Research article

The Relationships Between First-Year Students' Sense of Purpose and Meaning in Life, Mental Health and Academic Performance

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Abstract

The research explored the relationships that exist between first-year students' sense of purpose and meaning in life, mental health and academic performance enrolled for courses with at-risk subjects at a higher education institution. Empirical data was obtained from 269 participants (18-22 years = 60.97%, female = 55.80%) who completed the Purpose in Life test and Mental Health Screening Questionnaire that assessed their sense of purpose and meaning in life and mental health. The average mark in four subjects during their mid-year examination denoted their academic performance. The results suggested that students were still exploring the nature of their sense of purpose and meaning in life (M = 109.21, SD = 21.05) and that small, significant relationships existed between their sense of purpose and meaning in life and mental health. These findings suggested that student practitioners should consider developing interventions to enhance first-year students' identification of their purpose and meaning in life that may inherently also aid their identity development. Likewise, practitioners should consider strengthening and/or developing interventions in critical mental health areas like depression, anxiety, post-traumatic stress and alcohol use behaviour.
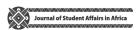
Introduction

The focus in South African higher education (SAHE) has shifted from elitism to mass opportunity (Fraser & Killen, 2003; Scott, Yeld & Hendry, 2007; White Paper, 2013). Consequently, the student population has diversified and higher education institutions (HEIs) must accommodate and address the needs of students coming from diverse backgrounds and varying levels of preparedness for the demands of higher education (HE) (De Jager & Van Lingen, 2012; Reddy, 2006; Scott et al., 2007).

There is a myriad of factors that influence students' success at university, like their academic and social preparedness; their motivation and approach to studying; their experience in the university system; the teaching strategies employed by educators;

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interaction between them and the HEI academic and social systems (e.g. levels of engagement and disengagement); cultural expectations; psychosocial factors and their socioeconomic status (Fraser & Killen, 2003; Mason, 2017; Scott et al., 2007).

First-year students may face additional challenges like moving to a new area or country; separation from their family and existing friends; managing the transition from high school and home to university life; experiencing a range of different cultures; communicating in a language they are not fluent in; meeting unfamiliar modes of learning, teaching and assessment; managing changed financial circumstances; balancing study with employment or being a parent and/or carer; and making the transition from home to the HEI local health providers and support services (Aldiabat, Matini & Le Navenec, 2014; Student mental wellbeing …, 2015). Consequently, first-year students may be at risk of higher levels of stress and the development of psychiatric symptoms (Aldiabat et al., 2014).

A key outcome for HE students is the development of purpose and meaning (PAM) in life (for this study 'purpose' and 'meaning' are regarded as an interwoven concept and used interchangeably) (Braskamp, Trautvetter & Ward, 2008; Chickering & Stamm, 2002). Whilst meaning in life is a complex construct and may not be defined in a general way, it is thought to be an inherent striving to find meaning in life and that life has meaning under all circumstances, including unfavourable situations (Frankl, 2006). Consequently, it is possible to find meaning in adversity through the attitude that individuals adopt when they are facing inevitable suffering (Frankl, 2006).

HE plays an active role in aiding students' identity development since identities are formed through challenges, crises, life events and values students experience throughout their HE years (Chickering & Stamm, 2002; Higbee, 1996; Reisser, 1995; Scialdoni, 2009). Identity development entails the development of PAM and involves educational and vocational planning, making lifestyle choices, exercising intentionality daily, persistence despite obstacles and a growing ability to unify various goals within the scope of a larger more meaningful purpose (Chickering & Stamm, 2002; Higbee, 1996).

Therefore, meaning in life becomes a "web of connections, understandings, and interpretations" that may not only assist students to comprehend their experiences, but also help them to formulate plans towards realising their desired futures (Steger, 2012, p. 165). However, students' ability to experience a sense of PAM involves their efficacy in coping with daily stresses, misfortunes and negative affect (Wong, 2012).

Makola and Van den Berg (2008b) reported a significant positive relationship between first-year students' sense of PAM and their academic performance. Research demonstrated students' level of PAM as positively linked to their better adjustment to university; more effective study strategies; better class attendance; better time management; perseverance and study completion (Makola, 2014; Makola & Van den Berg, 2010). Tinto (1993) identified students' intentions and commitment as key to their perseverance and success. Ultimately, a sense of PAM is associated with students having a better understanding of the application potential for what they have learnt; a higher level of exploring life directions; a regard for education as a gateway to their independence and bringing about positive change in the world (Henderson-King & Mitchell, 2011).

