

ACADEMIC DISTRESS AND DISORDERED EATING IN STUDENTS DURING THE
COVID-19 PANDEMIC: A CROSS-SECTIONAL STUDY AT A SOUTH AFRICAN
UNIVERSITY

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Abstract

University students are at risk for reduced mental wellbeing, particularly during the Covid-19 pandemic, and among the most common problems experienced are academic distress and eating concerns. Through a stress-coping model lens, a link between academic distress and disordered eating in student populations appears possible but has not previously been explored. The present study examines this relationship in a South African undergraduate sample. Data were collected during the Covid-19 pandemic using a cross-sectional, correlational survey design and the Counseling Center Assessment of Psychological Symptoms (CCAPS). The results of a multiple regression analysis indicate that academic distress most strongly predicts eating concerns, followed by the demographic variables of female gender and black racial identification. This novel finding suggests that academic institutions should consider the broader academic environment as point of intervention for the prevention and treatment of disordered eating in students.

Keywords: academic distress, covid-19, disordered eating, South Africa, students

**Academic Distress and Disordered Eating in Students During the Covid-19 Pandemic:
A Cross-Sectional Study at a South African University**

Introduction

Young people attending university are at risk for reduced mental wellbeing (Storrie et al., 2010) and, specifically, academic distress. Siegel (2008) defines academic distress as a discrepancy between a student's perception of the current demands, pressures, and challenges in the academic environment relative to their available personal resources for coping. The overall academic pressure placed on students, as well as other factors such as financial difficulties, parental or social expectations, and adapting to the campus environment, may all contribute to the experience of academic distress (Siegel, 2008). In 2020, the lockdown restrictions imposed on tertiary institutions as a result of the Covid-19 pandemic placed additional strain on students. Those unable to cope with the stress may develop maladaptive behaviours and symptoms of mental illness (Storrie et al., 2010), including disordered eating.

Eating disorders are among the most common mental health problems experienced by university students (Warwick et al., 2008) and have been linked to high levels of perceived stress (Fragkos & Frangos, 2013; MacNeil et al., 2012). Research shows that negative emotions act as triggers for binge-eating (Groesz et al., 2012; Leehr et al., 2015; O'Neill et al., 2020; Schulte, 2016) and emotional eating (Bennett et al., 2013; Brantley et al., 2020). Moreover, individuals engage in disordered eating behaviours, such as bingeing and purging, in order to reduce negative affect (Berg et al., 2013; Berg et al., 2015). Stress was additionally found to be a significant predictor of orthorexia (dysfunctional preoccupation with healthy eating) in both men and women (Stutts, 2020). The mechanism behind the relationship between stress and disordered eating may be attributed to the individual's coping style. For example, studies have found stress and disordered eating to be associated with

emotion-focused and avoidant coping styles in some populations (Sulkowski et al., 2011; Rodino et al., 2018). It can therefore be hypothesized that a similar relationship exists between academic distress and disordered eating.

Through a stress-coping model lens, a link between academic distress and disordered eating in student populations appears possible but has not yet been explored. This study sought to answer the question: *is there a relationship between academic distress and disordered eating in university students?*

Impact of the COVID-19 pandemic on students

South African universities were closed on 26 March 2020 to limit the spread of the novel coronavirus, and from 1 June were permitted to open under restrictions that resulted in the majority of academic activities, such as lectures and assessments, taking place on an online platform. Additionally, dates for graduations, academic terms, examinations, and holidays were in many cases postponed or changed. Pretorius (2021) reported higher levels of depression and hopelessness in a sample of South African health care students during Covid-19 compared to previous research. In a second study, completed during the first national lockdown in 2020, Pretorius and Padmanabhanunni (2021) found significantly raised levels of loneliness, anxiety and reduced life satisfaction among students in the Western Cape. Visser and Law-van Wyk (2021) corroborated these findings. The available literature appears to indicate a noteworthy decline of mental wellbeing in South African students as a result of the Covid-19 pandemic. Although academic distress has not been investigated specifically as a contributing factor, Laher et al. (2021) reported themes related to academic distress in their local student sample, such as “challenges of online learning”, “difficulties understanding course material due to an absence of interaction”, and “time management challenges” (p. 223).

