Research Article

Postgraduate psychology students' mental health and coping during COVID-19: Lessons learnt

Santé mentale et adaptation des étudiants des cycles supérieurs en psychologie pendant la période de la COVID19 : leçons tirées de l'expérience

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ABSTRACT

The transition in learning trajectories, academic pressures and stressors associated with financial and societal pressure that South African postgraduate university students experience places them at risk of mental health difficulties. For these students, their mental well-being has been further threatened due to the COVID-19 pandemic and the subsequent switch to emergency remote teaching. This study aimed to explore the physical and psychological health, resilience and coping amongst two Psychology honours student cohorts at a South African university. Using a repeated cross-sectional design, a sample of 38 Psychology honours students enrolled in 2020 and 39 Psychology honours students enrolled in 2021 voluntarily participated in the study. Overall, students reported poor mental health, with elevated levels of anxiety and burnout and moderate post-traumatic stress symptoms. The 2021 cohort reported significantly lower levels of self-efficacy, increased post-traumatic stress symptoms and employed coping through self-blame more frequently. Students' feelings of isolation persisted as well as feelings of hopelessness with regard to the contextual challenges faced by the country and the pandemic. Over the course of the pandemic, students found that they had less anxiety about online learning, however, they noted that the mental health support provided by the university was not sufficient. These results highlight the important role university mental health services play in fostering student mental well-being and thus the need to prioritise making mental health services to students more accessible and efficient.

KEYWORDS

Academic self-efficacy, anxiety, burnout, coping, depression, mental health, resilience

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RÉSUMÉ

Les étudiants sud-africains de cycle supérieur et postuniversitaire sont exposés à des risques de troubles de la santé mentale en raison de la transition des trajectoires d'apprentissage, des contraintes académiques et des facteurs de stress associés aux difficultés financières et sociétales qu'ils subissent. Le bien-être mental de ces étudiants a été encore plus menacé par la pandémie de COVID-19 et le passage consécutif à l'enseignement d'urgence à distance. Cette étude visait à explorer la santé physique et psychologique, la résilience et l'adaptation de deux cohortes d'étudiants en psychologie dans une université sud-africaine. En utilisant un modèle transversal répété, un échantillon de 38 étudiants de cycle supérieur en psychologie inscrits en 2020 et de 39 étudiants de cycle supérieur en psychologie inscrits en 2021 ont volontairement participé à l'étude. Dans l'ensemble, les étudiants ont fait état d'une mauvaise santé mentale, avec des niveaux élevés d'anxiété et d'épuisement professionnel et des symptômes de stress post-traumatique modérés. La cohorte 2021 a signalé des niveaux d'auto-efficacité nettement inférieurs, des symptômes de stress post-traumatique accrus et une utilisation plus fréquente de l'auto-culpabilisation comme moyen d'adaptation. Le sentiment d'isolement des étudiants a persisté, de même que le sentiment de désespoir face aux défis contextuels auxquels le pays est confronté et à la pandémie. Au cours de la pandémie, les étudiants ont constaté qu'ils étaient moins anxieux à propos de l'apprentissage en ligne, mais ils ont noté que le soutien en matière de santé mentale fourni par l'université n'était pas suffisant. Ces résultats soulignent le rôle important que jouent les services de santé mentale des universités dans la promotion du bien-être mental des étudiants et, par conséquent, le besoin prioritaire de rendre les services de santé mentale aux étudiants plus accessibles et plus efficaces.

MOTS-CLÉS

Auto-efficacité académique, anxiété, épuisement professionnel, adaptation, dépression, santé mentale, résilience

Introduction

The COVID-19 pandemic threatened the physical and mental health of many individuals (Rajkumar, 2020; Salari et al., 2020) resulting in an increased rate of depression and anxiety amongst individuals worldwide (Fancourt et al., 2020; Salari et al., 2020). Prior to the pandemic, university students were already vulnerable to mental health disorders and distress (Alonso et al., 2018; Auerbach et al., 2016; Bantjes et al., 2019). South African university students, in particular, experience many stressors which include a lack of finances, fear of failing, difficulties in procuring accommodation, transport challenges, death of a significant individual, emotional and mental stressors, as well as institutional stressors such as protest actions against university management, adjusting to academic demands and fitting into institutional cultures (Auerbach et al., 2016; Mall et al., 2018; Maringe & Osman, 2022; Mason, 2017).