Hence, international research has indicated an upward trend over the last few decades in the quantity and severity of mental health problems presented by HE students (Del Pilar, 2009; Garlow et al., 2008; Gencoz & Or, 2006; Wang, Lee & Wahid, 2013). These studies demonstrated significant levels of depressive symptoms, suicide ideation, suicide attempts, anxiety, anger, and alcohol and drug use in students. Research on the mental health of SAHE students is limited. However, a study by Pillay, Edwards, Gambu and Dhlomo (2002) showed an increase in depression amongst university student populations. Depressive symptoms are linked to poorer academic performance and additional mental health problems amongst those affected (Aldiabat et al., 2014).

A sense of PAM in life is deemed as a core component of mental health, and has been shown to be positively correlated to students' well-being, resiliency and social attitudes and is thought to be advantageous to their overall growth and development (Henderson-King & Mitchell, 2011; Kleftaras & Psarra, 2012; Mason, 2014; Mokalo & Van den Berg, 2008b; Molasso, 2006; Steger, 2012). A lack or low level of meaning is related to a series of negative behaviours and mental health problems, such as alcohol and drug use, boredom proneness, depression, suicide ideation, disengagement and risky behaviours (Kleftaras & Psarra, 2012; Schulenberg & Melton, 2010; Steger, Frazier, Oishi & Kaler, 2006) with clear implications for HE students' sense of PAM and academic success.

Purpose of the Study

A sense of PAM in life appears to be a valuable construct for HE. However, studies about meaning in life in the SAHE sector is still limited (Makola & Van den Berg, 2008a, 2008b; Makola, 2014; Mason, 2014, 2017; Nell, 2014). The study explored how a sense of PAM, mental health and academic performance of first-year students at a HEI enrolled for courses in management sciences with at-risk subjects related to one another. The core constructs explored were: a sense of PAM in life as the extent to which participants have found meaning in life; mental health as the absence or the presence of minimal symptoms of depression, anxiety and substance use; and academic performance as the average mark that the participants obtained in four identified subjects during their mid-year examination.

Method

Research design

To provide a basic familiarity, a quantitative exploratory design was used to investigate and describe the relationships between students' sense of PAM in life, mental health and academic performance (Babbie & Mouton, 2001; Neuman, 1997).

Participants

Students enrolled for at-risk first-year courses were asked to volunteer to participate in the study. Subsequently, a convenient sample of 269 male and female students participated during the second semester. An overview of the participant characteristics is included in Table 1.

Table 1: Participant characteristics of students enrolled for at–risk first–year courses

Category		N	%
Gender	Female	150	55.80
	Male	119	44.20
Age group (years)	18–22	164	60.97
	23–27	37	13.75
	>27	2	0.74
	Not stated	66	24.45
Accommodation	Residence (on/off campus)	68	25.30
	Private	201	74.70

Research instruments

A brief demographic questionnaire was developed to gather participants' age, gender and residential status (research has shown that residential accommodation is correlated to lower levels of psychological distress in HE students (Wang et al., 2013). All items were developed to allow participants to respond using selected response scales so that participants' identities were protected and for appropriate and ease of documentation.

The Purpose in Life (PIL) test (Crumbaugh & Maholick, 1969), which is based on Viktor Frankl's theory of meaning, was selected to assess participants' sense of PAM in life. It is regarded as a primary measure of meaning and is commonly used in research studies with diverse study populations (Crumbaugh & Maholick, 1969; Schulenberg & Melton, 2010). The PIL is an attitude scale that measured the degree to which individuals experienced a sense of PAM in life. The 20 items on the PIL are scored on a seven–point scale ranging from 1 (feelings of no purpose) to 7 (the greatest feelings of purpose in life). Scores range from a low of 20 to a high of 140 and are categorised into three ranges: a lack of clear purpose and meaning (score range: 20-91); somewhat uncertain purpose and meaning (score range: 92-112) and presence of definite purpose and meaning (score range: 113-140). Molasso (2006) had reported that the PIL demonstrates good reliability and validity according to the split-half (.87–.92) and test-retest method (.79–.83).