Recent international research has documented a similar increase in stress and anxiety experienced by students during the pandemic (Debowska et al., 2020; Essadek & Rabeyron, 2020; Husky et al., 2020; Kaparounaki et al., 2020; Odriozola-González et al., 2020; Son et al., 2020). This increase has been correlated to a delay in academic activities and graduations (Cao et al., 2020; Wang et al., 2020), challenges adapting to distance learning methods (Wang et al., 2020), difficulty maintaining focus on studies (Kecojevic et al., 2020), and fear of falling behind academically (Islam et al., 2020). Moreover, Odriozola-González et al. (2020) found that undergraduate students suffered significantly higher rates of stress compared to their postgraduate counterparts. In light of these findings, it is likely that academic distress in students may also be increased as a result of the COVID-19 pandemic and the related restrictions on educational institutions.

Coping theory

How students manage the unprecedented stress associated with the pandemic may be dependent on the coping styles they have developed over the course of their lives. Seminal theories of stress and coping (Lazarus & Folkman, 1984) propose that individuals have different styles of coping with stress. Broadly, coping strategies may be classified as either adaptive or maladaptive. Problem- or action-oriented coping is usually more adaptive, as the individual attempts to combat the stressor itself (Lazarus, 1991). For example, Laher et al. (2021) found that South African students using positive coping strategies reported adequate mental health during the Covid-19 pandemic. Maladaptive coping, however, is most associated with avoidant coping styles. Those who cope using avoidant strategies try to escape their stress by various means, including denial, disengagement, and substance use (Carver et al., 1989; Merrill & Thomas, 2013), as well as disordered eating (Anderson & Martens, 2006; Blackburn et al., 2006; McGarrity et al., 2019; Ward & Hay, 2015).

When considering avoidant coping styles, coping theory provides a framework for the possible relationship between academic distress and disordered eating. It can be hypothesized that individuals with maladaptive coping styles would be more likely to experience high levels of academic distress, as their coping resources would be insufficient to meet their perceived academic demands and challenges. Subsequently, they may engage in avoidant coping strategies that result in disordered eating attitudes and behaviours such as restricting food or bingeing.

Student mental health and the CCAPS

A student who is unable to cope effectively with mental health problems, such as eating disorders and academic distress, is at risk of failing or dropping out of university (American College Health Association, 2008; Coates, 2014; Petersen et al., 2009). The high levels of dropout and failure in South African universities are concerning. According to a report by the Task Team on Undergraduate Curriculum Structure (Council on Higher Education [CHE], 2013), a mere 35% of the total student intake at higher institutions in South Africa graduate within five years of commencing their studies. Furthermore, completion rates for white students are 50% higher on average than African rates, pointing to a racial bias in access, success, and completion rates in the country's higher education system (CHE, 2013). Young's (2009) findings from a local university sample support this indication of bias, as black students reported significantly greater psychological distress and self-harm risk compared to white students. Scholars (Vincent & Hlatshwayo, 2018; Young, 2009) suggest that factors such as low socioeconomic status, inadequate schooling, lack of social capital, and the experience of being a first-generation student contribute to this phenomenon.

The purpose of psychological support services at local institutions is to address the needs of struggling, distressed students (Munyaradzi & Addae, 2019). Psychological

assessment forms part of the non-academic support that these services offer (Munyaradzi & Addae, 2019). Developed intentionally with the aim of establishing an assessment tool for university counselling centres that is clinically applicable, comprehensive, inexpensive, and highly effective, the Counseling Center Assessment of Psychological Symptoms (CCAPS) is a useful measure of a student's psychological wellbeing (Youn et al., 2015). Moreover, the CCAPS includes subscales that are particularly relevant to the common psychological problems students experience, and which do not feature in many alternative measures: academic distress, eating concerns, family distress, and substance or alcohol use (Locke et al., 2011; Locke et al., 2012). The CCAPS represents a useful tool for psychological research at universities, due to its focus on student populations. This is especially true for South Africa, where research on student mental health is lacking despite the impact psychological distress has on dropout and failure rates.

Disordered eating in student populations

Despite the established relationship between stress and disordered eating, there is currently no available literature that concerns the possible interaction between academic distress and disordered eating.

