likelihood of reporting anger, escaping behaviours, and irritability. In all cases, men were more likely than women to report the symptom. The significant findings for the symptoms of anger and irritability were associated with small measures of effect size, ranging between $V=0.090$ and $V = 0.121$. The significant finding for escaping behaviours was associated with a small effect size as well but had a higher value of

V=0.184. This suggests that the findings regarding escaping behaviours are not only statistically significant, but also point to a stronger relationship between the variables of gender and escaping behaviours, compared to anger and irritability. With regards to the risk estimate, the odds of a male student, as opposed to a female student, not presenting with anger was 0.006. Similarly, the odds of a male student, as opposed to a female student, not presenting with irritability (0.001) or escaping behaviours (0.001) were quite low.

Table 3
SADAG Helpline Calls from University Students, 1 January 2017 – 31 June 2019: Frequency with which coded symptoms of depression were reported by the sub-sample of male and female callers who presented with symptoms of depression (N = 952)

| Symptom | Gender of Caller | | *p* | *V* | Risk |
	Male (*n* = 284)	Female (*n* = 668)			
Depressed mood	120 (42.3%)	292 (43.7%)	.366	.013	1.061
Loss of interest	14 (4.9%)	45 (6.7%)	.182	.034	0.290
Weight gain / loss	10 (3.5%)	22 (3.3%)	.497	.006	0.858
Slowed movement or speech	0.0	0.0	-	-	-
Fatigue	32 (11.3%)	60 (9.0%)	.165	.035	0.275
Guilt / worthlessness	12 (4.2%)	35 (5.2%)	.315	.021	0.509
Concentration and decision	25 (8.8%)	65 (9.7%)	.377	.015	0.654
Anger	19 (6.7%)	19 (2.8%)	.006**	.090	0.006
Irritability	14 (4.9%)	7 (1.0%)	< .0031***	.121	< 0.001
Infidelity	3 (1.1%)	1 (0.1%)	.082	.064	0.048
Escaping behaviours	26 (9.2%)	10 (1.5%)	< .0031**	.184	< 0.001
Suicidal ideation	41 (14.4%)	104 (15.6%)	.368	.014	0.656
Headache	0	3 (0.4%)	.345	.037	0.258
Low self-esteem	1 (0.4%)	11 (1.6%)	.086	.053	0.101
Disturbed sleep	18 (6.3%)	27 (4.0%)	.089	.050	0.127
Pessimism over the future	13 (4.6%)	22 (3.3%)	.216	.031	0.335

Note. Risk estimate: Odds ratio for sex (male / female)
*$p < .05$. **$p < .01$. ***$p < .0031$ (Bonferroni-corrected level).

Table 4 shows the frequency with which male and female callers who expressed suicidal ideation and presented with symptoms of depression reported the various coded symptoms of depression. Depressed mood was again the most common symptom for both male and female callers, with 120 of the 284 male callers, and 292 of the 668 female callers presenting with the symptom. In male callers, escaping behaviours was the next most common symptom, accounting for 9.20% of calls, while in female callers, the next most common symptom was fatigue, experienced by 9.70% of female callers. Analyses detected significant gender differences in the likelihood of reporting depressed mood, anger, escaping

behaviours, and irritability. In all cases, men were more likely than women to report the
symptom. The significant findings for the symptoms of depressed mood (V=1.92) and anger
(V=1.84) showed small effect sizes, while symptoms of irritability (V=.268) and escaping
behaviours (V=.268) were larger, but did not reach the 0.30 level of medium effect size. This
suggests that there is a stronger relationship between gender and the symptoms of escaping
behaviours and irritability, compared to the symptoms of depressed mood and anger, though
all 4 symptoms are statistically significant. With regards to the risk estimate, the odds of a
male student, as opposed to a female student, not presenting with anger was 0.006. Similarly,
the odds of a male student, as opposed to a female student, not presenting with irritability
(0.001) or escaping behaviours (0.001) were quite low.