The Mental Health Screening Questionnaire (MHSQ) was used to assess aspects of the participants' mental health and was adapted from the Psychiatric Diagnostic Screening Questionnaire (PDSQ) (Zimmerman, 2002). The PDSQ is a brief self–report questionnaire that screens for symptoms of DSM-IV Axis I disorders most commonly encountered amongst individuals 18 years of age and older (Zimmerman & Chelminski, 2006). The PDSQ has proven itself to be effective, convenient and reliable (Sheeran & Zimmerman, 2004; Zimmerman & Chelminski, 2006). The MHSQ consists of the PDSQ major depression (MDD), post-traumatic stress (PTSD), panic (PD), social anxiety (SP), generalised anxiety (GAD), alcohol abuse/dependence (AAD) and drug abuse/dependence (DAD) subscales. The entire instrument comprises 74 items, each with a yes/no answer format.

Ethics

The applicability of the PIL and MHSQ with student populations in group contexts was established and permission was obtained from the developers to utilise the questionnaires. Thereafter, permission was sought from the HEI Ethical Committee to conduct the study and approval was received. The language of the PIL and MHSQ was adapted since most participants were second-language English speakers. Permission was obtained from the course department at the HEI to recruit first-year students for the study. The researcher was present at the time of data collection to clarify any matter and was assisted by a multilingual psychologist to address any language issues, to act as a translator (if required) and to ensure the psychological safety of all participants. Although the researcher's presence may be regarded as a conflict of interest, this was counteracted by the presence of the psychologist and subject lecturers who were monitoring what transpired. Detailed information about the study; assurances on confidentiality; voluntarily participation and withdrawal; together with the scope of the research, data collection and analysis were provided in an open forum. Only students who agreed to participate in the study were asked to complete the questionnaires and the questionnaires (in English) were completed in class after written permission was obtained from all volunteers.

Data Analysis

The Statistical Package for Social Sciences (SPSS) (Version 22) assisted with the data analyses. Descriptive statistics were calculated to provide an overview of the participants' characteristics. A reliability coefficient (Cronbach's alpha) was calculated for the PIL. Reliability coefficients were not calculated for the MHSQ subscales due to the categorical nature of the data. Pearson r coefficients were calculated to determine relationships between the PIL, MHSQ and the participants' academic performance. T-tests were used to observe differences between the participants' demographic characteristics, PAM in life, mental health and academic performance.

Results and Discussion

A Cronbach's alpha of .89 was calculated for the PIL that represented good internal consistency. The PIL mean group score was calculated as 109.21 (SD = 21.05) and interpreted in the sense that the participants' PAM was somewhat uncertain. The result is in line with Chickering's developmental theory that held that students are still in a process of developing that PAM (Reisser, 1995).

The means and standard deviations on the MHSQ subscales and the cut-off scores on each subscale are included in Table 2.

Table 2: Means and standard deviations

Subscales	N	M (SD)	Cut-off score
MDD	269	6.93 (4.02)	9
PTSD	269	4.37 (3.39)	5
PD	269	2.02 (2.02)	4
SP	269	6.09 (3.94)	4
AAD	269	0.78 (1.39)	1
DAD	269	0.20 (0.79)	1
GAD	269	4.36 (3.05)	7

The mean group measures on the major depression, post-traumatic stress, panic, alcohol abuse/dependence, drug abuse/dependence and generalised anxiety were subclinical. At the group level, this finding suggested the participants' psychological health and adaptive coping. Although the mean group measure on the social anxiety subscale exceeded the recommended cut-off value that suggested a follow-up clinical interview, the measure was interpreted in the sense that the participants might have felt anxious because of the nature of the task and that they might have feared negative judgement.

Inspection of the individual measures on the MHSQ subscales indicated a significant number of participants who exceeded the recommended cut-off scores on the various subscales. The number and percentage of participants on the major depression, post-traumatic stress, panic, social anxiety, alcohol abuse/dependence, drug abuse/dependence and generalised anxiety subscales that were indicated for follow-up is shown in Table 3.