The recent eating disorder research in South Africa is almost exclusively from adolescent samples (e.g. Gitau et al., 2014a; Gitau et al., 2014b, Morris & Szabo, 2013; Pedro et al., 2016), while much of the existing local literature on eating disorders in student populations was published over 15 years ago (e.g. Edwards et al., 2003; Edwards & Moldan, 2004; Le Grange et al., 1998; Wassenaar et al., 2000). The latter studies have primarily investigated racial differences in eating disorder epidemiology, with mixed results. Le Grange et al. (1998) reported that black participants showed higher levels of disordered eating attitudes in comparison to students of other races, whereas Edwards and Moldan

(2004) suggested white female students are at higher risk for bulimia nervosa than their black counterparts. Other researchers found similar levels of disordered eating attitudes or behaviours across different race groups in their student samples (Edwards et al., 2003; Wassenaar et al., 2000).

This variance in the demographic prevalence of disordered eating disrupts the SWAG (“skinny, white, affluent girls”) stereotype historically associated with eating disorders (Bruch, 1973; Gordon et al., 2002; Nelson et al., 2011). Yet, considerable international research spanning the last ten years has documented a lack of significant disparities in the general prevalence of eating disorder symptomology between black and white individuals (Cheng et al., 2019; Franko et al., 2007; Lydecker & Grilo, 2016; Marques et al., 2011), despite slight differences in the presentations of eating disorder subtypes. Acculturative stress has been named as a possible contributor to increased disordered eating pathology in racial minority populations (Claudat et al., 2015; Shekriladze et al., 2019). As for gender as a predictor of risk, young women continue to constitute the vast majority of anorexia nervosa and bulimia nervosa cases, whereas binge-eating disorders have a similar prevalence across genders (American Psychiatric Association [APA], 2013; Udo & Grilo, 2018).

It is important to note, however, that eating disorder prevalence rates for men and black women may be under-reported. Studies in the USA have found that women of colour and men exhibiting disordered eating behaviours are less likely to be recognized, diagnosed and treated for their symptoms (Sonneville & Lipson, 2018; Sala et al., 2013). Subsequently, there is much to be explored in the realm of eating disorders within the cultural context of South Africa.

Method

Design

The study employed a cross-sectional, correlational survey design to determine whether academic distress and eating concerns of undergraduate students were related and, if so, to what extent. Data were collected from participants during the second academic term of 2020 and in the midst of the Covid-19 pandemic. The questionnaire (see Appendix B) was available for ten days, hosted on SurveyMonkey, and included details of the scope of the study, a demographic questionnaire, and the CCAPS-62.

Sampling

To recruit participants, undergraduate students who had not withheld permission to receive such invitations were invited to participate in the study via an email sent to their Rhodes University addresses (see Appendix A).

Participants

Participants were undergraduate students from Rhodes University in the Eastern Cape, South Africa. Of the 3878 students invited to participate, 1039 responded, although 24 withheld consent, and 85 accessed the survey but did not complete it in full. A final sample of 930 participants (24% response rate) completed the survey. Of this sample, 622 students identified their gender as female (67%), 243 as male (26%), and 63 as other (7%). Participants included 803 black students (86%) and 127 white students (14%)¹, as well as 394 first years (42%), 260 second years (28%), 215 third years (23%) and 61 fourth years (7%).

¹ As is convention in South Africa, in this article Black racial identification refers to those who represent groups that were oppressed during apartheid, including African, Indian and Coloured South Africans (Durrheim, Mtose, & Brown, 2011). However, the use of race as a variable in survey research is not without controversy. The consensus among social scientists, nevertheless, is that although socially constructed, race remains an important demographic variable as it continues to be a social reality for most South Africans and an important indicator of life opportunities and the impact of the legacy of apartheid (Bowman, Seedat, Duncan, & Burrows, 2006).

The mean and median age of participants was 20 years. Most participants (62%) reported that they lived in university residences prior to the Covid-19 pandemic. However, at the time of data collection, only 6% were doing so and 76% reported staying with their parent(s) or guardian(s).

Measures

The academic distress and eating concerns subscales of the CCAPS-62 were used to collect data for this study. As discussed above, the CCAPS-62 was designed to be used for research and treatment purposed in university counselling centres (Youn et al., 2015). The CCAPS-62 consists of 62 items and 8 subscales that have been derived through factor analysis, as well as the Distress Index (DI) as a measure for general distress (Youn et al., 2015). A subscale is scored by the mean of its questions, distress increasing with the score (Youn et al., 2015). The measure uses a form of Likert scale where participants are asked to rate their answer for each question regarding its applicability to themselves in the previous 2 weeks and takes 7 to 10 minutes to complete in full (Youn et al., 2015).

