

# PROMOTING PROFESSIONAL QUALITY AND MEANING IN LIFE AMONG NURSING STUDENTS: A MIXED METHODS STUDY

H.D. MASON and J.A. NEL  
TSHWANE UNIVERSITY OF TECHNOLOGY and UNISA

## Abstract

The study on which this article is based addressed a gap in existing research and practice by reporting on the empirical evaluation of a psycho-educational stress management programme that was developed to address professional quality of life (compassion fatigue, burnout and compassion satisfaction) and meaning in life among nursing students. An explanatory sequential mixed methods approach served as research design. Quantitative data were collected by means of the Professional Quality of Life Scale and the Life Purpose Questionnaire in a pre- and post-test manner (N = 42, Mage = 20.28; 76.19% female). Qualitative data were collected by means of unstructured one-on-one interviews (N = 6, Mage = 20.33; 67% female) and narrative sketches (N = 29, Mage = 20.21, 79.31% female). The paired-samples t-test was used to compare the pre- and post-test quantitative data. Statistically significant results indicate that the programme was effective in reducing secondary stressful experiences and enhancing compassion satisfaction and meaning among participants. Qualitative analysis suggests that group interaction and establishing a sense of meaning in life were important factors that contributed to the value of the programme.

**Keywords:** Burnout, compassion fatigue, compassion satisfaction, meaning, nursing students, professional quality of life.

## 1. INTRODUCTION

Nursing is a particularly stressful career. Not only do nurses have to cope with their own primary stressful experiences, but they are also exposed to secondary forms of stress due to compassionate interaction with patients and their respective families (Koen, Van Eeden & Wissing, 2011; Elkonin & Van der Vyver, 2011). Deleterious effects related to compassionate care, such as compassion fatigue, burnout and moral distress, are of particular concern among registered nurses (Elkonin & Van der Vyver, 2011; Woods, Rodgers, Towers & La Grow, 2014). However, studying towards a nursing degree can also be stressful.

Nursing students complete practical training in environments that are characterised by, amongst other things, high case loads, long hours and unpredictable work environments (Mason & Nel, 2012; Vallance, 2003).

In addition, younger caregivers, such as nursing students, may be more vulnerable, when compared to those in middle adulthood, to the deleterious effects of secondary stress (Figley, 1995; Maslach, 2003). Moreover, since they are still developing the skills required to fulfil their professional roles effectively, nursing students may be exposed to a heightened risk of pathogenic outcomes, such as compassion fatigue, burnout and moral distress (Ribeiro, 2004; Woods et al., 2014).

However, empirical data indicate that stressful incidents can also have positive and growth-enhancing effects, for example compassion satisfaction, the discovery of meaning and moral resilience (Elkonin & Van der Vyver, 2011; Stamm, 2005). Koen et al. (2011) contend that nurses require a sense of meaning in their work if the goal is to deliver quality patient care. Frankl's (2008) work supports the aforementioned assertion by indicating that a sense of meaning in life can serve as a protective factor against stressful experiences.

Previous research has indicated that psycho-educational stress management programmes may be beneficial for helping professionals, such as nurses, to deal constructively with compassion fatigue and burnout (Gentry, Baranowsky & Dunning, 2002; Ribeiro, 2004). Additionally, such programmes could assist in fortifying a sense of resilience, enhancing compassion satisfaction and aiding in the discovery of meaning among helping professionals (Gentry et al., 2002; Ribeiro, 2004; Van Tonder, 2005).

Yet, only a limited number of studies, especially among nursing students, have empirically evaluated the efficacy of psycho-educational stress management programmes that are focussed on addressing compassion fatigue, burnout, compassion satisfaction and meaning in life (Ribeiro, 2004; Van Tonder, 2005). Moreover, few studies have conducted such empirical evaluations from a mixed methods perspective. The collection, analysis and integration of qualitative data, as an adjunct to quantitative data, could allow researchers to develop a more holistic understanding of the results than would be possible when using single method designs (Creswell, 2014).