Table 4
*SADAG Helpline Calls from University Students, 1 January 2017 – 31 June 2019: Frequency
with which coded symptoms of depression were reported by the sub-sample of male and
female callers who reported suicidal ideation and presented with symptoms of depression (N
= 145)*

| | Gender of Caller | | | | |
| | Male | Female | | | |
Symptom	($n = 41$)	($n = 104$)	p	V	Risk
Depressed mood	36 (87.8%)	72 (69.2%)	.015*	.192	0.313
Loss of interest	5 (12.2%)	12 (11.5%)	.557	.009	0.939
Weight gain / loss	1 (2.4%)	8 (7.7%)	.220	.098	3.33
Slowed movement or speech	-	-	-	-	-
Fatigue	9 (22.0%)	18 (19.4%)	.335	.054	0.744
Guilt / worthlessness	4 (9.8%)	10 (9.6%)	.598	.002	0.984
Concentration and decision making	7 (17.1%)	12 (11.5%)	.263	.074	0.634
Anger	5 (12.2%)	3 (2.9%)	.041*	.184	0.214
Irritability	4 (9.8%)	0.0	.006*	.268	-
Infidelity	1 (2.4%)	0.0	.283	.133	-
Escaping behaviours	10 (24.4%)	6 (5.8%)	< .0031***	.268	0.19
Suicidal ideation	(100.0%)	(100.0%)	-	-	-
Headache	0.0	1 (0.7%)	.717	.052	1.01
Low self-esteem	0.0	2 (1.9%)	.513	.074	-
Disturbed sleep	5 (12.2%)	8 (7.7%)	.288	.071	0.60
Pessimism over the future	2 (4.9%)	7 (6.7%)	.507	.035	1.407

Note. Risk estimate: Odds ratio for sex (male / female)
*$p < .05$. **$p < .01$.***$p < .0031$ (Bonferroni-corrected level).

Discussion

The main aim of this study was to investigate the presentation of depression symptoms and suicidal ideation in the sample of students that called the SADAG student helpline for assistance. It was hypothesised that male and female students would differ in the manifestation of depressive symptoms, and that these differences may be partly as the result of gender-based stereotypes. This was expected to be particularly prevalent in a social context that is characterised by relatively strong gender norms, and result in males and females presenting with behaviour that is consistent with cultural expectations of masculine and feminine behaviour. The results of the study indicated that there were significant differences in the presentation of depressive symptoms, in both the complete sample of students, as well as in the sample of suicidal students. There was a significant difference at the standard level between male and female students for the presentation of anger – with male students presenting with the symptom of anger more frequently; while there were significant differences at the corrected Bonferroni level between male and female students for escaping behaviours and irritability- with male students presenting with the symptoms more frequently as well. Trending significance was found for the symptoms of infidelity, self-esteem and disturbed sleep, with infidelity and disturbed sleep reported more frequently in male students, while self-esteem problems were reported more frequently by female students. Within the sample of suicidal students, there were similar results. There were significant differences at the standard level of significance between male and female students for depressed mood, anger and irritability; with males presenting more frequently with each symptom in the suicidal sample of students. There was also a significant difference at the adjusted Bonferroni significance level between male and female students for escaping behaviours. These findings are partially in line with the predicted hypothesis, not only as it was found that there were symptom differences between male and female students, but also because the significant differences were found in key symptoms.

Theoretical Implications

The finding that males present more frequently with anger, irritability and escaping behaviours is consistent with the literature exploring the influence of cultural stereotypes on the experience of mental illness (Hill et al., 2018; Ogrodniczuk & Oliffe, 2011). This literature suggests that these symptoms are a product of avoiding verbally communicating emotional disturbances, which males may perceive as a sign of weakness (Jithoo, 2017). While significant results were not found for differences between males and females for infidelity, the significance was trending which suggests that infidelity, as suggested in the

literature, may also be more common in males as an avoidance mechanism. Instead of verbally communicating what is perceived as weakness, males therefore either react with anger or irritability– to reclaim third lost power or control, or with escaping behaviours and infidelity to avoid admitting to the problem to themselves, family members or partners (Berger et al., 2013; Jithoo, 2017). The link between anger and suicide has been well established(Daniel, Goldston, Erkanli, Franklin, & Mayfield, 2009), and the fact that males present with anger significantly more frequently in the study may be a potential factor in what drives male suicide rates to be higher than female suicide rates. The findings regarding the expected symptoms in females were however not as positive. While the literature suggested that females would present more frequently with symptoms of anhedonia, guilt and feelings of failure and self-disappointment, only loss of self-esteem was found to be reported significantly more frequently by females (Bennett et al., 2005; Ogrodniczuk & Oliffe, 2011; Salk et al., 2016). Loss of interest, guilt/worthlessness were both non-significantly different in frequency between males and females, while the differences in reporting depressed mood between males and was found to be statistically significant in the sample of suicidal students at the standard level of significance. This significant difference was however in the opposite direction to what was hypothesised, with male student presenting with depressed mood significantly more frequently compared to female students.