While the CCAPS-62 has not, to our knowledge, previously been used in South Africa, it has been widely used internationally and with diverse samples of students. Cross-cultural analyses suggest that the subscales function as intended across different cultural contexts, though there may be some doubt about the depression subscale that does not perform as well as the others (Locke et al., 2011; McAleavey et al., 2012; McClain, 2016). Measures of internal consistency are both high for the original normative data as reported in the *CCAPS user manual* (Center for Collegiate Mental Health, 2015) and for these South African data, where Cronbach's Alpha index ranges from .80 to .92.

Data analysis

Descriptive and inferential statistics were computed using MedCalc Statistical Software version 20.009. Student t-tests using the reported mean, standard deviation and sample size of the present sample and the reported US norms was calculated to compare local and international means. Additionally, the means and related statistics were calculated for the individual items of the eating concerns subscale (See Table 1) and for the total eating concerns scores for the various demographic and other variables (See Table 2). The means were compared statistically by t-test for bivariate, and one-way analysis of variance for multivariate comparisons to identify those variables that might be statistically associated with eating concerns. Standard multiple regression was computed to (a) determine the size of the overall relationship between eating concern scores and the academic distress and other variables; and (b) to determine how much each independent variable uniquely contributes to that relationship.

Ethics

Data collection commenced once permission was granted by the Rhodes University Ethical Standards Committee (RUESC, See Appendix C) and the Academic Registrar. Participants indicated consent, were free to decline to participate, and had their privacy protected through confidentiality and anonymity.

Results

Descriptive and inferential statistics

The result of the comparison between the local mean scores of the samples and the reported US norms is statistically significant ($t = 10.829$, $df = 143488$, $P < 0.01$). The local participants report much higher levels of eating concerns than the US normative sample (Center for Collegiate Mental Health, 2015). Similarly, the reported level of academic

distress is higher in the local sample compared to the same normative data ($t=15.797$, $df=143488$, $p < 0.01$).

Table 1 indicates that concerns about shape and weight are much more prevalent than concerns about eating and obsessing about food. Efforts to restrict eating or a sense of lacking control are least common.

Table 1

Mean and median scores for the individual items of the eating concerns subscale

Item	n	Mean	SD	Median	IQR
19. I am satisfied with my body shape	947	2.05	1.45	2	2
22. I am dissatisfied with my weight	930	2.00	1.57	2	4
25. I eat too much	930	1.37	1.41	1	2
13. I think about food more than I would like to	947	1.36	1.45	1	2
48. I purge to control my weight	919	1.12	1.37	0	2
61. The less I eat, the better I feel about myself	919	1.07	1.43	0	2
5. I feel out of control when I eat	947	0.96	1.30	0	2
34. I diet frequently	930	0.85	1.26	0	2
31. When I start eating I can't stop	930	0.78	1.17	0	1

Table 2 reports the descriptive statistics for eating concerns scores for the various groups. Of the reported variables, students who identify as men report a statistically significantly lower mean score than those who identify as women (and those who identify as non-binary gender are too small a group for meaningful statistical comparison), while those who identify as white report statistically significantly higher mean scores than those who identify as black.

Table 2*Descriptive statistics for eating concerns according to groups*

Group	n	Mean	SD	p
Non-Binary gender orientation	5	1.84	1.21	
Male	243	1.00	0.75	
Female	620	1.41	0.93	< 0.01
Black	803	1.26	0.89	
White	127	1.44	0.93	0.03
First-generation student	313	1.26	0.9	
Not a first-generation student	617	1.3	0.89	0.51
NSFAS funded	465	1.25	0.85	
Other funded	464	1.32	0.93	0.21
Lockdown accommodation with parents / guardians	711	1.3	0.9	
Independent lockdown accommodation	219	1.24	0.87	0.39
Year 1	394	1.29	0.87	
Year 2	260	1.27	0.86	
Year 3	215	1.24	0.95	
Year 4	61	1.44	0.99	0.49
First language is the language of instruction	270	1.32	0.93	
First language is not the language of instruction	625	1.25	0.86	0.28

Multiple regression analysis

Standard multiple regression was used to address the following questions: (i) what is the size of the overall relationship between eating concern scores and the academic distress, gender, and race variables? (ii) how much does each independent variable uniquely contribute to that relationship?