In order to prevent the spread of the COVID-19 pandemic, 191 countries witnessed the closure of various educational institutions (UNESCO, 2020), with South African tertiary educational institutions being no exception. South African contact universities were closed, and students were required to vacate student residences for the duration of lockdown level 5 (March–April 2020). A staggered approach was implemented to phase in specific groups of students during various lockdown levels experienced by the country post lockdown level 5. During lockdown level 4, final year students who required clinical training were allowed to return to campuses, while universities had to support other students through remote multimodal learning, also referred to as emergency remote teaching in South Africa. During lockdown levels 3 and 2, it was proposed that

33% and 66% of the student population would be allowed to return to campuses, respectively. These students had to fall in the following categories: students living with disabilities; students who were not able to access the internet where they were residing; students whose places of residence were not conducive to studying; and students who faced extreme difficulties engaging with remote learning (South African Government, 2020). Students became isolated during the pandemic and their recourse to social networks and emotional support were reduced (Elmer et al., 2020). The lockdown also removed opportunities for the alleviation of their stressors, opportunities which El-Ghoroury et al. (2012) report were particularly helpful to Psychology postgraduate students such as support from friends, family, classmates, regular exercise, and hobbies. Subsequently, studies conducted on South African undergraduate students' learning experiences during the COVID-19 lockdown have found that students experienced social isolation, difficult online learning conditions (Laher et al., 2021; Onwuegbuzie & Ojo, 2021; Visser & Law-van Wyk, 2021), reduced academic ability (Visser & Law-van Wyk, 2021), and challenging home dynamics which included multiple responsibilities (Laher et al., 2021; Maringe & Chiramba, 2022; Onwuegbuzie & Ojo, 2021). Unsettling changes to routines and sleep disturbance were also common (Davy et al., 2021). Despite this, students demonstrated resilience and reported a variety of coping strategies to manage feelings of despair during the lockdown, such as connecting online to access support from family, friends and lecturers, and various spiritual coping strategies (Eloff, 2021; Visser & Law-van Wyk, 2021).

The transition to online learning forced universities to develop flexible course content and assessment strategies conducive to online learning and teaching (Maringe & Chiramba, 2022; Mhlanga, 2021). This resulted in video recording presentations, real-time video conferencing as well as written communications. However, the transition to online learning for students was challenging. When compared to pre-pandemic levels, students reported negative achievement emotions such as anxiety and boredom more frequently, with females and students in the natural and life sciences and arts and humanities reporting more learning-related anxiety (Raccanello et al., 2022). During the pandemic, it was found that "students' technostress caused by the misfit between environmental demands (e-learning) and students' abilities (access to online resources)" (Mpungose, 2020, p. 6) complicated matters further. These stressors were further exacerbated as a result of limited access to laptops, no or inconsistent electricity, and transitioning to online learning (Hedding et al., 2020; Onwuegbuzie & Ojo, 2021). The pandemic thus highlighted the gross inequalities in educational access and outcomes for learners from variable socio-economic backgrounds (Fouche & Andrews, 2022; Patrick et al., 2021; Landa et al., 2021; Maringe & Chiramba, 2022). The transition to online learning, coupled with living through a pandemic, resulted in university students experiencing mild to extreme levels of stress, anxiety, as well as depression (Hamza et al., 2020; Khan et al., 2020; Van de Velde et al., 2021). Better study conditions were associated with fewer depressive symptoms (Fialho et al., 2021) and students who felt more confident in their use of technology appeared to adapt more easily (Raccanello

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et al., 2022). The lived experiences of South African university students raised concerns regarding mental health and the transition to online learning (Laher et al., 2021).

The transition from undergraduate to postgraduate studies can place strain on students' mental health due to the major transitions in the students' learning trajectories (Cvetkovski et al., 2019). Notwithstanding the potentially increased stress on postgraduate students, it is reported that postgraduate students in the field of Psychology may be especially vulnerable to stressors due to the evaluative and competitive nature of graduate training (Rummel, 2015). Postgraduate students of Psychology are prone to clinically significant anxiety, depression and chronic physical health symptoms (Rummel, 2015). Moreover, postgraduate students of Psychology report that the contributors to their mental health challenges relate to, amongst others, academic responsibilities; financial responsibilities, including debt; and poor work/school/life balance (El-Ghoroury et al., 2012). During the pandemic, notwithstanding these existing stressors, the lockdown, the modified modes of teaching and learning, concerns about their own and others' health (Elmer et al., 2020), and the aforementioned stressors precluded honours students from engaging in research activities with people and at research sites (Hedding et al., 2020), thereby introducing an unsettling hiatus into their postgraduate trajectories. For postgraduate students, the disruption to the structure, flow, and predictive path of the course caused by the lockdowns, limited physical interaction and the closure of many facilities also affected opportunities to conduct research (Hedding et al., 2020), a core component of postgraduate study. Moreover, they may have experienced challenges because students who were living at university residences were evacuated during the lockdowns which meant that they were away from their research sites and laboratories (Hedding et al., 2020; Makhado et al., 2022). For students who live in less-resourced areas, electricity and data network infrastructure tends to be poor and that further exacerbated attempts at remote learning (Hedding et al., 2020; Mpungose, 2020). There was a rush for students to change research topics and methodologies which may have compounded the stress which students were experiencing.