Additionally, the existence of these symptom differences between genders in the manifestation and resultant experience of mental disorders points to the potential role of gender-based stereotypes in influencing behaviours around mental illness. While these symptom differences do not confirm the influence of these stereotypes, the pattern of escaping and avoiding behaviours reported in the study- particularly by males, is consistent with the literature on gender stereotypes and their influence on male help seeking (Berger et al., 2013; Ogrodniczuk & Oliffe, 2011). This suggests that there is validity in considering the possibility that cultural stereotypes that are rooted in traditional perspectives exist in various communities in South Africa (Meissner et al., 2016; Mohamed-Kaloo & Laher, 2014; Padayachee & Laher, 2014), and may be a strong contributor in not only influencing treatment seeking (Berger et al., 2013), but also the experience and manifestation of depression.

Practical Implications

The practical implications of the findings are primarily for application in the screening process for depression and suicidality. Differences between male and female students in the frequency of presentation of symptoms including anger, irritation and

escaping behaviours suggests that these symptoms may be important in identifying depression and suicidality in male students particularly. Screening practices, particularly at institutions such as Student Support Centres, may need to realign their focus from the classical DSM and ICD criteria, to a broader perspective that acknowledges the potential significance of new symptoms that may be influenced by cultural stereotypes. The differences that males and female students may have in their experiences of depression, and the resulting differences in how the disorder manifests should be reflected in screening criteria and be a strong consideration for clinicians who engage in the diagnostic process. The frequency of presentation of many of the significant symptoms -anger and escaping behaviours in particular, were higher than many of the current DSM and ICD based criteria of symptoms including weight gain/loss, headache and guilt/worthlessness. This was the case for both male and female students and may warrant the inclusion of these symptoms into the standard diagnostic criteria used for screening depression. Further studies would need to investigate the predictive value of these symptoms in predicting depression.

Furthermore, the findings also suggest that cultural stereotypes may have an influence on the manifestation of depression, along with treatment seeking behaviours. While further studies are necessary to determine the nature, influence and consequences of these stereotypes, it is clear that mental health stereotypes do exist in various communities and cultural contexts. The accurate provision of psychoeducation in such communities is no longer a suggestion, but a must, particularly with the knowledge that these stereotypes have the potential power to influence the behaviour of individuals, and potentially lead to avoidance of treatment, or anger towards oneself or others- which has been strongly tied to suicide.

Study Limitations

The limitations of the study primarily focus on the data itself. The data is captured as a case by different counsellors who use their subjective perspectives in evaluating student cases and identifying problem behaviours and symptoms. This leads to the possibility of a lack of consistency in the capturing of data based on individual subjectivity, though clear guidelines for the descriptions of each symptom do exists according to the diagnostic criteria for the DSM 5 or the ICD 10 manuals. Furthermore, since the case is recorded by the counsellor based on the information provided by the student who calls in, there is additional subjectivity that exists in how the individual themselves will report on their symptoms, and potentially forget or misreport their symptoms. This risk does however exist in any counselling situation and is unavoidable. The data was also collected directly from the

records of the South African Depression and Anxiety Group and was therefore limited to their recording practices. Therefore, specific ages of students could not be obtained, as only age ranges were available. Similarly, many of the fields had missing data that had to be removed including location, university, and academic field. The data was also limited in its structure, as the gender of the participant must either be self-identified or assigned to the caller by the counsellor as either male or female, and does not account for non-binary individuals. The data was also coded by me and the coding process adds further subjectivity to the data and its interpretation, though this is mediated through the inter-rater reliability achieved. Lastly, while the focus of the study is on student depression and the role of gender stereotypes in influencing it, the study itself does not measure gender stereotypes directly, but only evaluates whether the pattern of symptom presentation is consistent with that suggested by the literature as resulting from adherence to gender stereotypes.

