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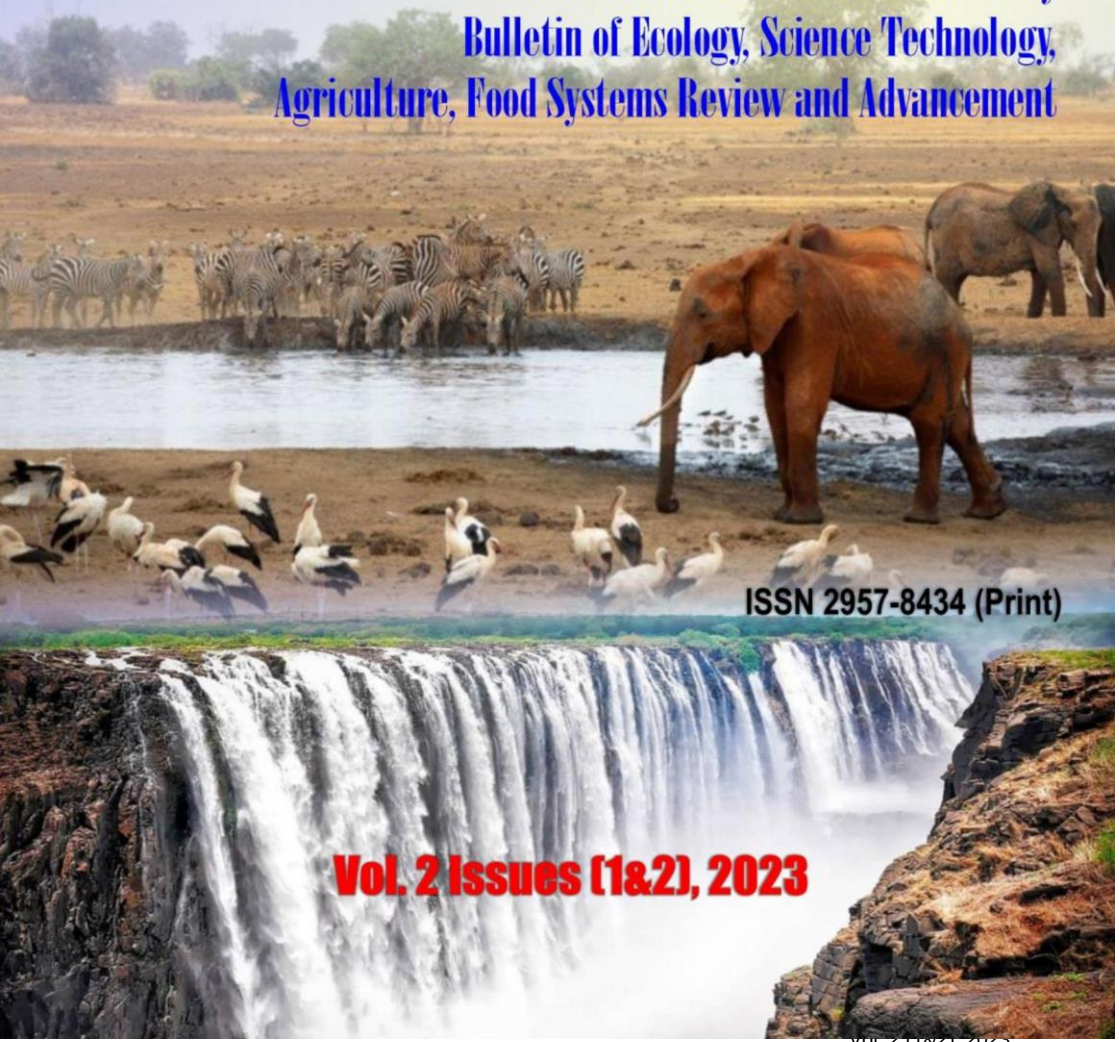
The Zimbabwe Ezekiel Guti University Bulletin of Ecology, Science Technology, Agriculture, Food Systems Review and Advancement



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The purpose of the *Oikos - The Zimbabwe Ezekiel Guti University Bulletin of Ecology, Science Technology, Agriculture and Food Systems Review and Advancement is* to provide a forum for scientific and technological solutions based on systems approach and thinking as the bedrock of intervention.