While past research draws attention to the increased pressures and strain experienced by postgraduate students prior to the pandemic (Cvetkovski et al., 2019; El-Ghoroury et al., 2012; Rummel, 2015) , there is limited research exploring the impact on the mental health of these students over the course of the pandemic (Makhado et al., 2022). Therefore, this study reports on the mental health of honours students at two time points during the pandemic, allowing for comparison and providing a sense of how students' abilities adapted over the course of the pandemic. Underpinned by the transactional model of stress and coping (Lazarus & Folkman, 1987; Lazarus, 1993), this study was thus undertaken to explore honours students' mental health experiences during lockdown level 3 of the COVID-19 pandemic in July 2020, and subsequently with the next cohort of Psychology honours students in 2021 in South Africa. Hence, the following research questions were explored:

- What were the levels of physical and psychological health, resilience and coping amongst Psychology honours students in 2020 and 2021?

- What were the health and study experiences of Psychology honours students in 2020 and 2021?

Methods

Research design

This study used a mixed-method research design (Caruana et al., 2015). Data were collected from two distinct postgraduate honours Psychology cohorts (2020, 2021) during the COVID-19 pandemic, through an online survey platform. Data collection for the 2020 cohort opened on 1 June 2020 and closed on 30 June 2020. Hence, data for this cohort were collected during Lockdown Phase 3 in South Africa. The university was just over one month into emergency remote teaching at this time and students were completing or had just completed their first semester examinations when they responded. Lockdown Phase 3 commenced on 1 June 2020 and ended on the 17 August 2020. During this time, all high-risk economic activities, such as entertainment, sports, conferences and social events, were prohibited. Individuals were required to wear a face mask in public spaces, allowed to travel to and from work and attend funerals and places of worship provided strict health protocols were adhered to and capacity was limited to 50 individuals (South African Government, 2020).

Data collection for the 2021 cohort opened on the 1 June 2021 and closed on the 23 August 2021. During this data collection period, South Africa moved through various lockdown phases (adjusted alert level 2 [31 May to 15 June 2021]; level 3 [16 June to 27 June 2021]; level 4 [28 June to 25 July 2021]; and level 3 [26 July to 12 September 2021]) because of the rise in COVID-19 infections leading to the third COVID-19 wave (National Institute for Communicable Diseases, 2021).

Sample

The samples for both cohorts consisted of postgraduate Psychology honours[6] students at the University of the Witwatersrand. The sample sizes for the 2020 and 2021 cohorts were 38 (*Mage* = 27.61 years; *SDage* = 7.978) and 39 (*Mage* = 28.85 years; *SDage* = 8.564), respectively. Student participation was voluntary and remained anonymous unless they chose to provide their details for further interviews for a follow-up study. Despite the low response rate, the feedback provided was very useful in terms of understanding postgraduate students' experiences and mental health during COVID-19. The 2020 and 2021 cohorts of students, although not identical, are very similar in that both were subjected to the same entrance selection for the degree registered and both experienced the same teaching mode – strictly online with a combination of synchronous sessions and asynchronous teaching material by the same staff members for the respective modules. The same asynchronous material was used for both cohorts.

The demographic characteristics of both the 2020 and 2021 cohorts are summarised in Table 1. Most participants from each cohort identified as female (2020 = 78.9%; 2021

6 Honours refers to students in their fourth year of study/first year of postgraduate study in Psychology in South Africa.

= 89.7%), Christian (2020 = 48.6%; 2021 = 54.05%), first-language English speakers (2020 = 64.9%; 2021 = 56.4%), and were unmarried (2020 = 81.6%; 2021 = 84.6%) or in a relationship (2020 = 68.4%; 2021 = 53.8%). The majority of the participants in the 2020 cohort were white (2020 = 47.4%), while in the 2021 cohort, the majority of the participants were black (2021 = 51.3%). Most participants lived with immediate family (2020 = 43.2%; 2021 = 43.6%), had no children (2020 = 80.6%; 2021 = 82.1%), experienced financial worry some of the time (2020 = 54.1%; 2021 = 38.5%) and were not diagnosed with a chronic medical condition (2020 = 78.4%; 2021 = 71.8%).