In this article we report on a mixed methods study that empirically evaluated the efficacy of a psycho-educational stress management programme that was developed for nursing students. The quantitative data indicate that the psycho-educational stress management programme was effective in assisting participants to mitigate the deleterious effects of caring, namely compassion fatigue and burnout, while enhancing compassion satisfaction and meaning in life. The qualitative data point to the relevance of group interaction and meaning in life as important components of the mentioned programme.



In the next section the study is conceptualised in relation to pertinent literature. Then, the research methodology and results are discussed. The article concludes with a summary of the findings.

## **2. THEORETICAL CONCEPTUALISATION**

Stamm (2005) refers to the umbrella term, professional quality of life, to identify the deleterious effects of compassion fatigue and burnout, and the protective factor of compassion satisfaction that may affect helping professionals, such as nurses. Compassion fatigue emerges as a normal yet potentially distressing reaction to the traumatic client-related content that helping professionals may encounter as a consequence of their work (Baranowsky, 2012). The concept of compassion fatigue can be defined as a state of tension and preoccupation with traumatised clients, and is characterised by a sudden onset, avoidance/numbing, on-going arousal related to the client interaction, and intrusive thoughts, images and perceptions (Figley, 1995).

In contrast to compassion fatigue, burnout has a slower onset and is regarded as a reaction related to environmental and personal factors, and not necessarily due to secondary exposure to traumatic content (Baranowsky, 2012). Burnout can be defined as a syndrome of emotional exhaustion, depersonalisation and diminished personal accomplishment that primarily occurs among those involved in the helping, and other person-orientated, professions (Maslach, 2003).

The concept of compassion satisfaction serves as the antithesis of compassion fatigue and burnout (Stamm, 2005). Compassion satisfaction refers to the levels of fulfilment, pleasure and enjoyment that individuals, mostly helping professionals, obtain from their work (Stamm, 2005). While compassion satisfaction can be described as a psychological-based fulfilment, Frankl (2008) suggests that the concept of meaning is more inclusive.

Meaning refers to the capacity to discern order, coherence and purpose in life, in addition to the establishment, pursuit and attainment of goals, which could result in a sense of fulfilment (Steger, 2009). Frankl (2008) argues that meaning is discovered when humans reach out beyond their own self-interests, attempt to make prosocial contributions to others and act with a sense of morality. According to Lütznén and Ewalds-Kvist (2013) the concepts of meaning and moral resilience are closely related. They define moral resilience as a distinctive sense that life is unconditionally meaningful (Lütznén & Ewalds-Kvist, 2013).

Researchers have suggested that nurses enter the field due to, amongst others, perceived callings and the desire to make a difference in the world (Boyle, 2011; Koen et al., 2011). However, Woods et al. (2014) indicate that nurses could experience moral distress when their altruistic intentions are thwarted by internal (e.g. limited experience or education) or external (e.g. institutional) obstacles. Notwithstanding differing perspectives, the concept of moral distress is generally defined as the range of experiences of individuals who are morally constrained – “In short, they know what is the right thing to do, but they are unable to do it ...” (McCarthy & Deady, 2008:254). Moral distress is positively related with compassion fatigue and burnout (Mathieu, 2012; Meltzer & Huckabay, 2004).

Psycho-educational stress management programmes have been developed to address compassion fatigue and burnout, and potentially enhance compassion satisfaction among helping professionals (Gentry et al., 2002). Baranowsky (2012) indicates that psycho-educational stress management programmes ought to address three important objectives: (1) to provide relevant information about the conditions of compassion fatigue, burnout and compassion satisfaction, (2) to assist participants in identifying their unique stress-related symptoms and possible triggers, and (3) to enable participants in developing and actively engaging in self-care plans. However, empirical evaluation studies of such programmes are limited (Van Tonder, 2005). Additionally, psycho-educational stress management programmes typically focus on enhancing psychological coping while neglecting to focus on the area of discovering meaning in life.