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The Nexus between Personal Life Events of Medical Students and Distress: A Case of Two Newly Established Medical Schools in Zimbabwe

MQEMANE TSHABABA[1], REGIS CHIRESHE[2], JULIA MUTAMBARA[3]

Abstract

The article is based on a study whose aim was to investigate sources and levels of distress among medical students at two newly established medical schools in Zimbabwe. The study used a mixed methods approach and a concurrent parallel design. A sample of 123 medical students, drawn from two newly established medical schools in Zimbabwe, was used for the study. The participants' ages ranged between 18 and 47 years. The study used a structured questionnaire and face-to-face interviews to collect data. Quantitative and qualitative data were collected separately, analysed

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independently, and merged at the interpretation stage. Numerical codes were used for the quantitative data. The quantitative data were entered into the SPSS version 21 and analysed using regression analysis. The computed quantitative data showed significant relationships between personal life events and medical students' distress. The qualitative data were analysed thematically. Personal life events were examined under the following themes: death of a loved one and distress, pregnancy and distress, a gain of a new member in the family, change in the health of self or family member, and distress, and marital separation and distress. The death of a loved one was found to be the only significant factor affecting medical students at the two newly established schools in Zimbabwe.

Keywords: anxiety, burnout, coping, depression, stressors,

INTRODUCTION

Personal life events and distress among college students have long been topical areas of research among academics. Studies such as by Gungor *et al*. (2021), Buizza *et al*. (2022) and Torres-Chávez *et al*. (2022) investigated the link between personal life events and their stress levels among students drawn from the general population and at different universities. In their study, negative life events were found to be unpleasant,

uncontrollable and generally stressful. Life events, as alluded to above, describe numerous stimuli experienced during the progression of life (Seo *et al*., 2018; Steinmayr *et al*., 2019). Life events are one of the major factors in the mental health of university students in general. Personal life events include, but are not limited to; pregnancy, gaining a new member in the family, change in the health of self or family member, death of a loved one and marital separation. Extant literature reveals that university students, with the capacity to cope with stress through healthy life events, will probably exhibit better life fulfilment (Saha *et al*., 2014). Nevertheless, some studies reveal that stressful life events can have short- and long-term outcomes on subjective well-being (Senocak and Demirkiran, 2020). While the above studies by Saha *et al*. (2014), Seo *et al*. (2018), Steinmayr *et al*. (2019), Gungor *et al*. (2021), Buizza *et al*. (2022) and Torres-Chávez *et al*. (2022) focused on personal events of general university students, this study focused exclusively on medical students to establish if the cited effects experienced by general university students are also applicable to medical students from a Zimbabwean sample.

The article is so organised that it has ten sections. The first section is the introduction which highlights to the reader what the whole article is about. The second is the

conceptual framework, highlighting how the authors view the relationship between personal life events and distress. The third section is the review of literature related to the relationship between personal life events and distress. The fourth section examines the relationship between personal life events under the following subtopics: Death of a loved one and distress, marital status and distress, illness of oneself and distress, pregnancy and distress, and marital separation and distress. The firth section is a presentation of the methods used in the study. The sixth section discusses the instruments used to collect data from the participants. The seventh section is on the ethical clearance for the study. The eighth section presents the results of the study. The nineth section discusses the results of the study. The last section is about the conclusions and recommendations of the study.

THE CONCEPTUAL FRAMEWORK

The conceptual framework for understanding the link between personal life events and distress is based on the notion that life events can contribute to distress whether they are positive or negative events (Figure 1). When these life events happen, individuals cannot cope with the resultant distress and hence may require outside resources to manage the distress. As alluded to, personal life events are either positive or negative and unpleasant

events experienced by medical students during their training. At the core of the framework is the identification of personal life events that the medical students have already faced or are likely to face during their training and are beyond their coping capacity. Among other personal life events, the framework identifies the death of a loved one, illness of self or of a loved one, pregnancy and marital separation as possible causes of distress among medical students undergoing training at two newly established medical training schools in Zimbabwe.

