

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter aims to provide a detailed description of the process and procedure that was followed to gather and analyse data throughout the duration of the current research. In addition, the chapter aims discuss how variables in the current study were both operationalised and measured.

3.2 Research Design

The current research employed a quantitative research, categorised as a cross-sectional and correlational design (Howell, 1995). The nature of the data gathered was from a self-report questionnaire constructed primarily from existing instruments (see Appendix C, D, E, F and G). Furthermore, the constructs were measured once and the present study aimed to look at the relationships between the variables in the study. This choice was determined by the reality that the independent variable work environment (job control, workload and collegial support) resulted from employee perceptions at work, cannot be manipulated. Furthermore, as it would not be possible to randomly assign participants into groups, natural groupings had to be used. A correlational study is ideal to provide information on the strength and direction of relationships (Howell, 1998), and to measure the moderating effect of sense of coherence. As a result of the use of a correlational design, no causal inferences can be derived from the present study (Rosenthal and Rosnow, 1991).

The study employed a non-experimental design, as there was no manipulation of the independent variables, work environment and sense of coherence in the study. A moderator component was also included into the design of the study. The independent variable was work environment in terms of its three components (job control, work load and collegial support) and sense of coherence (manageability, comprehensibility and meaningfulness). The dependant variable was compassion fatigue. In addition, sense of coherence was measured as a single score from its three components (manageability, comprehensibility and meaningfulness), and was measured as both the independent variable and the moderator variable in the current study. According to Baron and Kenny (1986), a moderator variable is both an independent variable and a moderator, which implies that it influences the experiences and perceptions of the work environment, and that conceptually it can also act as a moderator. All the above variables were treated as continuous variables.

3.3 Sample and sampling procedure

Within the South African workplace context, EAPs are a growing workplace service, but they still remain few and far between (Maiden, 1999). Thus the population of EAP practitioners remains relatively small. Hence, the relatively small sample size is reflected in the current research. The sample was distributed in all provinces of South Africa, namely Gauteng, Mpumalanga, Limpopo, North-West, Northern Cape, Free State, Kwazulu-Natal, Eastern Cape, and Western Cape (refer to Table 3.1). Nonetheless, most EAP practitioners who participated in the present study were from the Gauteng province.

Of the 220 questionnaires that were distributed, in both organisations and at the conference, 115 were returned, yielding a response rate of 52.3%. Sixteen (16) questionnaires were unusable; since they were incompletely filled in (either no biographical information or more than two scales had missing information). This represented a usable response rate of 45%, which equals a sample size of ninety-nine (99) EAP practitioners.

A non-probability sampling procedure was used in the study, in that EAP practitioners were requested to participate in the current study, and were not randomly selected to participate in the study. Upon approval of the current research from the organisations, EAP practitioners were requested to participate. Consequently, a convenience sampling method was used (Rosnow and Rosenthal, 1991). A sufficient sample size was needed to perform the statistical procedures to be used in the current research, in order to obtain meaningful results. A total sample size of ninety-nine (N=99) EAP practitioners was obtained in the current study. According to Pedhazur (1987) this sample was considered adequate for the statistical analysis conducted in the current research.

Table 1 indicates that the mean age for the sample is 41.81 years (SD=8.45) with a range of 26 to 57 years, and there were five participants who did not reveal their age. With reference to gender most participants were female (78 or 78.79%) and males (21 or 21.21%). With reference to race, most participants were Africans (69 or 69.69%), followed by Coloured (15 or 15.31%), Whites (13 or 13.27%) and Indians (2 or 2.04%). In terms of marital status, most participants were married (54 or 55.00%), followed by those who were single (32 or 32.65%), divorced (10 or 10.20%) and lastly widowed (3

or 3.06%). Most participants were from the Gauteng province (71 or 71.72%) (Refer to Table 1 for a detailed description of the sample demographics).