Within the South African context nurses are challenged to conduct their work in often under-resourced and demanding environments where social ills are pervasive (Makie, 2006). It may therefore be important for caregivers to transcend beyond mere coping efforts towards the dimension of meaning. By transcending towards the dimension of meaning nurses could make prosocial contributions in spite of being confronted by on-going stressors (Frankl, 2008; Koen et al., 2011).

### **3. AIM OF THE STUDY**

The purpose of this article is to report on a mixed methods study that was conducted at a South African university. The aim of the study was to empirically evaluate the efficacy of a psycho-educational stress management programme that was developed to mitigate the deleterious effects of compassion fatigue and burnout, while enhancing compassion satisfaction and meaning among nursing students. The study was guided by the following research questions:



- Will the psycho-educational stress management programme reduce participants' experiences of compassion fatigue and burnout and enhance participants' experiences of compassion satisfaction and sense of meaning in life?
- What components of the psycho-educational stress management programme will participants regard as important?

## **4. METHODOLOGY**

### **4.1 Research Design**

An explanatory sequential mixed methods approach served as research design (Creswell, 2014). As part of this research design a repeat measures quasi-experimental approach was used to collect quantitative data in a pre- and post-test manner. Qualitative data were collected to explain and expand upon the quantitative results.

### **4.2 Participants**

Quantitative data were collected from a purposefully selected sample that consisted of first-year nursing students (N = 42, Mage = 20.28; 76.19% female). Qualitative data were collected by means of one-on-one unstructured interviews (N = 6, Mage = 20.33; 67% female) and narrative sketches (N = 29, Mage = 20.21, 79.31% female). To be included in the study, participants had to be registered nursing students at a specific South African university. As indicated above, the majority of participants were female, which is in line with international nursing-specific gender norms (Noguer, Canal, Pumarola, Soler & Ferrando, 2008). Based on their ages, participants could be characterised as falling into the late adolescent and young adulthood developmental stage (18-25 years of age) (Arnett, 2000).

### **4.3 The psycho-educational stress management programme**

The psycho-educational stress management programme focussed on two primary goals, namely to assist nursing students to identify, address and manage the conditions and symptoms related to compassion fatigue and burnout, and to enhance their sense of compassion satisfaction and meaning in life. Four themes were addressed during the programme: (1) meaning in life, (2) stress management, (3) professional quality of life (compassion fatigue, burnout and compassion satisfaction), and (4) self-care. The programme was articulated from an experiential and logotherapy-based approach and presented over a period of eight weeks with one two-hour contact session per week. More specifically, participants were assisted in assimilating the programme content by means of case studies, reflective group discussions and weekly homework assignments, such as evaluating life values and setting personally meaningful goals.

Additionally, participants developed personalised self-care plans, which included reflecting on the meaning-centred opportunities that presented themselves in spite of pervasive stressors.

## **4.4 Data collection**

### **4.4.1 Quantitative data collection**

Quantitative data were collected by means of a pen-and-paper-based questionnaire package that was completed in a pre- and post-test manner. The pre-test data were collected the week prior to commencement of the psycho-educational stress management programme. Post-data were collected two weeks following the final contact session. The questionnaire package consisted of four sections: (1) informed consent (see section on Research Ethics), (2) biographical information, (3) the Life Purpose Questionnaire (LPQ) (Hutzell, 1989), and (4) the Professional Quality of Life (ProQOL) Scale (Stamm, 2005).

The LPQ serves as a one-dimensional empirical measure of Frankl's (2008) concept meaning in life (Hutzell, 1989). Consisting of 20 items, participants are requested to indicate whether they agree or disagree with each of the statements. Examples of items are: I have discovered many reasons why I was born and My life is kind of boring (reverse scored). Prior construct validation has revealed acceptable levels of internal consistency (.73-.84) and test-retest reliability (.90) (Hutzell, 1989; Schulenberg, 2004). The following guidelines for interpretation are provided: 0-11 = no sense of meaning; 12-16 = uncertain definition; and, 17-20 = definite sense of meaning (Hutzell, 1989).