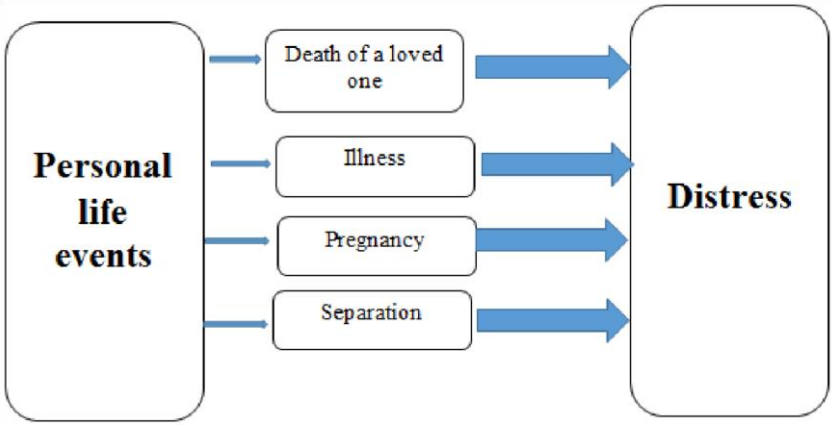

Figure 1 The conceptual framework for personal life events and distress link

LITERATURE REVIEW

In illuminating the association between life events and distress, studies such as by Hill *et al*. (2018), Fontana *et*

al. (2020) and Howarth *et al*. (2020) examined the role of personal life events in causing medical students' distress and found an association between life events and distress. The Hill *et al*. (2018) study concluded that personal life events make medical students, especially susceptible to stress and poor life fulfilment. The study identified the personal life of medical students such as the loss of a loved one such as a parent, job loss, gaining a new family member and spousal separation as the leading causes of distress among medical students (*ibid.*). The weakness of the Hill *et al*. (2018) study, just like other quantitative studies already cited, is that it used a structured questionnaire to collect data. The weakness of using such a data collection tool without other supporting tools is that it does not tell us about the feelings of the participants as expressed by themselves. The present mixed methods study addressed the rigidity element of the structured questionnaire by including a semi-structured interview to also understand how medical students feel about their distress.

While there is evidence of a link between personal life events and distress among medical students, there is also evidence that medical students also experience numerous personal life stressors common to individuals their age (Dyrbye *et al*., 2006). In the Dyrbye *et al*. (*ibid.*) study, involving more than 1 000 medical students, many

participants reported personal illness or injury (25%), or change of health in a relative (42%) within the past year as personal life events that were stressful to them. Work-life balance (family/parenting), lack of time for self-care (sleep, exercise) and complex personal relationships, were some of the personal events found to cause distress to medical students. However, the exponential rise of multiple factors places even the most resilient student at high risk for burnout (Shapiro, 2011; Bell, 2013; Anne; 2014).

To understand the nexus between personal life events and distress, an Iranian cross-sectional study conducted on medical students by Hassanzadeh *et al*. (2017), with 4 763 participants, used a scale comprising 46 items in 11 various dimensions. The study utilised selfadministered standard questionnaires to collect data. Data were analysed using latent factor regression for grouped outcomes to model the relationship of stressful life events, as latent predictors, with psychological problems, as the grouped outcomes. The study observed that stressful life events were directly associated with components of psychological problems and their profile scores, with greater associations in females than in males. The researchers identified five prevalent sources of potential distress. First, home life was measured with addiction, divorce or separation, concern about addiction

of a family member, quarrels with a spouse, being accused, legal problems, and troubles with children, Second, financial problems were measured with getting in debt, low income, major financial problems, taking on a mortgage and financial inflation. Third, social relations included social discrimination, major social changes, social insecurity and concern about the future. Fourth, personal conflicts included loneliness, lack of social support, cultural alienation, not having an intimate friend and failure to achieve life goals. Fifth and finally, job conflicts were measured with quarrels with colleagues/boss, dealing with customers, increased working hours and improper working place and environment. The sentiments of Hassanzadeh *et al*. (*ibid.*) were echoed by another study conducted in Syria by Al Houri *et al*. (2023) who reported that personal events such as financial problems and social relations were some of the causes of distress among medical students.

A major strength of the Hassanzadeh *et al*. (2017) study was their use of a large population to which they applied latent factor regression modelling for grouped outcomes with confirmatory latent predictors for evaluating the association of stressful life events and psychological disorders. The current mixed-methods study used a similar approach with a small sample. The Hassanzadeh

et al. (*ibid*.) study accedes that due to the cross-sectional design of the study, cause-effect relationships could not be inferred from their findings and, as such, the current mixed-methods study attempted to overcome the failure to determine the cause-and-effect hurdle through method triangulation, in which modelled data were further explained using interview data.