Suggestions for Future Research

There is a huge need for research regarding mental illness in South Africa, as there are no regular, nationally representative studies on mental illness conducted, either in the national population or in the student population. Future research must focus on better understanding the role of gender based cultural stereotypes in influencing thinking and behaviours – both in adult and student populations. Studies must focus on better understanding the symptom of anger, both in male and female populations, particularly given its connection to suicide.

Summary and Conclusion

This study aimed at investigating gender-based symptom differences in university students with the goal of better understanding the manifestation of depression and suicidal ideation. This is the first study to evaluate telephonic case data from a national suicide helpline, and the first to investigate mental illness in a broad sample of students from different universities, provinces and communities. Previous research on gender differences suggested that symptom differences do exist between males and females, while other research suggested that cultural stereotypes on traditional gender norms may influence behaviours of sufferers, but there was little understanding of how this may present in the South African context. The findings of the study suggested that there are significant differences between male and female students in the manifestation and reporting of depression, with males presenting more frequently with anger, escaping behaviours and irritability.

These findings are in line with literature on cultural stereotypes and stigma ad their effects on males with depression, and suggests that males present with symptoms such as infidelity, escaping behaviours that allow them to wither avoid having to express emotional

vulnerability, or with symptoms such as anger that have been strongly linked to suicidal behaviours. The increased frequency of male presentation of the symptom of anger may partly explain why males are more likely to commit suicide than females.

These findings indicate that screening procedures at Student Support divisions and other major student screening locations may need to be adjusted to acknowledge the differences in the manifestation of depression between male and female students, and how these may be culturally rooted and differ between individuals from different communities. Furthermore, the existence of these symptom differences that are in line with literature suggests that gender stereotypes have a significant influence, and shows that both treatment seeking attitudes, as well as the actual manifestation of the disorder can be influenced by these stereotypes. Psychoeducation programmes are therefore of top priority in communities that exhibit cultural stereotypes and prescriptions for masculine and feminine appropriate behaviours.

Acknowledgements

References

Adjaye-Gbewonyo, K., Avendano, M., Subramanian, S. V., & Kawachi, I. (2016). Income inequality and depressive symptoms in South Africa: A longitudinal analysis of the National Income Dynamics Study. *Health & Place, 42*, 37-46. doi:10.1016/j.healthplace.2016.08.013

American Psychological Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Alrington: American Psychiatric Publishing.

Azorin, J. M., Belzeaux, R., Fakra, E., Kaladjian, A., Hantouche, E., Lancrenon, S., & Adida, M. (2014). Gender differences in a cohort of major depressive patients: Further evidence for the male depression syndrome hypothesis. *Journal of Affective Disorders, 167*, 85-92. doi:10.1016/j.jad.2014.05.058

Bantjes, J., & Kagee, A. (2013). Epidemiology of suicide in South Africa: Setting an agenda for future research. *South African Journal of Psychology, 43*(2), 238-251. doi:10.1177/0081246313482627

Bantjes, J., Kagee, A., McGowan, T., & Steel, H. (2016). Symptoms of posttraumatic stress, depression, and anxiety as predictors of suicidal ideation among South African university students. *Journal of American College Health, 64*(6), 429-437. doi:10.1080/07448481.2016.1178120

Bantjes, J., Kagee, A., & Meissner, B. (2016). Young men in post-apartheid South Africa talk about masculinity and suicide prevention. *South African Journal of Psychology, 47*(2), 233-245. doi:10.1177/0081246316665990

Bantjes, J., Tomlinson, M., Weiss, R. E., Yen, P. K., Goldstone, D., Stewart, J., . . . Rotheram-Borus, M. J. (2018). Non-fatal suicidal behaviour, depression and poverty among young men living in low-resource communities in South Africa. *BMC Public Health, 18*. doi:10.1186/s12889-018-6104-3

Bennett, D. S., Ambrosini, P. J., Kudes, D., Metz, C., & Rabinovich, H. (2005). Gender differences in adolescent depression: Do symptoms differ for boys and girls? *Journal of Affective Disorders, 89*(1-3), 35-44. doi:10.1016/j.jad.2005.05.020

Berger, J. L., Addis, M. E., Green, J. D., Mackowiak, C., & Goldberg, V. (2013). Men's reactions to mental health labels, forms of help-seeking, and sources of help-seeking advice. *Psychology of Men & Masculinity, 14*(4), 433-443. doi:10.1037/a0030175

Canetto, S. S., & Sakinofsky, I. (1998). The Gender Paradox in Suicide. *Suicide and Life-Threatening Behaviour, 28*(1).