Table 1: Demographic data of the two cohorts

Variables				
	2020 cohort		**2021 cohort**	
	Frequency	**%**	**Frequency**	**%**
Gender				
Female	30	78.9	35	89.7
Male	7	18.4	4	10.3
Other	1	2.6		
Race				
Black	13	34.2	20	51.3
White	18	47.4	11	28.2
Indian	6	15.8	5	12.8
Coloured	1	2.6	2	5.1
Other			1	2.6
Religious affiliation				
No religion	7	18.9	10	27.03
Christianity	18	48.6	20	54.05
Hinduism	2	5.4		
Islam	3	8.1	5	13.5
Judaism	3	8.1	1	2.7
Other	4	10.8	1	2.7
Home language				
Afrikaans	2	5.4	2	5.1
English	24	64.9	22	56.4
IsiNdebele	1	2.7		
IsiXhosa			3	7.7
IsiZulu	1	2.7	4	10.3
Sepedi (North Sotho)	1	2.7	5	12.8
Sesotho	2	5.4	1	2.6

Variables				
	2020 cohort		2021 cohort	
	Frequency	%	Frequency	%
Setswana	3	8.1	2	5.1
Other	3	8.1		
Marital status				
Married	7	18.4	6	15.4
Not married	31	81.6	33	84.6
Relationship status				
In a relationship	26	68.4	21	53.8
Not in a relationship	12	31.6	18	46.2
Living arrangement				
Alone	6	16.2	4	10.3
Immediate family	16	43.2	17	43.6
Other relatives			2	5.1
University residence	2	5.4	2	5.1
Housemates	3	8.1	3	7.7
Partner	5	13.5	6	15.4
Partner with children	5	13.5	5	12.8
Number of children				
0	29	80.6	32	82.1
1	2	5.6	2	5.1
2	2	5.6	4	10.3
3	2	5.6	1	2.6
5	1	2.8		
Financial worry				
All the time	6	15.8	7	17.9
Some of the time	20	52.6	15	38.5
Rarely	6	15.8	12	30.8
Never	5	13.2	5	12.8
Chronic condition				
Yes	8	21.6	11	28.2
No	29	78.4	28	71.8

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Instruments

An online questionnaire consisting of a demographic section and several mental health screening instruments as well as five open-ended questions was used. Gender, age, race, level of financial concern/worry, year of study, family and other support structures, and whether the student suffered from a health condition prior to COVID were requested in the demographics section.

General mental health: The Global Mental Health Scale (GMH-4) of the PROMIS Global Health Instrument (v 1.2) was used to assess overall mental health (Hays et al., 2017). The scale consists of four items and uses a five-point response format with items one to three having the same anchors (Excellent - Poor) and item four having a unique anchor (Never - Always). The GMH-4 has been shown to be reliable (Hays et al., 2017) and valid (Katzan & Lapin 2018). The GMH-4 evidenced an internal reliability in excess of 0.73 after item 4 ("How often have you been bothered by emotional problems?") was removed.

Depression and anxiety: The Hospital Anxiety and Depression Scale (HADS) consists of two 7-item subscales that are rated on a four-point scale (0-3). One scale measures level of anxiety and the other depression. The HADS has been validated across multiple languages and settings (Bjelland et al., 2002; Herrman, 1997), including with patients diagnosed with HIV/AIDS in South Africa (Wouters et al., 2012). An internal consistency reliability coefficient that ranged from .74 to .84 was found for the depression subscale and .69 to .86 for the anxiety subscale.

Burnout: The Burnout Measure-Short Version (BMS) contains 10 items addressing the frequency of experiencing symptoms of emotional, mental, and physical exhaustion using a 7-point Likert scale (1: *Never;* 7: *Always*). It has been successfully used in the South African context with an internal consistency reliability coefficient of 0.82 (Fatoki, 2019). In this study, a Cronbach's alpha coefficient that ranged from .89 to .93 was obtained for the BMS.

Coping skills: Coping skills were assessed using the Brief COPE Inventory. This inventory of 14 subscales measures different aspects of coping as follows: self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion, and self-blame. Participants are asked to rate the degree to which they use each coping strategy to deal with a particular stressful event using a 4-point Likert scale (1: *I haven't been doing this at all*; 4: *I've been doing this a lot*). For the purposes of the proposed study, item 19, 'going to the movies' as an example of coping was removed as it was not applicable during lockdown level 4. The scale has been used in South Africa with good internal consistency reliability (Kotze et al., 2013). Cronbach's alpha coefficients ranged between 0.59 and 0.99 for the coping subscales, except for the self-Distraction ($\alpha = 0.26$), active coping ($\alpha = 0.49$), acceptance ($\alpha = 0.44$), and planning ($\alpha = 0.51$) subscales.

Resilience: The Connor-Davidson Resilience Scale (CD-RISC-10) measures resilience or how well one is equipped to bounce back after stressful events, tragedy, or trauma (Campbell-Sills & Stein, 2007; Connor & Davidson, 2003; Vaishnavi et al., 2007). The

scale consists of 10 items which are answered on a Likert scale of 0-4 (0: *Not true at all*; 4: *True nearly all of the time*). The measure has adequate test-retest and internal consistency reliability as well as good construct validity evidence (Vaishnavi et al., 2007). Previous studies in Nigerian student and South African adolescent populations have found reliability coefficients of 0.81 and 0.93 respectively (Aloba et al., 2016; Jørgensen & Seedat, 2008). In this study, a Cronbach's alpha coefficient for the samples ranged from 0.82 to 0.92 for the resilience scale.