CHANGE IN HEALTH OF SELF OR FAMILY MEMBER AND DISTRESS Major personal illnesses and those of close family members have been implicated in university student distress. Numerous studies such as by Stewart-Brown *et al*. (2000), Modis *et al*. 2021) and Amass *et al*. (2022) researched on the correlation between personal illness and distress among the general population of university students. The above studies found that among other personal life events, the health status of students is a serious indicator of distress among university students. In support, Stewart-Brown *et al*. (2000) opine that students who fell ill in the last 12 months seem to have higher levels of distress compared to students who had not had major illnesses within the last that period. According to the study by Stewart-Brown *et al*. (*ibid*.), falling ill while at university is part of human development most students are not prepared for as this sometimes leads one to assume a sick role at the end of school assignments, school tasks and even

examinations. The other study that focused on the general population of students, Schwarzer and Luszczynska (2012), found a correlation between the illness of a loved one and distress. According to this study, the illness of a close member of the family is associated with distress because it disrupts the way of life for family members. The family is normally affected following the illness of a family member due to, among other things, fear of loss and assumption of duties previously done by the ill member. These responsibilities also add to the emotional burden faced by students who concentrate on academic work.

Also focusing on the general population of university students, Khandelwal *et al*. (2020) conducted a study on the relationship between the illness of a member and distress in the United States of America. Their study used a sample of 175 students drawn from the University of Washington and the University of North Carolina. They reported high levels of psychological distress, symptoms of depression and anxiety among family members who lived with critically and chronically ill members. In another study, Chronister, Fitzgerald and Chou (2021) interrogated the role of the family as a source of social support to ill members of the family and how they are impacted by the change of life for any one member of the family. Chronister, Fitzgerald and Chou(*ibid.*) focused

on the mental illness of a member of the adult population who was not going to school.

While not focusing on college or university students, the study, however, provides a useful insight into understanding how the illness of a family member can contribute to the distress of other family members. Chronister, Fitzgerald and Chou (*bid.*) used a sample of 14 adults in a qualitative approach and concluded that family members endure the most stress and anxiety due to the change in family circumstances, such as the role of assuming responsibilities previously done by the ill member. As alluded to, while Chronister, Fitzgerald and Chou (*ibid.*) used a qualitative approach that captured students' lived experiences, it could not be generalised to medical students since its focus was on the general population of adults who were not attending any school or university. The lack of generalisation prompted the present study to investigate sources and levels of distress among medical students using a mixed methods approach to allow for the generalisation of the study results.

Further, while studies by Stewart-Brown *et al*. (2000), Modis *et al*. (2021) and Amass *et al*. (2022) used quantitative approaches, the fact that they focused on non-student populations meant that a more direct study focusing on the sources and levels of distress among

medical students needed to be carried out, hence the present study. The present study focused on medical students because their mental well-being, or lack of it, may affect the health outcomes of their patients. To understand distress emanating from the illness of a member, Khandelwal *et al*. (2020) used a quantitative approach to measure distress among adults not going to college or university students. The study, like other cited quantitative studies, typically had a weakness of failing to capture the lived experiences of students and, as such, the study might have failed to provide a full account of students‘ distress as told by students themselves. Given the highlighted weaknesses, the current mixed methods study sought to determine the relationship between the illness of a family member and distress specifically in medical college students to get a fuller appreciation of medical students‘ distress and to generalise the findings.

DEATH OF A LOVED ONE AND DISTRESS

While death is inevitable, the death of a family member or any significant other is difficult to contend with. Studies such as by Stroebe *et al*. (2010) and Joaquim *et al*. (2021) researched the link between the death of a loved one and distress among the general population of university students and found that the death of a loved one is one of the leading causes of distress in students.