In standard multiple regression, all predictor variables are entered into the regression equation simultaneously, showing how much each variable uniquely contributes to variance

in the dependent variable. A significant regression equation was found ($F(3.861)=51.068$, $p<0.00$), with an R of .151, indicating that approximately 15% of the variance of the eating concern scores can be accounted for by the linear combination of academic distress, female gender identification, and black racial identification. Moreover, the analysis shows that academic distress ($B = 0.298$, $p < 0.01$), gender ($B=0.386$, $p<0.01$), and race ($B = 0.243$, $p < 0.01$) significantly predict eating concern scores.

The partial correlation coefficient r_{partial} is the coefficient of correlation of the independent variable with the dependent variable, adjusted for the effect of the other variables in the model. Of the three statistically significant predictor variables, academic distress ($r_{\text{partial}} = .332$) most strongly predicts eating concerns, followed by female gender identification ($r_{\text{partial}} = .0204$) and black racial identification ($r_{\text{partial}} = 0.101$).

Table 3

Regression analysis

Independent variables	Coefficient	Std. Error	r_{partial}	t	P
Academic Distress	0.298	0.029	0.332	10.315	<0.01
Female Gender Identification	0.386	0.063	0.204	6.107	<0.01
Black Racial Identification	0.243	0.081	0.101	2.982	<0.01

Discussion

The present study sought to determine whether a relationship existed between academic distress and eating concerns in a student sample during the Covid-19 pandemic, using the CCAPS-62 measure. The effects of the demographic variables of race and gender on this relationship were additionally investigated. Overall, 15% of the variance of eating concern

scores was accounted for by the linear combination of academic distress, female gender identification, and black racial identification. Furthermore, the results show that, of the three independent variables, academic distress most strongly predicted eating concerns. The demographic variables of female gender and black racial identification were less strongly associated with eating concerns.

The female gender bias towards increased eating concerns found in this sample mirrors previous findings placing women at greater risk of developing disordered eating behaviours (APA, 2013; Fragkos & Frangos, 2013). Higher eating concerns among black students, however, is more poorly documented. Recent eating disorder literature has demonstrated a relatively equal prevalence across individuals of different races (Cheng et al., 2019; Franko et al., 2007; Lydecker & Grilo, 2016; Marques et al., 2011). The current findings are in line with those of a 2-year study of South African students published in 1998 (Le Grange et al.) which found, unexpectedly at the time, significantly greater eating disorder psychopathology in black participants in comparison to participants of other races. In light of these findings, it appears that the traditional “SWAG” stereotype for individuals with eating disorders may now be considered wholly outdated. Further research in different populations, spanning across various age groups and community contexts, would be beneficial in continuing to elucidate the current picture of eating disorder risk.

In comparison to previous, international studies (Center for Collegiate Mental Health, 2015) using the CCAPS-62 measure, the participants displayed higher levels of academic distress and eating concerns. A possible explanation may be the impact of the Covid-19 pandemic, which has greatly increased students’ general distress and anxieties (Debowska et al., 2020; Essadek & Rabeyron, 2020; Husky et al., 2020; Kaparounaki et al., 2020; Odriozola-González et al., 2020; Pretorius & Padmanabhanunni, 2021; Son et al., 2020; Visser & Law-van Wyk, 2021). Academic distress levels were likely inflated as a result. It

should therefore not be assumed that South African students experience greater levels of distress than students in the US until a comparison can be made to a setting without the acute influence of the Covid-19 pandemic.

The results from the multiple regression analysis supported the study's hypothesis that a relationship exists between academic distress and eating concerns. The finding that academic distress predicts eating concerns in students is new and has not previously been investigated in the literature. Additionally, academic distress was the strongest predictor of eating concerns in this sample when compared to other independent variables. The mechanism underlying the development of disordered eating in students is therefore less related to their racial or gender identity and more likely an outcome of increased distress caused by their academic environment and lack of coping skills.

These findings have significant implications for the prevention and treatment of disordered eating in student populations. Previously, interventions have focused on addressing the symptoms of eating disorders once they have already manifested. Considering the predictive value of academic distress in students' eating concerns, preventative strategies may target academic distress as a considerable risk factor for mental illness in students, specifically eating disorders. In lieu of university counselling centres being solely responsible for the treatment of students with eating disorders, it is suggested that lecturers as well as other professionals implicated in the management of students' academic environment become actively involved in academic distress prevention and intervention strategies. Academic distress may now be investigated as a point of intervention for the prevention and treatment of disordered eating in students. It is suggested that the allocation of university resources should be redirected to address the cause of these students' problems, as opposed to their symptomatic treatment in counselling centres.