Posttraumatic Stress Disorder (PTSD) Checklist—Civilian Version (PCL-C): The extent to which students were bothered by their reactions to traumatic experiences occurring in their everyday lives was evaluated using the *PCL-C* (Weathers et al., 1993). This scale comprises 17 items, measured on a 5-point scale (1 = *Not at all*; 5 = *Extremely*) (Weathers et al., 1993). The scale has been shown to be reliable and valid (Conybeare et al., 2012; Weathers et al., 1993), including with a university sample (Ruggiero et al., 2003). The scale has been successfully used within the South African context (Gomo et al., 2018; Peltzer et al., 2007; Watt et al., 2012), including within a university setting (Peltzer, 1998). A Cronbach's alpha coefficient for both samples was in excess of 0.87 in the current study.

Self-efficacy: The Generalized Self-Efficacy Scale (Schwarzer & Jerusalem 1995) was used to assess students' self-efficacy, that is, their beliefs in their own abilities to respond to novel or difficult situations. The scale consists of 10 items which are answered on a 4-point Likert Scale (1: *Not at all true*; 4: *Exactly true*). This scale demonstrates a satisfactory internal consistency of 0.86 and test-retest reliability of 0.75 after 12 months (Wu et al., 2004). Internal consistency reliability for this study was good with a Cronbach's alpha coefficient ranging from 0.82 to .90.

Self-reported, open-ended questions: Five open-ended questions about the participants' experiences of COVID-19 were included at the end of the questionnaire. The questions asked students about their experiences during lockdown, particularly their mental health experiences, their experiences of working on university work at home, their support structures at home, the challenges experienced and their needs in terms of support from the university.

Procedure

All Psychology honours students were notified about the study via an announcement on the e-learning management system. The announcement included a link to the questionnaire on the online survey platform. Completion of the survey required minimal data and all students had received 10GB of daytime data and 20GB of night-time data from the university.

Data analysis

All statistical analyses were conducted on SPSS Version 27 and 28 (IBM Corporation, 2022). Descriptive statistics were used for demographic information as well as to determine levels of mental health, coping and resilience in the sample. Group differences were examined using independent sample t-tests or an independent Mann-Whitney

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U-test where parametric assumptions were not met. Content and an inductive-semantic thematic analysis, as specified by Braun et al. (2016), were used to analyse the open-ended responses.

Results

Table 2 depicts the descriptive statistics of the 2020 and 2021 participants' scores on measures of psychological health. On average, participants from each cohort did not obtain an elevated score for depression (2020 cohort 1: M = 6.87, SD = 4.180; 2021 cohort: M = 7.56, SD = 3.455), and demonstrated resilience (2020 cohort M = 28.66, SD = 7.397; 2021 M = 26.14, SD = 6.176) and self-efficacy (2020 cohort M = 38.18, SD = 7.780; 2021 cohort M = 34.64, SD = 4.486). On the self-efficacy scale, significant differences were obtained between the groups (see Table 2). The 2021 cohort demonstrated lower levels of self-efficacy ($\eta^2 = 0.019$) in comparison to the 2020 cohort. Participants demonstrated slightly elevated scores for anxiety (2020 cohort M = 10.34, SD = 4.783; 2021 cohort M = 11.62, SD = 3.668), burnout (2020 cohort M = 3.43, SD = 1.306; 2021 cohort M = 3.764, SD = 1.213), and moderately severe post-traumatic stress symptoms (2020 cohort M = 39.21, SD = 17.216; 2021 cohort M = 45.54, SD = 11.959), as well as poor general mental health (2020 cohort M = 11.08, SD = 2.774; 2021 cohort M = 10.62, SD = 2.720). Participants in the 2021 cohort demonstrated an increase in post-traumatic stress symptoms ($\eta^2 = 0.081$). The most common coping mechanism employed by participants was acceptance (2020 cohort M = 4.29, SD = 1.183; 2021 cohort M = 4.308 SD = 1.866), while substance use was identified as the least commonly utilised coping mechanism (2020 cohort M = 0.66, SD = 1.681; 2021 cohort M = 0.744 SD = 1.390). A significant difference on the self-blame coping mechanism was demonstrated ($p = 0.026$, $\eta^2 = 0.065$), where the 2021 cohort employed self-blame as a coping mechanism more often in comparison to the 2020 cohort.