While buttressing the psychological effect of losing a loved one, Joaquim *et al*. (2021) observe that the mixed experience of the loss of a close family or friend, especially at the height of the COVID-19 pandemic, could elicit negative manifestations of affection, and psychological distress. In examining the impact of losing a loved one, Stroebe, Abakoumkin and Stroebe (2010) observe that the intensity of the stress caused by the life event depends on the extent to which the perceived demands of the situation tax or exceed the individual's coping resources, given that failure to cope can bring harmful effects. According to Stroebe, Abakoumkin and Stroebe (*ibid.*), the loss of a significant other in the last 12 months, especially a partner, leads to discrepancies in areas that can broadly be characterised as loss of instrumental support, loss of validation support, lack of emotional support and loss of social contact. Furthermore, the foregoing study postulates that the loss of a spouse is a key contributor to distress levels. This is largely so because the extent to which spouses feel supported by their partners is a key indicator of marital satisfaction. In addition, the loss of loved ones, like a child, a sibling or a mother is, ordinarily speaking, a source of distress. While studies by Stroebe, Abakoumkin and Stroebe (*ibid.*) and Joaquim *et al*. (2021) focused on general university students and found a correlation between personal life events of students and

distress, the present study sought to establish if medical students experienced the same effects as those experienced by the students from other faculties.

A study by Corden, Hirst, and Nice (2008) found that the loss of loved ones does not cause distress in general, but observed that a lot depends on the timing of the interviews after such loss. The timeframe is the most critical aspect when determining distress due to the loss of a loved one. If interviews on distress are conducted 10 months after the loss, the participants might not necessarily show distress. Not only does the loss of a loved one predict distress for students, but also people whose psychological well-being was relatively secure, as well as those already experiencing high levels of distress, were vulnerable

to the emotional impact of loss. In a study aimed at understanding the effects of the death of a loved one, Laranjeira *et al*. (2022) found that 51% of participants in their study faced high susceptibility to sorrow and showed a raised need for emotional support, particularly in dealing with expressing emotions and feelings. Most bereaved individuals adapt to loss, but a significant minority report high levels of persistent grief symptoms long after the loss. The Laranjeira *et al*. (*ibid*.) study reported that complicated grief manifests in excessive rumination, alienation, hopelessness and intrusive thoughts about the dead.

Preceding studies like Corden *et al*. (2008), Joaquim *et al*. (2021) and Laranjeira *et al*. (2022) appear to suggest that the experience of distress because of the loss of a loved one is a subjective experience. The foregoing literature review presented mixed and perhaps inconclusive findings on the impact of the death of a loved one on distress. Given the inconclusive nature of the preceding findings, the current study, therefore, sought to examine the effect death of a loved one had on the distress of medical students at two Zimbabwean universities. The medical students were chosen in the present study because of the clinical nature of their duties that expose them dying patients and deaths in the wards. Deaths in the wards may make the medical

students‘ distress unique when contrasted with students from other academic programmes. For this reason, understanding the impact of losing a loved one on a medical student may allow decision-makers to allow medical students sufficient time off after losing a loved one, to give them enough healing time. Such may help reduce negligencerelated hospital accidents.

MARITAL SEPARATION AND DISTRESS

In a bid to understand the impact of marital separation on human wellbeing, Crabtree and Harris (2020) carried out a study comprising 20 married male individuals who were non-students. At the time of the interviews, these were identified as having separated from their wives. According to the study, separation and divorce are not synonymous. Marital separation is an understudied phenomenon related to divorcerelated processes and transitions (Crabtree and Harris 2020; O‘Hara *et al*. (2020). Crabtree and Harris (2020:01) investigated marital separation and found that:

> During separation, a couple remains legally married, but their relationship is on hold, either legally or informally, due to relationship distress. … a socially ambiguous status — not quite married, not quite divorced. Treating separated persons as divorcing suggests an

assumption that separation inevitably and linearly leads to divorce and leaves little room to examine different outcomes (e.g., reconciliation, long term separation), pathways to various outcomes, or unique elements of the separation experience. This also implies that marital decision making happens before separating when it may continue after.

The preceding study concluded that separation is not sustainable and that those involved in separation cannot go on indefinitely as the doubt of the future is too much to bear. In support of the above findings, Wolchik and Sandler (2013) assessed how separation affected children and their parents and conclude that one may feel overwhelmed by everything that goes on during separation, especially when it comes to having to tell one‘s children or parents, friends or colleagues about one‘s separation. It also found that having to deal with and manage the emotions and reactions, or even the act of sharing and distributing the property and other possessions was stressful. While studies by Wolchik and Sandler (*ibid.*) and Crabtree and Harris (2020) focused on adults who were at neither university nor college, they however, have important implications for our understanding of the role of marital separation in human distress.