<u>Variables</u>	<u>Categories</u>	<u>Frequency</u>	<u>Percentage</u>
Gender	Male	21	21.21
	Female	78	78.79
Race	African	69	69.69
	Coloured	15	15.31
	Indian	2	2.04
	White	13	13.27
Home language	Afrikaans	18	18.18
	English	12	12.12
	IsiZulu	17	17.17
	isiXhosa	3	3.03
	seSotho	17	17.17
	seTswana	18	18.18
	sePedi	9	9.09
	isiNdebele	0	0
	isiSwati	1	1.01
	xiTsonga	3	3.03
	Tshivenda	1	1.01
Marital Status	Single	32	32.65
	Married	54	55.00
	Divorced	10	10.20
	Widowed	3	3.06
Highest Level of Education	Matric	14	14.29
	Diploma	19	19.39
	Bachelors Degree	30	30.30
	Honours	22	22.45
	Masters	12	12.24
	PhD	2	2.04
Age	26-31 years	14	14.14
	32-37 years	19	19.19
	38-43 years	21	21.21
	44-49 years	19	19.21
	50-57 years	22	22.22
Province	Gauteng	71	71.72
	Mpumalanga	3	3.03
	Limpopo	3	3.03
	North-West	6	6.06
	Northern Cape	2	2.02
	Free State	3	3.03
	Kwazulu-Natal	6	6.06
	Eastern Cape	0	0
	Western Cape	5	5.05

Table 1: Sample demographic (gender – province) (N=99)

In addition, Table 2 indicates that most participants were also employed in the public sector (91 or 92.86%) and (7 or 7.14%) were from the private sector. As already discussed in the section, the sample in the current research was collected in two folds or approaches, there were (49 or 49.49%) collected at conference and (50 or 50.51%) collected in organisations. The data gathering samples will be explained in detailed below (data collection procedure). With reference to level of education, a large proportion of participants had a bachelor's degree (30 or 30.30%). This indicates that the sample had above average level of education. Furthermore, most participants had 1-6 years (33 or 33.33%) length of service in their workplaces and similarly they had 1-6 years (68 or 68.68%) in the same job title. This means that most participants 69% of the sample have been employed with a title of EAP practitioner, as opposed to other titles (refer to Table 1).

Table 2 further indicates that sample demographics in terms of job title and organisational sector. Job title in the current research was clustered in terms of professional affiliation, for example EAP practitioners include (EAP practitioners, EAP co-ordinators, and EAP managers), and the same applies to nurses (professional nurses and senior professional nurses). Organisational sector has been divided into medical health sector, which includes all the nurses employed in the health sector, and other health professionals employed outside the health sector. With reference to job title, EAP practitioners who were referred to as EAP Practitioners were (26 or 26.26%), as compared to those who are referred to HR practitioners were (13 or 13.13%), Social Workers were (12 or 12.12%) and others were (27 or 27.27%), this participants were referred to with different job titles. This point indicates the diversity of job titles of practitioners working in the area. With reference to organisational sector, there were 42 (or 42.42%) medical health sector participants (nurses) and 57 (or 57.57%) participants from other mental health sectors (social work, psychologists, EAP practitioners and other health professionals). This statistics may indicate the area of concentration for the profession and broad range of professionals involved in the EAP practice.

<u>Variables</u>	<u>Categories</u>	<u>Frequency</u>	<u>Percentage</u>
Type of Employment	Full-time	96	96.97
	Part-time	1	1.01
	Short-term contract	2	2.02
Sector	Public sector	91	92.86
	Private sector	7	7.14
Organisational Tenure	1-6 years	33	33.33
	7-12 years	23	23.23
	13-24 years	32	32.32
	25-36 years	11	11.11
Job Title Tenure	1-6 years	68	68.68
	7-12 years	22	22.22
	13-18 years	6	6.06
	19-27 years	3	3.03
Data	Collected at conference	49	49.49
	Collected in organisations	50	50.51
Job Title	EAP Practitioners	26	26.26%
	HR Practitioners	13	13.13%
	Social workers	12	12.12%
	Nurses	21	21.21%
	Others	27	27.27%
Organisational sector	Medical health sector	42	42.22%
	Other health sectors	57	57.57%

Table 2: Sample demographics (type of employment – organizational sector) (N=99)

3.4 Data Collection Procedure

Data from the current study was obtained by means of self-report questionnaires distributed by the researcher to the EAP practitioners. The participants were required to complete the questionnaires in their own time. Once questionnaires were completed, they either e-mailed them to the researcher or placed them in a sealed box, which was placed at a convenient location in the organisation or mailed them to the researcher. No identification information was used in the questionnaire, only biographical information, which ensured that respondents remained anonymous and guaranteed confidentiality. A subject information letter informed subjects about the purpose of the research and at the same time invited participation, which ensured voluntary participation and informed consent. The subject information letter also informed the participants that no person would be advantaged or disadvantaged in any way for choosing to participate or not to participate in the study (Appendix A).