Daniel, S. S., Goldston, D. B., Erkanli, A., Franklin, J. C., & Mayfield, A. M. (2009). Trait anger, anger expression, and suicide attempts among adolescents and young adults: a prospective study. *J Clin Child Adolesc Psychol, 38*(5), 661-671. doi:10.1080/15374410903103494

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioural and biomedical sciences. *Behavioural Research Methods, 39*, 175-191.

Hill, L. M., Gottfredson, N. C., Kajula, L. J., Pence, B. W., Go, V. F., Moody, J., & Maman, S. (2018). Changes in Anxiety and Depression symptoms predict sexual risk behaviors among young men living in Dar es Salaam, Tanzania. *AIDS and Behavior, 22*(5), 1435-1445. doi:10.1007/s10461-017-1991-3

Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. (2013). A systematic review of studies of depression prevalence in university students. *Journal of Psychiatric Research, 47*(3), 391-400. doi:10.1016/j.jpsychires.2012.11.015

Jansen, J., & Walters, C. (2019). The recent crisis in South African universities. *International Higher Education*(96). doi:10.6017/ihe.2019.96.10779

Jithoo, V. (2017). Contested meanings of mental health and well-being among university students. *South African Journal of Psychology, 48*(4), 453-464. doi:10.1177/0081246317731958

Korb, I., & Plattner, I. E. (2014). Suicide ideation and depression in university students in Botswana. *Journal of Psychology in Africa, 24*(5), 420-426. doi:10.1080/14330237.2014.997010

Lara, G. A. G., Zuniga, J. O., Perez, O. C., Solis, S. H., Jimenez, C. E. P., & Mendez, M. C. (2018). Predictors of suicidal ideation and depressive symptoms among adolescents in Chiapas, Mexico. *Ciência & Saúde Coletiv, 23*(4), 1089-1096. doi:10.1590/1413-81232018234.14492016

Mabasa, N. (2018). Suicide on campus:Spate of deaths raises alarm. Retrieved from https://www.dailymaverick.co.za/article/2018-10-28-suicide-on-campus-spate-of-deaths-raises-alarm/

Mall, S., Mortier, P., Taljaard, L., Roos, J., Stein, D. J., & Lochner, C. (2018). The relationship between childhood adversity, recent stressors, and depression in college students attending a South African university. *BMC Psychiatry, 18*(1), 63. doi:10.1186/s12888-017-1583-9

Maphasa, T. (2017). The mental effects of #FeesMustFall haunt me to this day. Retrieved from http://livemag.co.za/projectdemoza/mental-effects-of-feesmustfall/

Meissner, B., Bantjes, J., & Kagee, A. (2016). I would rather just go through with it than be called a wussy: An exploration of how a group of young South African men think and talk about suicide. *American Journal of Men's Health, 10*(4), 338-348. doi:10.1177/1557988314568183

Mohamed-Kaloo, Z., & Laher, S. (2014). Perceptions of mental illness among Muslim general practitioners in South Africa. *South African Medical Journal, 104*(5), 350-352. doi:10.7196/samj.7863

Naidoo, S. S., Naidoo, U., & Naidoo, A. (2015). Unmasking depression in persons attempting suicide. *South African Family Practice, 57*(2), 83-87. doi:10.1080/20786190.2014.1002219

Naidu, E. (2018). 47 rapes on SA campuses last year; varsities to take action. Retrieved from https://www.iol.co.za/news/south-africa/western-cape/47-rapes-on-sa-campuses-last-year-varsities-to-take-action-17471548