The ProQOL Scale serves as a valid and reliable empirical measure for the concepts of compassion fatigue ( $\alpha = .80$ ), burnout ( $\alpha = .72$ ) and compassion satisfaction ( $\alpha = .87$ ) (Stamm, 2005). Each of the aforementioned constructs is measured via a 10-item scale. Examples of items are: I am losing sleep over traumatic experiences of a person I help (compassion fatigue), Because of my work as a helper, I feel exhausted (burnout), and I believe I can make a difference through my work (compassion satisfaction). Participants are requested to provide response ratings on a six-point Likert scale, ranging from 0 (never), to 5 (very often). Stamm (2005) provides the following guidelines for interpretation: Compassion fatigue - mean = 13; < 8 = low risk; 8-17 = moderate / medium risk; > 17 = high risk; burnout - mean = 22; < 17 = low risk; 17-28 = moderate/ medium risk; > 28 = high risk; and compassion satisfaction - mean = 37; < 32 = low potential; 32-41 = moderate/ medium potential; > 41 = high potential.

#### 4.4.2 Qualitative data collection

Participants were requested to complete narrative sketches two weeks following completion of the psycho-educational stress management programme. Narrative sketches refer to documents written by participants to depict their perspectives about the theme in question (Giorgi, 1985). The instruction to the narrative sketch read as follows: What have you learned during this programme? What thoughts, ideas and concepts will you take forward with you as you journey further into the field of nursing? What are your thoughts, feelings and perspectives of this training programme? Use the space below to write your story in approximately one to three pages. A total of 29 participants completed narrative sketches.

Subsequent to the completion of the narrative sketch, an open invitation was sent to all 42 participants to take part in one-on-one unstructured interviews. The guiding question during the open-ended interview was: Explain, in as much detail as possible, what the experience of attending the psycho-educational stress management programme was like for you. Follow-up questions were used to elucidate participants' responses. A total of six participants agreed to be interviewed. The interviews, approximately an hour in duration, were audio recorded and transcribed verbatim.

### 4.5 Data analysis

#### 4.5.1 Quantitative data analysis

Descriptive statistics were used to analyse and report on the biographical information of the sample, as well as on the quantitative measurement of compassion fatigue, burnout, compassion satisfaction and meaning. Guidelines, as indicated by Hutzell (1989), were used to interpret the LPQ scores; criteria as proposed by Stamm (2005) were used to interpret the scores indicated on the ProQOL Scale. The paired-samples t-test, calculated by means of SPSS version 21, was used to compare the pre- and post-test scores as reported by participants on the LPQ and ProQOL Scale.

#### 4.5.2 Qualitative data analysis

Qualitative content analysis, consisting of five interrelated steps, namely (1) familiarisation, (2) inducing themes, (3) coding, (4) elaboration, and (5) interpretation and checking, was used for the thematic analysis of the narrative sketches and the transcribed interviews (Henning, Van Rensburg & Smit, 2011). Additionally, the data were analysed by asking the following question: What factors contributed to the effectiveness of the psycho-educational stress management programme? The software programme Atlas.ti, version 7 was used to manage the qualitative data analysis process.

Trustworthiness of the qualitative analysis was ensured through prolonged exposure, keeping a reflexive journal, member checks and using verbatim quotes to substantiate findings (Henning et al., 2011).

#### 4.6 Research ethics

The Research Ethics Committee of the university where the data were collected granted permission to conduct the study (Ref#: 2010/05/008). All identifying information (e.g. student numbers) were treated confidentially and removed following the data analysis. No course credit or financial benefits were offered for participation. All participants gave individual written informed consent.

### 5. RESULTS

#### 5.1 Quantitative results

Table 1 provides the data comparison between pre- and post-test scores. The mean score of 13.74 (SD = 3.33) on the LPQ pre-test can be interpreted as uncertain definition of meaning in life (Hutzell, 1989). Regarding the ProQOL scores on the compassion fatigue and burnout subscales, moderate to high probability for deleterious effects, i.e. compassion fatigue (M = 23.33, SD = 7.67) and burnout (M = 21, SD = 7.10), was detected during the pre-test. According to Stamm (2005), the aforementioned combination indicates that stress management training may be beneficial. Pre-test scores reported on the compassion satisfaction subscale (M = 39.83, SD = 5.52) suggested that, notwithstanding the apparent stressful effects of their nursing studies, participants experienced moderate potential for positive levels of fulfillment.