In the current research, the sample was accessed using two approaches. Part of the sample was obtained through the researcher attending an Employee Assistance Programme Association of South Africa (EAPA-SA) annual conference. During the conference, EAP practitioners were informed of the present research by the conference chairs and the researcher. The researcher was provided with a table from which to handout or administer and collect completed questionnaires in a sealed box. Forty-nine (N=49) responses were collected from the conference. The second sample collection procedure was achieved through sending questionnaires to EAP practitioners from different organisations, mostly in the Gauteng province. EAP practitioners were given a month to complete and return the questionnaires via email, post or request the researcher to collect completed questionnaires. Fifty (N=50) questionnaires were collected from various organisations using this method.

The two collected sub-samples were treated as one sample in the current study, because the statistics conducted in the current study revealed that they share similar biographical characteristics and trends in the measures used in the current study. Various descriptive statistics were performed to ensure similarities. According to Figley (1995) compassion fatigue is short-term may be remedied by a holiday or in this case a situation that takes the practitioner from their work environment. However, Figley (1995) does not provide a time frame to experiencing compassion fatigue or how long the holiday has to be in order to alleviate compassion fatigue. This is a limitation on the

compassion fatigue literature. The conference that some of the participants attended could possibly be compared with a short holiday. Although work-related the participants are out of his/her usual daily work environment. This could influence compassion fatigue levels.

A correlation matrix between measures used in the study and the two sub-samples was performed, and next a t-test was performed so as to assess the experience of the dependent variable, which is compassion fatigue for the two groups. From a theoretical perspective the t-test analysis was performed to test Figley's (1995) assumptions and from a practical side to test whether the two groups were significantly different on their experience of compassion fatigue, despite lack of scientific empirical research to support Figley's case (Figley, 1995; Stamm, 1995). The results to demonstrate the similarities between the two sub-samples will be presented in the results chapter (next chapter).

3.5 Instrumentation

The following section discusses the measures used in the study, including the biographical information form, which was used to elicit background information from the participants, as well as the Job Control Scale, Workload and Collegial Support, Compassion Fatigue Self-Test Scale (CFS) and Orientation to Life Questionnaire (QTLQ), which were used to measure the constructs of job control, workload, collegial support, compassion fatigue and sense of coherence, respectively.

3.5.1 Biographical Information Form

The biographical information form was designed to elicit certain background information about the sample in the current study. Information including age, gender, marital status, level of education, tenure, job type, job title in the organisation, and province was gathered. The biographical information form is not an instrument, but it is included here because it was part of the research questionnaire.

3.5.2 Job Control Scale

Job Control was assessed by a 10-item instrument, which was developed by Jackson, Wall, Martin and Davids (1993 as cited in Wall, Jackson and Mullarkey, 1995). The scale is referred to as the 'Job Control Scale'. The scale is a Likert type format, on a 5-point scale ranging from "not at all" to "a great deal". The scale has two sub-scales

'timing the control' and 'method control components' (Wall, 1995). The scale has yielded reliabilities of .86 and .76 for the two subscales (Wall et al, 1995).

In terms of South African studies, Sangweni (1997) used the scale, and reported a Cronbach alpha of 0.91 for the overall questionnaire, with a sample size of 74 participants, which is less than the current research. The current research had a sample size of over one-hundred participants, which indicates the stability of the job control scale.

In the current research, Cronbach alpha for the job control scale was measured as total reliability and not the two sub-scales (timing the control and method control). An example of questionnaire items is "Do you set you own pace at work?" The current research obtained a Cronbach alpha of 0.88 for the job control scale.

3.5.3 Workload and Collegial Support

Workload and collegial support were measured using the scale developed by Dewe (1987). These scales were initially developed for nurses, to measure the level of perceived workload and degree of collegial support. Levert et al. (2000) provide Cronbach alphas for the scales, 0.85 for workload and 0.77 for collegial support, respectively. Levert et al. (2000) research indicates the use of the measure in the South African context. Workload's measuring instrument is a 11-item scale, and it is a Likert-type form, it ranges from "1= Never" to "5=Always". Similarly, Collegial Support, is a 11-item scale, and in a Likert-type form, it ranges from "1=Never" to "5=Frequently". There is no evident title or name for the measuring instrument, within the reviewed literature for the scale. An example of questionnaire items for workload is "I have too much to do in a given time" and for collegial support "there is lack of team work between staff".

3.5.4 Compassion Fatigue Self-Test Scale (CFS)

The Compassion Fatigue Scale was developed by Figley (1995), and is designed to determine the level of compassion fatigue and specific patterns of its manifestation. Further, to assist in differentiating between burnout and secondary traumatic stress. The scale is a 30-item scale, and it is in a Likert-type format, on a 5-point scale of "rarely or never" to "very often". Psychometric properties of the scale are reported in Stamm and Vara (1993). Alpha reliability scores range from 0.94 to 0.86. The higher

the level of rating obtained, the higher the level of compassion fatigue. An example of questionnaire items is “while working with a client who was a victim I thought about violence against the perpetrator”.