Table 2: Mental health variables descriptive statistics and comparison test results

Mental health variables	2020 Cohort					2021 Cohort						
	N	Min	Max	M	SD	N	Min	Max	M	SD	Test-stat	Sig
GMH total	38	5.00	11.00	11.08	2.774	39	5.00	16.00	10.62	2.720	-.636	.525
Anxiety	38	1	21	10.34	4.783	39	4	20	11.62	3.668	-1.313*	0.097
Depression	38	0	19	6.87	4.180	39	1	18	7.56	3.455	-.797*	.214
Self-distraction	38	1	6	3.82	1.411	39	1	6	3.923	1.476	.358	0.720
Active coping	38	0	6	3.50	1.466	39	0	6	3.564	1.447	0.151	0.880
Denial	38	0	6	1.21	1.492	39	0	4	0.949	1.395	-.916	0.360
Substance use	38	0	6	.66	1.681	39	0	6	0.744	1.390	1.237	0.216
Use of emotional support	38	0	6	2.92	2.084	39	0	6	2.923	1.797	0.010	0.992
Use of instrumental support	38	0	6	2.68	1.741	37	0	6	2.270	1.742	-1.139	0.255
Behavioural disengagement	38	0	6	1.42	1.703	39	0	6	1.539	1.890	-.022	0.983
Venting	38	0	6	3.03	1.668	39	0	6	2.667	1.545	-.992	0.321
Positive reframing	38	0	6	3.63	1.762	39	0	6	2.821	1.485	-1.939	0.52
Planning	38	1	6	3.11	1.429	39	0	6	3.487	1.684	1.293	0.196
Humour	38	0	6	2.39	1.701	39	0	6	2.103	2.024	-0.861	0.389
Acceptance	38	2	6	4.29	1.183	39	0	6	4.308	1.866	0.898	0.369
Religion	38	0	6	2.82	2.091	39	0	6	3.308	2.179	0.991	0.321
Self-blame	38	0	6	1.95	1.800	39	0	6	2.872	1.936	2.223	0.026
Resilience	38	9	40	28.66	7.397	36	14	40	26.17	6.176	-1.809	0.070
Burnout	38	1.20	7.00	3.43	1.306	36	1.6	6.70	3.764	1.213	1.185	0.236
Self-efficacy	38	16	40	38.18	7.780	36	21	40	34.64	4.486	-3.089	0.002
PLC-C	38	17.00	85.00	39.21	17.216	35	23	78	45.54	11.959	-1.183*	0.071

Note: GMH: General mental health, HADS: Hospital Anxiety and Depression Scale, PCL-C: PTSD CheckList – Civilian Version *Independent sample T-test

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Based on the open-ended responses provided by the students, a number of themes were evident across both cohorts. There were concerns around psychological well-being, academic pressure/challenges as well as support mechanisms available to them.

Psychological well-being

Feelings of isolation, emotional challenges, a sense of hopelessness and anxiety, and depression symptoms were subthemes evident within the broader psychological well-being theme.

Feelings of isolation

Feelings of isolation persisted throughout the pandemic as this was reported consistently in both cohorts. The isolation felt was attributed to COVID-19 lockdown restrictions as well as the lack of social contact:

> *It has had a negative impact on me. I feel trapped in my small living space. For two and a half months, I was restricted to not stepping outside my home (strict complex rules). This was really hard on me mentally because I thrive on fresh air and sunshine and to be able to run/walk daily. I exercise regularly but I don't have the space to exercise indoors. I felt extreme fatigue.* (P11, 2020)

In 2021, extended periods of decreased social contact over the past two years appeared to be taking a toll: "*Struggling with psychical isolation*" (P6, 2021).

Emotional challenges

Emotional challenges experienced by postgraduate students appear to have persisted over the course of the pandemic and those students with existing mental health issues appeared to struggle more. For example, one participant (P22, 2021) stated:

> *Things were easier at the beginning of the pandemic. Over time, I have noticed my mental health fluctuate. I have good weeks and bad weeks. My anxiety has definitely gotten worse, and I am increasingly having issues with keeping my attention on important tasks at hand.*

This excerpt also reflects the impact of emotional stress on academic learning, with difficulty maintaining attention emerging often in the data. For some postgraduate students, besides persisting, their emotional challenges also intensified, as per this excerpt:

> *With the constant mutations of the virus and looming new variants as well as uncertainty of the effectiveness of the vaccine towards the new variants, the paranoia just seems to be increasing.* (P30, 2021)

Although some reported an abatement in their anxiety levels, they also stated that it still remained and added to other challenges such as fatigue, anger, eating disturbances, and emotional liability. For example, Participant 26 (2021) reported:

> *I was very anxious and scared at the beginning of the pandemic. I still feel anxious now but not as much and not as often. The fatigue still feels the same.*

Another participant stated,

> *My eating is all over the place though, hasn't changed much. Less crying, still have angry outbursts.* (P28, 2021)