While the current research has contributed novel and pertinent information regarding the development of disordered eating in student populations, several questions remain unanswered. Maladaptive and avoidant coping has been offered as a possible explanation of the underlying relationship between academic distress and eating concerns. However, further investigation is needed. It is recommended that future research considering these variables include a qualitative component, in order to gather information about the process whereby academic distress predicts eating concerns.

The data suggest that, of the different items that measure eating concerns, concerns about body shape and weight were predominant. It is possible that this is exacerbated by the pandemic lockdown that restricted opportunities for exercise, while the supervision of parents and guardians after students had been sent home from campus might have curtailed opportunities to purge or restrict intake. While this observation is speculative, it does suggest that the pattern of disordered eating may change once students are on campus under conditions of reduced supervision.

The present study had some caveats and limitations in scope and method. Firstly, the impact of the Covid-19 pandemic likely caused increased distress levels overall and one should not assume that the same pattern of findings will be obtained post the pandemic. Secondly, the CCAPS-62 instrument used to measure the participants' eating attitudes and behaviours does not contain certain items that may be more associated with disordered eating in men, such as steroid use and excessive exercise. This limitation should be considered carefully when examining the gender prevalence in the study. Finally, although the study's sample was adequately diverse and probably representative of the larger population, the sampling method employed did not use stratification to ensure a random, representative sample.

Conclusion

Considering the prevalence of mental illness in young people and its detrimental effects on study completion rates, this study's novel finding that academic distress is strongly related to disordered eating may represent an important shift in the common mental health intervention strategies employed in universities and colleges. Preventative approaches targeting the broader academic environment in order to reduce academic distress should be prioritized in tertiary institutions' plans for addressing student mental illness. In addition, the high rates of distress reported by the sample contribute to the growing knowledge base on the far-reaching effects of the Covid-19 pandemic.

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Appendix A

Email to Students

Dear Undergraduate Student,

Rhodes university student psychological symptoms survey

You are one of 2000 undergraduate students who have been randomly selected to participate in a survey that has been designed to collect data about academic distress, disordered eating, substance use/abuse, and suicidal ideation among students at Rhodes University

The survey will usually take around ten minutes to complete.

Your answers are strictly confidential and we will not divulge individual results to anyone. All identifying data will be removed and only aggregated, anonymised results will be reported in academic publications.

This research project has been approved by the Psychology Department's Research Ethics and Proposal Review Committee and the Rhodes University Ethics Standards Committee. Permission to conduct the survey amongst Rhodes students was provided by the Registrar.

If you are interested in participating in the research, please click on the link below that will take you to the first page of the survey where you will be provided with participant information and a button to indicate that you give your consent to participating in this research:

[SurveyLink]

Alternatively, you are free to opt out by selecting the following link, in which case you will not receive any further invitations:

[OptOutLink]

For further information, please contact Professor Charles Young, Department of Psychology, Rhodes University at c.young@ru.ac.za or 046 603 8541.

Best wishes,

Charles

Professor Charles Young

Associate Professor & Counselling Psychologist

Department of Psychology

Powered by SurveyMonkey

Appendix B

CCAPS-62

Counseling Center Assessment of Psychological Symptoms — CCAPS-62

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Name: _____ Date: _____

INSTRUCTIONS: The following statements describe thoughts, feelings, and experiences that people may have. Please indicate how well each statement describes you, during the past two weeks, from "not at all like me" (0) to "extremely like me" (4), by marking the correct number. Read each statement carefully, select only one answer per statement, and please do not skip any questions.