Similarly, studies such as by Tong, Chen and Shu (2019) and Reneflot *et al*. (2020) researched the association between marital separation and distress using secondary data and found a positive correlation between the two variables. The Tong, Chen, and Shu (*ibid.*) study used 2010, 2012, and 2014 data from the Chinese Family Panel Studies (CFPS), while the Reneflot *et al*. (2020) study used secondary data from the Norwegian Population Register between 2005 and 2015 to conclude that marital separation and distress had a positive correlation. The weakness of using secondary data as in the studies by Tong *et al*. (2019) and Reneflot *et al*. (2020) is that the data used was from China and Norway, respectively, hence, may not be relevant in the Zimbabwean context, hence the present study. In addition, secondary data used do not provide answers to some research questions in the present study, hence the use of the current mixed methods approach that combines questionnaires and interview questions, to answer all the questions about medical sources and levels of distress among medical students in the two newly established medical schools in Zimbabwe.

To measure and explore the relationship between the personal life events of medical students and their

distress, the following hypothesis and research question were formulated.

HYPOTHESIS

Personal life events are not associated with medical students‘ distress.

RESEARCH QUESTION

How far is personal life events of medical students linked to distress?

METHOD

PARTICIPANTS AND PROCEDURE

The study used a sample of 123 medical students chosen from two medical schools that were identified as Medical School A and Medical School B. The study used a stratified sampling technique, together with a simple random technique to select participants from the two medical schools. A mixed methods approach was used together with a convergent parallel design to understand how the personal life events of medical students impacted their distress. The choice of the mixed methods approach was meant to quantitatively measure the extent to which personal events contributed towards medical students‘ distress, while at the same time

qualitatively understanding the subjective experiences of medical students regarding distress emanating from their negative life experiences.

INSTRUMENT

A structured questionnaire and a semi-structured interview were used to collect data from the participants.

REVISED STUDENT-LIFE STRESS INVENTORY (SSI-R)

Gadzella's (2005) revised Student-life Stress Inventory questionnaire was used to determine the extent to which personal life events contributed to medical students' distress. The scale is a revision of the original Student-life Scale Inventory (Gadzella, 1991) which is a 51item Likert-type scale. The Revised Student Stress Scale used in the present study has 21 items each rated from 1 to 5. On the scale, 1 means the identified stressor does not affect the student at all. A 5 on the scale means the identified stressor affects the student very much. In using this scale, researchers list only those areas that are rated 3 and above. This instrument sought to measure students' distress across two sections: *stressor*s and *reaction to stressors*. The scoring for the revised student-life stress scale was the summation of the nine categories (scores) values (Gadzella *et al*., 2012). The

total stress score was, therefore, the summation of the nine categories. To interpret the SSI-R, it is important to note that those who obtain a score of 84-105, indicate having severe stress, those with 63-84, reflect having moderate stress and those who obtain a score of 42-63, reflect having mild stress. The Revised Student Stress Scale was relevant in the present study because of its reliability coefficient of .789.

SEMI-STRUCTURED INTERVIEW

The interviews were conducted face-to-face with medical students with strict adherence to the World Health Organisation (WHO) and the Ministry of Health and Child Care protocols on the COVID-19 pandemic. Fourteen medical students, comprising seven medical students from Medical School A and seven from Medical School B, were interviewed. The idea to interview a total of 14 medical students from both schools was informed by a study carried out by Guest, Bunce and Johnson (2006) that states that if you are generating data using interviews, about 12 participants should be interviewed as data saturates around 12 interviews. The semi-structured interview was considered ideal because it is flexible and it allowed the researchers to make follow-up questions and, at the same

time, allowed respondents to freely express and share their thoughts on particular issues.

ETHICAL APPROVAL

Permission to conduct the study was obtained from the Medical Research Council of Zimbabwe and from the two newly established medical schools In Zimbabwe. The individual participants signed informed consent forms to indicate their willingness to participate in the study.

RESULTS

The researchers employed linear regression and analysis of variance to establish the association between personal life events and medical student distress and explain the amount of the variance in distress. Table 1 shows the findings.