Table 3: Numbers of participants recommended for follow-up

Subscales	N (%)
MDD	72 (26.77)
PTSD	113 (42.01)
PD	63 (23.42)
SP	182 (67.66)
AAD	86 (31.97)
DAD	22 (8.18)
GAD	62 (23.05)

Zimmerman (2002) indicated the MHSQ cut-off values to be more sensitive than specific and to be interpreted in a flexible way. Therefore, the cut-off values were not used to assign a diagnosis or treatment, but rather to inform decisions about whether a more comprehensive clinical screening should be undertaken (Zimmerman, 2002). The high levels of symptoms present on the subscales is consistent with previous research that indicated that not only globally, but also locally, there is an increase in mental health problems amongst students (Del Pilar, 2009; Garlow et al., 2008; Gencoz & Or, 2006;

Pillay et al., 2002). The recommendation for follow-up was most prominent regarding post-traumatic stress, alcohol abuse/dependency and major depression. Generally, research shows a prevalence rate of 16.67% amongst South Africans suffering from anxiety, depression and substance use problems (Herman et al., 2009)**.** Alarmingly, the psychological distress may be related to contemporary South Africans' challenges to deal with political uncertainty, social transition, crime and economic stress (Health24, 2017). Since no cut-off values on the MHSQ were available for South African populations, the results were interpreted with caution, however, being cognisant of the emerging trend of mental health problems amongst HE students (Pillay et al., 2002). The correlations between the PIL and MHSQ are included in Table 4.

Table 4: Correlations between PIL and MHSQ

	PIL	MDD	PTSD	PD	SP	AAD	DAD
MDD	–.340★★						
PTSD	–.100	.495★★					
PD	–.124★	.446★★	.459★★				
SP	–.097	.307★★	.245★★	.378★★			
AAD	–.085	.122★	.144★	.208★★	.129★		
DAD	–.073	.117	.159★★	.120★	.065	.371★★	
GAD	–.192★★	.541★★	.427★★	.531★★	.503★★	.084	.082
★p<.05, two tailed ★★p<.01, two tailed							

Small significant negative correlations were found between the participants' sense of PAM in life and the presence of symptoms of major depression, panic and generalised anxiety. Empirical studies support positive associations between psychological distress and lower meaning in life, and between high meaning in life, psychological well-being and the ability to cope effectively with stressful life events (Marsh, Smith, Piek & Saunders, 2003). At the group level, the significant negative correlations between the measure on the PIL and the presence of symptoms of major depression, panic and generalised anxiety concurred with these studies, and were interpreted in the sense that the participants' sense of PAM in life was positively related to their adaptive psychological coping. However, on an individual level it was apparent that a significant percentage of the participants might have been psychologically distressed (see Table 3).

An average score of 59.66% (SD = 7.14) was calculated for the participants' academic performance in the mid-year examination. At the group level, a non-significant relationship was found between the participants' sense of PAM and their academic performance. The correlations between the participants' sense of PAM and their academic performance are included in Table 5.

Table 5: Correlations between academic performance and meaning

	PIL	N	%	SD
Subject A	.020	244	59.58	9.54
Subject B	.125	231	58.64	6.64
Subject C	.038	247	63.51	10.40
Subject D	.003	235	58.73	13.54
Subject mean	.054	239	59.66	7.14
★p<.05, two tailed ★★p<.01, two tailed				

The female participants reported a higher sense of PAM on the PIL (M = 110.36; SD = 20.11) than the male participants (M = 107.85; SD = 22.22). Both these measures were interpreted as a somewhat uncertain sense of PAM. T-tests revealed the difference between the PAM of the genders as non-significant.

Significant differences were found between the genders concerning the prevalence of symptoms on the post-traumatic, alcohol abuse/dependency, drug abuse/dependency and generalised anxiety on the MHSQ subscales. The means, standard deviations and p-values for the differences between the genders is included in Table 6.

Table 6: Means and standard deviations for differences between the male and female participants

Subscale	Females M (SD)	Males M (SD)	p-value
PTSD	4.80 (3.36)	3.84 (3.34)	.020
AAD	.414 (1.05)	1.27 (1.63)	.000
DAD	.046 (0.24)	.414 (1.14)	.000
GAD	4.72 (3.17)	3.87 (2.83)	.023

The female participants reported more symptoms than the male participants on the post-traumatic stress and generalised anxiety subscales. The male participants reported more symptoms than the female participants on the substance (alcohol and drugs) abuse/dependency subscales. Alcohol and drug use were indicated as particularly prevalent amongst rural-based first-year university students (Pillay & Naidoo, 2010). The high prevalence rate was related to the students' developmental level, the vulnerabilities and challenges associated with being a first-year student in relation to ways of dealing with stress and social situations (Pillay & Ngcobo, 2010). It is also possible that the female participants might have been socialised differently from the male participants (Afifi, 2007; Needham & Hill, 2010) and that they might have had a higher tendency to internalise psychological distress than males who might have had a higher tendency to externalise psychological distress in the form of alcohol and drug use (Afifi, 2007; Needham & Hill, 2010). The literature shows a distinct relationship between meaninglessness and alcohol and/or drug use (Asagba & Marshall, 2016). For this study, a non-significant statistical correlation was found between the participants' sense of PAM and the presence of symptoms on the alcohol and/or drug abuse/dependency subscales (see Table 4).