This compassion fatigue measure is not the most widely used, the most widely used is the 66-items scale with sub-scales of compassion satisfaction, burnout and compassion fatigue or the 40-items scale which measures compassion fatigue, compassion satisfaction and silencing response (Ortlepp, 1998). Therefore, these commonly used scales measures related aspects which were not directly relevant to this study. Ortlepp (1998) further acknowledges that most measures in the secondary traumatic stress and/or compassion fatigue area frequently refined due to the infancy of the secondary traumatic stress area. The choice to use the above scale despite the lack of wide use was motivated by the length of the scale, which may increase face validity and the point that it has been used in the South African context, by researchers such as Nkosi (2002). In addition, the psychometric properties of the scale are exceptional. Thus, the Compassion Fatigue Self-Test Scale (CFS) presents the best option to measure compassion fatigue as a single construct as opposed to using the secondary traumatic stress, which also measures overlapping concepts.

3.5.5 Orientation to Life Questionnaire (OTLQ)

The Orientation to Life Questionnaire (OTLQ) was used to measure sense of coherence and its three components of manageability, meaningfulness and comprehensibility (Antonovsky, 1993). The questionnaire is a 13-item scale, which is the short form (Antonovsky, 1987). It has a 7-point Likert scale, ranging from “1=Very Seldom” to “7=Very Often”, for other items it ranges from “Never happened (1)” to “Always happened (7)”, “No clear goals or purpose at all (1)” to “Very clear goals and purpose (7)”. Five items were reversed scored from the normal scoring rules of the questionnaire because a high level of SOC represented a low value, e.g. “Do you have feelings that you don’t really care about what goes on around you?” High sense of coherence is 1 and low SOC is 7. These Items are item 1, 2, 3, 7 and 10. An example of questionnaire items for the other normally scored items is “How often do you have the feeling that you there is little meaning in the things you do in your daily life?”.

Levert et al. (2000) argue that Antonovsky does not report Cronbach alpha for the scale. However, according to Antonovsky (1991) SOC-13 scale has demonstrated

satisfactory reliability and validity levels. In a local study, Strumpfer and Mlonzi (2001) provide Cronbach alphas for both the 29-item SOC scale and the 13-item SOC short form, in three studies of SOC and other job attitudes. The Cronbach alpha for SOC-29 from study 1 for the white sample was 0.92 and 0.74 for the African sample, and from study three 0.90. With reference to SOC-13 in study Cronbach alpha was 0.88 for the white sample, and 0.54 for the African sample and study 2 it was 0.84. Rothman, Jackson and Kruger (2003, p. 54), reported that Antonovsky (1993) reported alpha coefficients of the between 0.85 and 0.91 for the SOC-29.

3.6 Statistical Procedure

The data gathered from the biographical form, work environment, compassion fatigue, and sense of coherence scales were analysed with the following statistical procedures:

3.6.1 Descriptive statistics: to indicate frequencies, percentages, means and standard deviations. These statistical procedures are useful in describing various biographical characteristics of data gathered in the current research. Descriptive statistics were used to measure the participants or EAP practitioner's level of compassion fatigue as experienced in each level of compassion fatigue according to Figley (1993; 1995).

In addition, the current study examined assumptions of the different statistical tests such as correlations and t-tests, which are utilised. One key assumption is of normality, which is measured through moments (i.e. Skewness and kurtosis) (Howell, 1998). Skewness is a measure of symmetry, or more precisely, the lack of symmetry. A distribution, or data set, is symmetric if it looks the same to the left and right of the centre point. Kurtosis is a measure of whether the data are peaked or flat relative to a normal distribution. That is, data sets with high kurtosis tend to have a distinct peak near the mean, decline rather rapidly, and have heavy tails. Data sets with low kurtosis tend to have a flat top near the mean rather than a sharp peak (Hopkins and Weeks, 1990). Non-normal distributions create problems insofar as they indicate violations of the assumption of normality that underlies other statistics utilised in the current research as discussed above.