	Not at all like me				Extremely like me
	0	1	2	3	4
1. I get sad or angry when I think of my family	0	1	2	3	4
2. I am shy around others	0	1	2	3	4
3. There are many things I am afraid of	0	1	2	3	4
4. My heart races for no good reason	0	1	2	3	4
5. I feel out of control when I eat	0	1	2	3	4
6. I enjoy my classes	0	1	2	3	4
7. I feel that my family loves me	0	1	2	3	4
8. I feel disconnected from myself	0	1	2	3	4
9. I don't enjoy being around people as much as I used to	0	1	2	3	4
10. I feel isolated and alone	0	1	2	3	4
11. My family gets on my nerves	0	1	2	3	4
12. I lose touch with reality	0	1	2	3	4
13. I think about food more than I would like to	0	1	2	3	4
14. I am anxious that I might have a panic attack while in public	0	1	2	3	4
15. I feel confident that I can succeed academically	0	1	2	3	4
16. I become anxious when I have to speak in front of audiences	0	1	2	3	4
17. I have sleep difficulties	0	1	2	3	4
18. My thoughts are racing	0	1	2	3	4
19. I am satisfied with my body shape	0	1	2	3	4
20. I feel worthless	0	1	2	3	4
21. My family is basically a happy one	0	1	2	3	4
22. I am dissatisfied with my weight	0	1	2	3	4
23. I feel helpless	0	1	2	3	4
24. I use drugs more than I should	0	1	2	3	4
25. I eat too much	0	1	2	3	4
26. I drink alcohol frequently	0	1	2	3	4
27. I have spells of terror or panic	0	1	2	3	4
28. I am enthusiastic about life	0	1	2	3	4
29. When I drink alcohol I can't remember what happened	0	1	2	3	4
30. I feel tense	0	1	2	3	4
31. When I start eating I can't stop	0	1	2	3	4
32. I have difficulty controlling my temper	0	1	2	3	4
33. I am easily frightened or startled	0	1	2	3	4

Counseling Center Assessment of Psychological Symptoms – **CCAPS-62**

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	Not at all like me				Extremely like me
34. I diet frequently	0	1	2	3	4
35. I make friends easily	0	1	2	3	4
36. I sometimes feel like breaking or smashing things	0	1	2	3	4
37. I have unwanted thoughts I can't control	0	1	2	3	4
38. There is a history of abuse in my family	0	1	2	3	4
39. I experience nightmares or flashbacks	0	1	2	3	4
40. I feel sad all the time	0	1	2	3	4
41. I am concerned that other people do not like me	0	1	2	3	4
42. I wish my family got along better	0	1	2	3	4
43. I get angry easily	0	1	2	3	4
44. I feel uncomfortable around people I don't know	0	1	2	3	4
45. I feel irritable	0	1	2	3	4
46. I have thoughts of ending my life	0	1	2	3	4
47. I feel self conscious around others	0	1	2	3	4
48. I purge to control my weight	0	1	2	3	4
49. I drink more than I should	0	1	2	3	4
50. I enjoy getting drunk	0	1	2	3	4
51. I am not able to concentrate as well as usual	0	1	2	3	4
52. I am afraid I may lose control and act violently	0	1	2	3	4
53. It's hard to stay motivated for my classes	0	1	2	3	4
54. I feel comfortable around other people	0	1	2	3	4
55. I like myself	0	1	2	3	4
56. I have done something I have regretted because of drinking	0	1	2	3	4
57. I frequently get into arguments	0	1	2	3	4
58. I find that I cry frequently	0	1	2	3	4
59. I am unable to keep up with my schoolwork	0	1	2	3	4
60. I have thoughts of hurting others	0	1	2	3	4
61. The less I eat, the better I feel about myself	0	1	2	3	4
62. I feel that I have no one who understands me	0	1	2	3	4

Appendix C

RUESC letter



16 October 2019
PROF Charles Young
Review Reference: 2019-0716-972
Email: C.Young@ru.ac.za

Dear PROF Charles Young

Re: Correlates of psychological distress at Rhodes University

Principal Investigator: A/Prof Charles Young

Collaborators: Ms. Mae du Toit, Mr. Brandon Young, Ms. Jeslyn Goosen

This letter confirms that the above research proposal has been reviewed and **APPROVED** by the Rhodes University Ethical Standards Committee (RUESC) – Human Ethics (HE) sub-committee.

Approval has been granted for 1 year. An annual progress report will be required in order to renew approval for an additional period. You will receive an email notifying when the annual report is due.

Please ensure that the ethical standards committee is notified should any substantive change(s) be made, for whatever reason, during the research process. This includes changes in investigators. Please also ensure that a brief report is submitted to the ethics committee on the completion of the research. The purpose of this report is to indicate whether the research was conducted successfully, if any aspects could not be completed, or if any problems arose that the ethical standards committee should be aware of. If a thesis or dissertation arising from this research is submitted to the library's electronic theses and dissertations (ETD) repository, please notify the committee of the date of submission and/or any reference or cataloging number allocated.

Sincerely

A handwritten signature in black ink, appearing to read 'J Dames', with a stylized flourish at the end.

Prof Joanna Dames

Chair: Human Ethics sub-committee, RUEHC- HE