The difference between the genders on the post-traumatic stress subscale may be interpreted in the sense that the female participants might have been more vulnerable regarding exposure (including secondary exposure) to gender-based violence (e.g. physical violence and rape) than the male participants (Dunkle et al., 2004). Research substantiated the experience of high levels of gender-based violence amongst South African females (Maluleke, 2018). This interpretation may account for the higher incidence of reported post-traumatic stress symptoms in the female population. However, this finding should be investigated further before any final conclusions can be drawn.

A significant difference was found concerning the prevalence of symptoms reported on the alcohol abuse/dependency subscale between the participants who resided in a residence (M = .338, SD = .84) and those who resided in private accommodation (M = .935, SD = 1.51). Students who resided in a residence reported fewer symptoms than those in private accommodation. This result is supported by the Wang et al. (2013) study, and it may suggest that the accommodation affiliated with the HEI offered a more structured environment with a higher level of peer support, that had culminated into a higher sense of connectedness to the HEI and the cultivation of prosocial behaviour. Such an environment may thus play a role in mitigating first-year students' alcohol/drug use and/or dependency behaviour. However, this finding should be investigated further before any final conclusions can be made.

Limitations and Future Directions

The research project had certain limitations that should be taken into consideration when interpreting the results. The representativeness of the sample posed a limitation on the study. A relatively small, convenient sample was used from a specific subject area from a HEI, implying that the conclusions drawn may not be generalised to other students and other HEIs. Research instruments that have been validated for the South African context could not be found. As such, the cultural fairness of the PIL and MHSQ was not established for the South African student populations. Likewise, the cut-off values for the MHSQ subscales were not determined for South African student populations and could be more sensitive than specific. Future work using mixed methods would allow for richer descriptions of the relationships between students' meaning in life, mental health and academic performance.

Conclusion

The study revealed that the participants had a somewhat uncertain sense of purpose and meaning in life, suggesting that they were still exploring these aspects. The study also revealed significant positive relationships between the participants' sense of purpose and meaning in life and mental health; differences between the genders with respect to the prevalence of symptoms reported for mental health conditions; and differences between participants who were residing in residence accommodation and those who did not, concerning the prevalence of symptoms reported for alcohol use/dependency behaviour.

These findings have practical implications. While HEIs' focus and main priority is the academic or intellectual development of its students, there are claims that HE has been neglecting its students' inner development (Dalton & Crosby, 2006; Marklein, 2007).

Young people in contemporary South Africa dwell in an increasingly volatile, uncertain and complex world which poses definite challenges to their identity construction as individuals and as a collective, their capacity to establish healthy interpersonal relationships and their ability to develop purpose and meaning (Côté, 2018). It was clear from the results that students' sense of purpose and meaning played a role in their mental health, whereas the literature study indicated that students' mental health is linked to prosocial attitudes and behaviour, and resilience. As such, HEIs may be underestimating the role that a sense of purpose and meaning may play in students' development and growth and ultimately their success.

Moreover, the results offer insight into strategies and programmes that may support and develop first-year students. For example, there is a need for interventions to develop first-year students' sense of purpose and meaning whilst fostering their identity construction and resilience that may enable them to advance despite adversity and to live meaningful lives; a need to strengthen and/or develop interventions in critical mental health areas (e.g. programmes focusing on depression and anxiety, post-traumatic stress and alcohol use behaviour) and a need to strengthen or establish gender-based psychosocial programmes. Furthermore, it is clear that residence accommodation and the student development work that takes place in residence systems may play a critical role in first-year students' social attitudes and behaviour that depicts residence life during the first year of study to be an effective strategy to support students' transition into and integration with university life. However, cognisance should be taken that the proposed intervention strategies should be part of a range of holistic student development programmes intentionally designed to enhance students' likelihood to succeed. Besides the infrastructure requirements at an institutional level for this to happen, the will and capacity of practitioners (and mainstream staff) to drive and implement such interventions need to be in place.

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