**Table 1:** Paired t-test results for LPQ and ProQOL Scale

Variable	N	M	SD	df	t-value
<b>LPQ</b>					
Pre-test	42	13.74	3.33	41	
Post-test	42	16.67	1.97	41	7.83*
<b>ProQOL</b>					
CS pre-test	42	39.83	5.52	41	
CS post-test	42	44.02	4.60	41	5.10*
CF pre-test	42	23.33	7.67	41	
CF post-test	42	19.79	6.22	41	4.49*
BO pre-test	42	21.00	7.10	41	
BO post-test	42	18.14	5.62	41	3.47*

**Note:** LPQ – Life Purpose Questionnaire • ProQOL – Professional Quality of Life Scale • CS – Compassion satisfaction • CF – Compassion fatigue • BO – Burnout • \*p < 0.001 – statistically significant

A statistically significant change can be detected between the pre- and post-test scores on the LPQ ( $t(41) = 7.83, p < 0.001$ ). This implies that participants' reported scores on the LPQ were significantly higher following participation in the psycho-educational stress management programme.

Positive changes between pre- and post-compassion satisfaction scores were also reported ( $t(41) = 5.01, p < 0.001$ ). This suggests that participants' sense of enjoyment, satisfaction and fulfilment improved over the course of the programme. The positive compassion satisfaction changes were accompanied by decreased levels of compassion fatigue ( $t(41) = 4.49, p < 0.001$ ) and burnout ( $t(41) = 3.47, p < 0.001$ ).

## 5.2 Qualitative findings

Two prominent themes related to the value of the psycho-educational stress management programme emerged from the qualitative data, namely (1) group interaction, and (2) establishing a sense of meaning in life. These two themes are discussed next.

### 5.2.1 Group interaction

The use of reflective group discussions was a prominent feature of the psycho-educational stress management programme. This approach appeared to be of benefit to participants:

*"... lots of discussions with other students ... gave me time to open my old wounds and share my ... stories with others ..."* (Participant 25, narrative sketch)

*"... found the group work ... very positive ..."* (Participant 3, interview)

*"... best part for me was the group work ... could connect to other students at a deep level ..."* (Participant 6, interview)

Developmental psychologists indicate that the establishment of meaningful connections is an important aspect of the late adolescent and young adulthood stage (Arnett, 2000). Furthermore, the group interaction may have assisted participants in developing a sense of social connectedness, which could help to establish a strong social support group (Figley, 1995). Social support is regarded as an important protective factor against the deleterious effects of compassion fatigue and burnout (Baranowsky, 2012). One participant described the experience as follows:

*"...belonging to a caring society makes me feel confident..."* (Participant 2, narrative sketch)

### 5.2.2 Establishing a sense of meaning in life

Participants indicated that the focus on the discovery of a sense of meaning in life contributed to the effectiveness of the programme:

*“This programme has made me more interested in life and helped me realise who I am and where I want to see myself in the coming years ...”*

(Participant 11, narrative sketch)

Koen et al. (2011) point to the importance of meaning in nursing contexts. According to Steger (2009) a sense of meaning is related to the establishment and pursuit of important goals. Frankl (2008) adds that social connectedness is an important feature of meaning in life. Participants' responses highlighted the importance of meaningful goals and social connectedness:

*“I want to contribute something to my community and be a great example ...”*

(Participant 4, narrative sketch)

*“I want to be a nurse so that I can help people ...”*

(Participant 17, narrative sketch)

*“It has always been my dream to be a registered nurse ...”*

(Participant 4, interview)

The pursuit of meaningful goals were not just related to personal development, but also associated with contributing to the well-being of others:

*“By studying to be a nurse I can contribute to others' happiness and health ... this way I can reduce other people's suffering ...”* (Participant 2, interview)

The aforementioned is consistent with Frankl's (2008) conception that meaning in life is associated with prosocial contributions. Earlier South African (Mason, 2013) and international (Steger, 2009) studies have also indicated the importance of prosocial contributions in the experience of meaning in life.