QUANTITATIVE RESULTS ON HOW FAR MEDICAL STUDENTS' PERSONAL LIFE EVENTS LINK WITH DISTRESS

Table 1: The relationship between Personal Life Events and Medical Student Distress

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.005	1	1.005	4.876	.033[b]
	Residual	8.654	42	.206		
	Total	9.659	43			

a. Dependent Variable: Stress

b. Predictors: (Constant), personal life events

Coefficients

	Unstandardised Coefficients		Standardised Coefficients			95.0% Confidence Interval for B	
						Lower Bound	Upper Bound
Model	**B**	**Std. Error**	**Beta**	**T**	**Sig.**		
1 (Constant)	1.795	.292		6.156	.000	1.206	2.383
Personal life events	.259	.117	.323	2.208	.033	.022	.495

a. Dependent Variable: Stress

The study hypothesised that personal events are not associated with medical students‘ distress. Table 1 reveals that there is a significant positive association between students‘ exposure to student personal life events and distress. Personal life events had a significant positive association with distress and explained a significant amount of variance in distress ($F = 5.545$, $p = .020$, $R^2 = .050$, $R^2_{adjusted} = .045$). Table 1 shows that 4.5% of the variability in distress of medical students is

a result of personal life events experienced by medical students. The regression coefficient (Beta = .323, p = .20<.05) suggested that a unit increase in life events of medical students results in an increase in medical students‘ distress by .323 points.

QUALITATIVE RESULTS ON HOW FAR MEDICAL STUDENTS' PERSONAL LIFE EVENTS LINK WITH DISTRESS

Most of the medical students indicated that personal life problems, such as losing a loved one, constituted another source of distress. Some students indicated that they experienced adjustment problems owing to losing loved ones such as a sibling, a parent or a guardian, while a few others mentioned that they had not experienced such life problems. The following verbal quotes illustrate the above:

> *Losing a loved one is a big problem because it can tear a person down. After all, they take long to accept the fact that someone is gone and is not coming back. This can cause a fall in academic performance; sometimes-suicidal thoughts can arise (*Sithabile).

*Losing a loved one is a great setback as it brings sadness and worry and this affects reading. When death strikes, you keep thinking about it as if it has just happened. This experience brings other negative feelings such anxiety and depression. In some instances, you feel so weak and develop suicidal tendencies because of the pain (*Amukela).

*Fortunately, I have so far not lost any close members of my family. I have seen how distressing it is for my friends who have gone through that sad chapter in life while at medical school (*Nkanyiso).

*While I have heard and seen fellow students showing signs of distress after losing loved ones, I am yet to experience such since I commenced my programme (*Sibusisiwe).

Adjustment problems were cited as a major stressor in some medical problems. The next section presents results for research sub-question four that focused on the relationship between finance and medical students' distress.

DISCUSSION

The study hypothesised that medical students‘ events are not linked to their distress. The findings are discussed under the theme of the death of a loved one and distress. Other personal life events like pregnancy, marital separation and gain of a new family member, did not have a significant impact on the medical students‘ distress.

The study found that the death of a loved one had a positive correlation with distress. The finding in the present study that the

death of a loved one causes distress confirms findings by Gungor *et al*. (2021), Joaquim *et al*. (2021), and Torres-Chavez *et al*. (2022), that found that personal life events such as such death of a loved one contributed much to the general population of university students. It emerged from the present study that grief feelings cause an individual to lose concentration on their activities and focus on their loss. The grieving process, if not supported, can cause a decline in academic performance, thereby further increasing students' distress. The finding that the death of a loved one causes distress dovetails with findings by Laranjeira *et al*. (2022) who reveal in their study of general university students that the death of a loved one leads to complicated grief that manifests in excessive rumination, alienation, hopelessness and intrusive thoughts about the dead. Distress emanating from losing a loved one was linked to the nature of the relationship with the lost relative. The death of a parent has long been linked to more distress compared to any other death that might occur in the family.

CONCLUSION AND RECOMMENDATIONS

The study sought to establish the link between the personal life events of medical students and distress. It concluded that while the personal life events of medical students contribute to their distress, not all life events have a distressing effect on medical students. Only the death of a loved one seemed to distress medical students. Other life events, such as pregnancy, that affect only female students, and other life events like gaining a new family member and change of health, did not have significant contributions towards medical students. Given the foregoing, the study recommends medical college-specific policies on mental health to buffer students from the negative effects of distress. Further, the study recommends peer-to-peer counselling programmes at medical schools to complement the already existing counselling services offered by universities through Student Affairs Offices and Psychology Departments.

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