Sense of hopelessness

There is a sense that participants held out for an amelioration of symptoms over time from when the pandemic was declared, but their responses suggest that such hopes may have been dashed. Extended periods of anxiety seemed to contribute to an enhanced sense of hopelessness as expressed by Participant 31 (2021) who shared that

> *Initially, the pandemic felt like an opportunity to rest, but now I feel trapped and exhausted from being stir crazy. I also have less hope about a positive future than I did at the beginning of all this.*

Concerningly, hopelessness about the future was evident in many responses: "*When it started, I was hopeful for better times. Now, I don't believe things could ever improve*" (P29, 2021). Adding to their sense of hopelessness seemed to be the contextual challenges in South Africa as expressed by this participant:

> *At the beginning, I was stressed about the virus itself. Now the virus itself has become far less of a concern and instead it's things like economic stability, civil unrest, employment opportunity, financial stress etc. as a lingering result of the lockdowns that cause the stress.* (P31, 2021)

Anxiety and depressive symptoms

While symptoms of anxiety were present in both cohorts, the reasons attributed to anxious feelings differed. Anxiety in the first cohort had a more fearful component to it:

> *It has been really stressful and emotionally draining. These last two or three weeks, in particular, I have found myself becoming extremely paranoid. My dad has Chronic Obstructive Pulmonary Disease, my seven-year-old nephew has Osteomyelitis and a weak immune system, so I panic when someone in my house leaves because I have family members who are high risk.* (P36, 2020)

Although less fearful, the anxiety in the second cohort featured more uncertainty (related to the future and the unknown in relation to the various iterations of COVID-19 at that stage): "*It's worse now ... I am at school having to focus on the uncertainty of COVID and the uncertainty of how I will cope with my academics*" (P32, 2021).

Based on the qualitative data, symptoms of depression were prevalent, albeit subclinical as indicated on the HADS. Students in both cohorts described feelings of negative affect, crying as well as disturbances in both eating and sleeping patterns. Depression amongst the 2021 cohort appeared to be exacerbated by the prevalence

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of loss and grief and the seeming endlessness of the pandemic. Students appeared to be grappling with the losses of the previous year in multiple areas: loved ones, social contact, academic achievement expectations, the university "experience", etc. "*At the beginning, the COVID-19 illness felt distant but now it is close to home with people I know personally having died*" (P5, 2021).

Academic pressures/challenges

In both cohorts, it was evident that students found learning challenging due to the shift to an online medium. Students reported feeling demotivated, finding it difficult to balance work/life and studies and highlighted the challenge in not having an academic structure (space). The 2021 cohort acknowledged the challenges of online learning as difficult but necessary. Students indicated that the stress of the pandemic and concerns with regard to death and ill-health added to the difficulty of the postgraduate experience, as explained by this participant:

> *My experience has only worsened. I have lost 2 friends to the virus in 2021 - they were my age. Honours in 2021 has been by far the most stressful and most competitive year of my life. Being in that environment and that pressure in the middle of the COVID devastation only added to my mental and physical health issues.* (P19, 2021)

Support

The theme of support is presented in two subthemes relating to personal and academic support.

Personal support

Students in both cohorts reported several support mechanisms that they had at home. Social support from close others was the most common support mechanism reported by participants. This included "family support structure" and support from romantic partners and friends. Several students reported that this support was not sufficient and had not addressed all their needs. The availability and use of recreational activities (exercise, taking dogs for a walk), personal interest (meditation, sermons, musical instruments) and access to resources (online streaming) were experienced by participants as support mechanisms.

Academic support

The only difference between cohorts in this respect was that students in the second cohort appeared to report fewer anxiety symptoms with regard to the need for academic support from the university. In the first cohort, the shift to online learning seemed to be more overwhelming. Perhaps, due to adaptations having been made by both the university and students to online/blended learning, this seemed to be less of an issue in the second cohort. The participants in the 2021 cohort felt that mental health support was lacking and that there was a need for more accessible mental health support to be provided.

Discussion

While a generally lowered level of mental health amongst postgraduate students has been found previously (Rummel, 2015; El-Ghoroury et al., 2012), results from this study indicate that postgraduate Psychology students' general mental health during the initial months of the pandemic and a year into the pandemic was increasingly negatively affected. Higher levels of anxiety were found across both samples. This trend is similar to that observed by Khan et al. (2020), Hamza et al. (2020) and Van de Velde et al. (2021). While the levels of depression on the HADS were subclinical, the qualitative data highlights various symptoms of depression experienced in both cohorts which could be attributed to the multiple losses (deaths and social environments) experienced during these times. These losses may also account for the moderate levels of PTSD experienced in the samples and increased PTSD symptoms in the 2021 cohort. The elevated levels of anxiety (reported in both the quantitative and qualitative data) and depression (reported in the qualitative data), are likely linked to the moderate levels of PTSD found in both cohorts. These trends were also found in a US student sample, where high levels of anxiety, depression, loneliness, and COVID-19-specific worry were significantly associated with PTSD symptoms (Liu et al., 2020).