Nalugya-Sserunjogi, J., Rukundo, G. Z., Ovuga, E., Kiwuwa, S. M., Musisi, S., & Nakimuli-Mpungu, E. (2016). Prevalence and factors associated with depression symptoms among school-going adolescents in Central Uganda. *Child and Adolescent Psychiatry and Mental Health, 10*, 39. doi:10.1186/s13034-016-0133-4

Nowotny, K. M., Peterson, R. L., & Boardman, J. D. (2015). Gendered contexts: variation in suicidal ideation by female and male youth across U.S. states. *Journal of Health and Social Behavior, 56*(1), 114-130. doi:10.1177/0022146514568350

Ogrodniczuk, J. S., & Oliffe, J. L. (2011). Men and Depression. *Canadian Family Physician, 57*, 153-155.

Oswalt, S. B., Lederer, A. M., Chestnut-Steich, K., Day, C., Halbritter, A., & Ortiz, D. (2018). Trends in college students' mental health diagnoses and utilization of services, 2009-2015. *Journal of American College Health*, 1-11. doi:10.1080/07448481.2018.1515748

Othieno, C. J., Okoth, R., Peltzer, K., Pengpid, S., & Malla, L. O. (2015). Traumatic experiences, posttraumatic stress symptoms, depression, and health-risk behavior in relation to injury among University of Nairobi students in Kenya. *International Journal of Psychiatry in Medicine, 50*(3), 299-316. doi:10.1177/0091217415610310

Othieno, C. J., Okoth, R. O., Peltzer, K., Pengpid, S., & Malla, L. O. (2014). Depression among university students in Kenya: prevalence and sociodemographic correlates. *Journal of Affective Disorders, 165*, 120-125. doi:10.1016/j.jad.2014.04.070

Padayachee, P., & Laher, S. (2014). South African Hindu psychologists' perceptions of mental illness. *Journal of Religious Health, 53*(2), 424-437. doi:10.1007/s10943-012-9646-1

Peter, Z. (2018). Depression steals more students_ Wits student takes his life, another attempts suicide. Retrieved from https://city-press.news24.com/News/depression-steals-more-students-wits-student-takes-his-life-another-attempts-suicide-20181025

Pillay, N., Ramlall, S., & Burns, J. K. (2016). Spirituality, depression and quality of life in medical students in KwaZulu-Natal. *South African Journal of Psychiatry, 22*(1), 731. doi:10.4102/sajpsychiatry.v22i1.731

Rabe, L. (2018). Open letter to UCT students on the death of Prof Mayosi. Retrieved from https://www.news.uct.ac.za/article/-2018-08-01-open-letter-to-uct-students-on-the-death-of-prof-mayosi

Riddle, S. (2019). Wits accommodation woes force homeless student to sleep on campus. Retrieved from https://briefly.co.za/25289-wits-accommodation-woes-force-homeless-student-sleep-campus.html#25289

Salk, R. H., Petersen, J. L., Abramson, L. Y., & Hyde, J. S. (2016). The contemporary face of gender differences and similarities in depression throughout adolescence: Development and chronicity. *Journal of Affective Disorders, 205*, 28-35. doi:10.1016/j.jad.2016.03.071

Schrijvers, D. L., Bollen, J., & Sabbe, B. G. (2012). The gender paradox in suicidal behavior and its impact on the suicidal process. *Journal of Affective Disorders, 138*(1-2), 19-26. doi:10.1016/j.jad.2011.03.050

Sigurdsson, B., Palsson, S. P., Aevarsson, O., Olafsdottir, M., & Johannsson, M. (2015). Validity of Gotland Male Depression Scale for male depression in a community study: the Sudurnesjamenn study. *Journal of Affective Disorders, 173*, 81-89. doi:10.1016/j.jad.2014.10.065

Sun, L., Zhou, C., Xu, L., Li, S., Kong, F., & Chu, J. (2017). Suicidal ideation, plans and attempts among medical college students in china: The effect of their parental characteristics. *Psychiatry Research, 247*, 139-143. doi:10.1016/j.psychres.2016.11.024

Tomlinson, M., Grimsrud, A. T., Stein, D. J., Williams, D. R., & Myer, L. (2009). The epidemiology of major depression in South Africa: Results from the South African Stress and Health study. *South African Medical Journal, 99*(5).