3.6.2 Internal Consistency Reliability: Cronbach's Alpha measured the internal consistency of the scales, which is a useful way to provide information about the soundness of these measuring instruments, which is also important for future research

in this area (Rosenthal and Rosnow, 1991). Internal consistency reliability estimates reliability by correlating items with each other, and is dependent on the number of observations. Rosenthal and Rosnow (1991, p. 50) state “for purposes of clinical testing, reliability coefficients of approximately 0.85 or higher may be considered as indicative of dependable psychological tests, whereas in experimental research, instruments with much lower reliability coefficients may be accepted as satisfactory”. The current research is not clinical in nature and as such an alpha coefficient of 0.85 is deemed not necessary. However, it is advisable that the reliabilities still show a level of internal consistency. Thus, reliabilities lower than 0.70 will be considered unacceptable and discarded. However, in the current research no reliabilities of less than 0.70 were found.

3.6.3 A t-test was performed so as to assess the experience of the dependent variable (compassion fatigue) for the two groups (i.e. data collected at the conference and data collected in organisations). This is due to the theoretical argument that Figley (1995) makes that compassion fatigue sets in quickly and lasts over a short period of time, as compared to burnout, which is enduring and longer lasting. The assumption had to be tested with regards to the two sub-samples, because one was in a conference (outside EAP practitioner role) and the other in an organisation (within the EAP practitioner role). Despite the point that the two data gathering groups were distinguished in the current analysis, it has to be noted that the two groups were treated as one group in the rest of the present study.

3.6.4 Correlations will be utilised in the current research to explore the relationship between work environment and compassion fatigue. Furthermore, pearson product moment correlation will be used to test the above-identified independent variable (work environment), sense of coherence and dependent variable (compassion fatigue) (Rosenthal and Rosnow, 1991). This coefficient is an index that ranges from -1.00 to +1.00, which reflects the direction and the strength of the relationships between variables (Howell, 1995). In the present research, correlations between 0 and 0.30 will be considered as weak, between 0.30 and 0.50 will be considered as moderate, and higher than 0.50 will be considered as strong (Rosenthal and Rosnow, 1991).

3.6.5 Stepwise linear regressions were utilised in the current study to examine how each of the independent variables (job control, workload and collegial support) and the

moderator variable (sense of coherence) contributes to the dependent variable of compassion fatigue. In addition, interaction variables were included in the second regression equation (job control x sense of coherence, workload x sense of coherence and collegial support x sense of coherence) in the current study. Stepwise regression is used in the exploratory phase of research or for purposes of pure prediction and explanation (Howell, 1998), and in the case of the current research to explore which independent variables, interaction variables and moderator variable predict or explain compassion fatigue.

3.6.6 Moderated Multiple Regressions (MMR) was used in the study to test for the moderator model. A moderator model is tested when the sample size higher than one hundred, which is a guideline in behavioural research (Cohen and Cohen, 1983). As already mentioned the sample size in the current research was ninety-nine and due to the nature of the population of EAP practitioners in South Africa, the sample size was regarded as satisfactory to perform the above analysis.

Baron and Kenny (1986) define a moderator as “a variable that affects the direction and/or strength of the relationship between an independent variable or predictor variable and a dependent or criterion variable (p. 1174). In order for a variable to be statistically considered to be a moderator, the following assumptions must be tested and fulfilled:

- All variables must be free of error. Internal reliabilities are calculated as an indication of error. Ideally, cronbach alphas must exceed 0.60, according to Pedhazur (1987) the traditionally accepted range of internal consistency reliability is behavioural research is about 0.50 to 0.80. In the present research all the scales were either 0.70 or higher, which means that they meet the requirement.
- Relationships between variables must be linear. Linearity of data is examined by generating plots of the data to identify the degree to which the relationships were linear and curvilinear, and from this plots it is possible to determine if relationships are linear (Howell, 1995). The scatter-plot indicated that most relationships in the current research were linear although not perfectly linear. Thus, there were considered acceptable.
- There should be no multicollinearity between independent variables. To examine and determine multicollinearity relationships should not exceed $r =$

+/- 0.80, which is the minimum specified level of multicollinearity (Lewis-Beck, 1980). The correlation matrix indicates that there was no correlation close to $r=\pm 0.80$ (Table 3.3 in the results section).

The assumptions and requirements for doing moderated multiple regressions were met in the current research, and results will be presented in the next section.

In MMR, moderation is interpreted as significant or to exist when the interaction variables (job control x sense of coherence, workload x sense of coherence and collegial support x sense of coherence) are significant (Aiken and West, 1991; Baron and Kenny, 1986).

In addition, the trends were analysed by means of graphs. These graphs consist of independent variables (workload, job control and collegial support), moderator variable of sense of coherence and dependent variable of compassion fatigue.