Interestingly, self-efficacy decreased and post-traumatic stress symptoms increased across the samples. This can potentially be attributed to the persisting uncertainty regarding the virus, changes in lockdown levels and the country's economic situation during these times. The endlessness of the pandemic, and the associated contextual difficulties, such as higher levels of poverty, civil unrest and infrastructure challenges, appeared to have heightened students' sense of hopelessness regarding the future. Despite the endlessness and contextual difficulties experienced, students demonstrated resilience and continued to employ positive coping strategies during this time. The 2021 cohort of students used self-blame more often as a coping strategy. This may be linked to beliefs that they should have adjusted or be coping better later in the pandemic.

The results aligned with the theoretical orientation of the study. From the results it was clear that on primary appraisal, students perceived the environment as threatening. From the qualitative responses, an assessment of resource (un)availability contributed to stress and ultimately mental ill-health. Coping responses were generally positive, leading to possibly better mental health outcomes as the pandemic progressed but with increased levels of self-blame. University support strategies may have aided pacing and re-appraisal, but from the responses provided, these were not necessarily enough.

The results did highlight the success of online teaching strategies employed by the university, as the 2021 cohort were less anxious with regard to online learning. While this may reflect some positive adjustment to online learning in the 2021 cohort, it may also reflect improved teaching in the 2021 academic year, given that staff had also had time to learn and adjust.

Despite the university putting strategies in place to support students with respect to their mental health, it is evident that this support was not sufficient. While the university provided students with a mobile crisis application (app) and a toll-free line, the barriers associated with the use of such platforms need to be considered. These barriers include,

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amongst others, access to an internet connection, financial implications of the app installation and usage, electricity supply, cultural barriers, under-staffing, and a lack of digital devices (Mbunge et al., 2022). These results highlight the need for universities to revise support strategies in order to make mental health services more accessible to students, especially in times of crisis. It would be useful to conduct a follow-up study to assess student mental health now that university campuses have once again opened as opportunities for face-to-face learning and socialising may have helped to lessen feelings of isolation and hopelessness. Since the pandemic and the rapid transition to remote and online learning, contact universities in South Africa have increasingly been calling for the integration of blended learning approaches. As is evident from the findings of this study, online and hybrid teaching can introduce feelings of isolation, anxiety and depression. It is vital to consider issues of staff and student mental health, resilience and coping in addition to pedagogy and content when embracing blended approaches (Naidoo, 2022).

While this study provides insight into postgraduate experiences during the pandemic, it is necessary to note that the sample was from a relatively small and particular department at one university. In addition, a repeated cross-sectional design was employed which limited within-group comparisons. It is recommended that future studies explore students' coping post-pandemic and identify any residual effects of the pandemic on student mental health using a larger and more diverse sample.

Conclusion

This study explored the mental health experiences of two cohorts of students completing an honours degree in Psychology during the COVID-19 pandemic. While the university provided students with mental health support, it is evident that this support was insufficient as symptoms of depression and anxiety were prevalent, student self-efficacy decreased, and PTSD symptoms increased over the course of the pandemic. Despite this negative mental health impact, students continued to display resilience and employed positive coping strategies, however, self-blame became more prominent as the pandemic continued. The transition to online learning improved over the course of the pandemic with students feeling less anxious in this regard. Whilst this study was conducted on postgraduate Psychology students, the findings are commensurate with student experiences in various fields from other local and international institutions (see Eloff, 2021; Laher et al., 2021; Onwuegbuzie & Ojo, 2021; Visser & Law-van Wyk, 2021). These findings provide support for using the transactional model of stress and coping to understand student coping not only during the pandemic but also in the course of their postgraduate studies.

This growing body of research indicates the importance of considering student health and mental health in university strategic planning. A number of institutions in South Africa offer health services at dedicated units on campus but mental health services are often understaffed and underserviced. Since the pandemic, universities have introduced increased access to toll-free crisis lines and publicised student counselling services more widely, yet our experiences with our students have indicated

that campus services have not been able to cope with the increasing demand for mental health support. This was already the case pre-COVID but has worsened during and post the pandemic. Hence, there is a strong need for universities to prioritise mental health on campus.

Ethics statement

Ethical clearance was obtained from the University of the Witwatersrand (Protocol No. H20/03/33). Both in the announcement and on accessing the link, students received the participant information sheet which detailed the aims of the study and the conditions of their participation. Students remained anonymous unless they provided details to be interviewed later. Students were provided with details for the free online and telephonic counselling services offered by the university and encouraged to use these if they felt overwhelmed.

Potential conflict of interest

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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