van Zyl, P. M., Joubert, G., Jadhunandan, S., Fredericks, F., Bowen, E., Plooy, F. d., & Metz, L. (2017). Depression, anxiety, stress and substance use in medical students in a 5-year curriculum. *African Journal of Health Professions Education*. doi:10.7196/AJHPE.2017.v9i2.705

WHO. (2014). *Preventing suicide: A global Imperative*. Retrieved from https://www.who.int/mental_health/suicide-prevention/world_report_2014/en/

WHO. (2017). Depression and Other Common Mental Disorders: Global Health Estimates [Press release]. Retrieved from https://www.who.int/mental_health/management/depression/prevalence_global_health_estimates/en/

WHO. (2018). Depression key facts. Retrieved from https://www.who.int/en/news-room/fact-sheets/detail/depression

Zeng, B., Zhao, J., Zou, L., Yang, X., Zhang, X., Wang, W., . . . Chen, J. (2018). Depressive symptoms, post-traumatic stress symptoms and suicide risk among graduate students: The mediating influence of emotional regulatory self-efficacy. *Psychiatry Research, 264*, 224-230. doi:10.1016/j.psychres.2018.03.022

Appendix A
SADAG Helpline Log Sheet

AFTERHOURS HELPLINE LOG SHEET   DAISY: ☐

Date: Counsellor:

Helpline: University Name:

Time: Daytime   After hours   Weekend   Exact time:

Source: Call: SMS: Email: Contact a Counsellor:

Caller: Student: Staff: Family Member: Friend: Other:

Student Number: Year: Course/Faculty:

DISTRESS RATING: (1 very distressed - 5 very calm)   BEGINNING   1 2 3 4 5   END   1 2 3 4 5

Name: Number: Email:

Age: Gender: Male   Female   Race: African   White   Coloured   Indian   Other

Area/Address: Postal Code: Province:

Location: RES STUDENT (Name of Res):   OFF CAMPUS

Did they call for: Themselves   Loved one   Other

Medical Aid: Yes   No   If yes, which one?

Where did they hear about the line? Website   Radio/Newspaper   Poster   Intranet   Other

Why did the caller call?

MH info	Support Group	Gender-based violence	Sexual Assault
ADHD	Anxiety/Panic	Bipolar	Depression
Loss/Grief	Postnatal Depression	PTSD/Trauma	Family Relationship Issues
Abuse	Schizophrenia	Stress	Romantic Relationship Issue
Substance Abuse	Suicide	Financial Issues	Other:

If Mental Illness, which one?   Diagnosed?   By who?

How did you help?

Government Hospital/Clinic	GP	Online	NGO/Helpline	Rehab
Private Hospital/Clinic	Psychologist	Psychiatrist	Social Worker	Shelter
Support Group	Police Station	Company EAP	University Support Services	

Other:

Summary information of the call

Action Points:

FOLLOW UP DETAILS

Reported to Vanishaa – email both (newsletter@anxiety.org.za / vanishaa124@gmail.com)

FOLLOW UP CALL NEEDED : Date _____ Time _____

Appendix B

Coding Questionnaire

Name: Participant ID:

Age group: University:

Previous Diagnosis: Date of call:

Sex:

What are the main problems identified in the call?

	Reason for Call	Tick
1	Clinical Depression	
2	Sub-clinical Depression	
3	Anxiety	
4	ADHD	
5	Schizophrenia	
6	HIV	
7	Relationships	
8	Substance abuse	
9	General Stress	
10	Academic Stress	
11	Sexual Abuse	
12	Personality Disorder	
13	Trauma	
14	Eating Disorder	
15	Other	

Which of the following symptoms have been reported?

	Symptom	Tick
1	Depressed mood most of the day	
2	Diminished interest or pleasure in activities	
3	Significant weight loss or gain or changes in appetite	
4	Slowing of thought or physical movement	
5	Fatigue	
6	Feelings of guilt or worthlessness	
7	Diminished ability to concentrate or make decisions	
8	Anger and irritation	
9	Immersion in work or play	
10	Infidelity	
11	Escaping behaviours	
12	Headaches	
13	Self-esteem issues	
14	Disturbed sleep	
15	Pessimism over the future	
16	Suicidal ideation	