## 6. DISCUSSION

The aim of this study was to investigate the efficacy of a psycho-educational stress management programme that was aimed at mitigating the deleterious effects of caring, namely compassion fatigue and burnout, while enhancing compassion satisfaction and meaning in life among nursing students. Pre-intervention data obtained from the LPQ indicated uncertain definition of meaning in life among participants. The post-intervention mean LPQ score of 16.67 (SD = 1.97) could also be interpreted as uncertain definition of meaning in life.

However, the difference between pre- and post-LPQ scores was statistically significant, which suggests the programme was effective in enhancing participants' sense of meaning in life, even if the change was not dramatic.

The qualitative analysis suggested that participants regarded the discovery of a sense of meaning in life as an important outcome of participation in the psycho-educational stress management programme. This sense of meaning was discovered through, amongst other things, setting and pursuing goals, as well as via group interaction.

The aforementioned qualitative findings are substantiated by theorists who suggest that establishing social connections and a sense of meaning in life are important developmental tasks for those who fall within the late adolescent to young adulthood stages (Arnett, 2000; Steger, 2009). Earlier research has also indicated that establishing a sense of meaning and maintaining interpersonal connections appear to be important goals among South African participants in the 18-25 years of age group (Mason, 2013).

The pre-intervention compassion satisfaction scores pointed to moderate potential ( $M = 39.83$ ,  $SD = 5.52$ ), while the mean post-score ( $M = 44.02$ ,  $SD = 4.60$ ) indicated high potential. The aforementioned change in compassion satisfaction scores was statistically significant ( $t(41) = 5.10$ ,  $p < 0.001$ ).

The collective improvements on both the LPQ and compassion satisfaction scales, as well as the qualitative analysis, suggest that participants may have gained an enhanced appreciation of their caring roles. Subsequently, participants may also be more likely to experience their training endeavours as positive and meaningful, in spite of the stressors that are endemic to the nursing training context.

Compassion fatigue presented with a statistically significant decline from 23.33 ( $SD = 7.67$ ) (pre-test) to 19.79 ( $SD = 6.22$ ) (post-test). Notwithstanding the mentioned decline, the post-intervention score still points to a high risk for the development of compassion fatigue (Stamm, 2005). Figley (2002) explains that compassion fatigue encompasses the unavoidable wear and tear of being involved in the helping profession. Hence, the incidence of compassion fatigue could be considered normative rather than pathological, but it still ought to be addressed and managed in a responsible manner (Baranowsky, 2012).

The pre-intervention burnout score, which was calculated as 21.00 ( $SD = 7.10$ ), pointed to a moderate risk for burnout. A statistically significant decline was indicated following the data analysis. However, the post-test score of 18.14 ( $SD = 5.62$ ) could still be interpreted as pointing to moderate risk for burnout, even though it borders on an interpretation of low risk.

Notwithstanding statistically significant changes, participants still appear to be at risk for the development of compassion fatigue and burnout. This may be indicative of the enduring stressors that nursing students encounter as part of their training. Exposure to stressors is not an isolated event, but forms part and parcel of everyday nursing work (Makie, 2006). Ongoing stressful experiences within a caring context could also contribute towards the experience of moral distress (Woods et al., 2014). Nonetheless, the qualitative analysis indicated that participants regarded their participation in the psycho-educational stress management programme as beneficial:

*“Before attending this course I was struggling to manage ... my own life ... my life changed ... the way I act towards my life situations ... ”* (Participant 1, narrative sketch)

It can subsequently be inferred that while the implementation of psycho-educational stress management programmes may not necessarily nullify the endemic stressful challenges that nursing students may encounter, participants still indicated that such support may be beneficial. Based on the qualitative analysis, it appears that psychologists, and others, would do well to emphasise group-based activities and meaning in life as components of psycho-educational stress management programmes when working with nursing students in the 18-25 years of age cohort.

Whereas the aforementioned results focussed primarily on enhancing psycho-educational support to nursing students, they could also be applied to the wider educational programmes of nursing students. More specifically, the concepts that were investigated – burnout, compassion fatigue, compassion satisfaction and meaning – appear to be fundamental to the notion of ethics in nursing.

Vallance (2003) indicates that nursing students are exposed to ethical principles in classrooms, but struggle to uphold such ideals in practice. Ethical challenges are plentiful in the South African nursing context. Amongst others, nurses who work in the overextended and under-resourced public healthcare setting often serve as a first contact and important connection for patients (Makie, 2006). Yet, systemic stressors such as staff shortages, time-consuming hospital hours and mediocre remuneration could negatively impinge on the ethics of care (Mathieu, 2012). Moreover, inexperience and inadequate educational preparation could further create a situation where moral distress becomes a normal reaction among nursing students (McCarthy & Deady, 2008). As such, the concept of care ethics ought to be regarded as an important component of psycho-educational stress management programmes for nursing students.



## 7. CONCLUSION

Nursing students are not immune to the deleterious effects of caring (Mason & Nel, 2012). The study reported in this article pointed to the value of a psycho-educational stress management training programme in assisting nursing students to negate the stressful challenges that they may encounter. Whereas the quantitative results indicated statistically significant changes between pre- and post-test scores, the qualitative analysis suggested that group interaction and meaning in life are important aspects to include in psycho-education stress management programmes.

Psychologists who work with nursing students could play an important role in helping them to address stressors in a constructive manner by presenting, empirically evaluating and further developing the mentioned programme. Such endeavours could assist nursing students in concretising a sense of resilience to address the stressors that may be encountered in their chosen profession. Moreover, this study paves the way for additional research that could focus on the topic of care ethics among nursing students.

The study was limited due to the small and homogeneous sample. It is recommended that future studies be conducted with larger samples from various training institutions in order to further empirically evaluate the efficacy of the psycho-educational stress management programme.

A further limitation was that the psycho-educational stress management programme was only evaluated among a sample of first-year students. Previous research indicates that senior nursing students tend to be at greater risk for compassion fatigue and burnout, and present with lower compassion satisfaction scores, when compared to first-year students (Mason & Nel, 2012). Future research would benefit from evaluating the effectiveness of the stress management programme among both junior and senior students.

The use of a control group with a phased-in programme for larger groups could have allowed the researchers to draw more rigorous quantitative causal inferences. However, the use of true experimental research designs is challenging in real world versus laboratory settings (Creswell, 2014). Nonetheless, this avenue is worthy of further exploration.

Lastly, this study reported on the concepts of professional quality of life and meaning only. Additional studies regarding the interaction of the aforementioned variables linked to the theory of moral distress and moral resilience appears to be warranted. Such studies could ensure that the collective body of related concepts are investigated.

While it is acknowledged that additional studies are required to substantiate the empirical value of the psycho-educational stress management programme, the statistically significant quantitative changes and qualitative analysis suggest that it made a positive contribution to the lives of the participants. Additionally, this investigation is, to the researchers' best knowledge, one of the first South African mixed methods studies to empirically evaluate a psycho-educational stress management programme that is focussed specifically on assisting nursing students in addressing secondary stress-related challenges. It is hoped that this study could serve as a springboard for further empirical investigations as a means of informing and enhancing psycho-educational support to nursing students.

Escalating levels of compassion fatigue and burnout are cause for concern among nursing professionals (Elkonin & Van der Vyver, 2011; Koen et al., 2011). This mixed methods study served as an initial attempt to assist nursing students in concretising the skills, knowledge, abilities and attitudes required to mitigate the harmful effects of caring, while concurrently celebrating the positive and growth-enhancing aspects of their vocation.

## **8. ACKNOWLEDGEMENT**

The first author wishes to thank Dr Christel Troskie-de Bruin for her assistance in finalising this manuscript.

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