# FACTORS INVOLVED IN COMBAT READINESS WITH HARDINESS AS A MEDIATOR: AN EXPLORATORY STUDY

Gladness Ntokozo Shinga
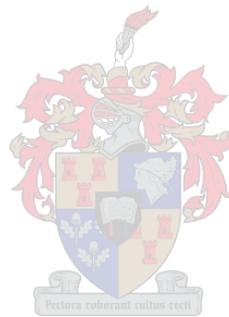
THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF COMMERCE IN INDUSTRIAL PSYCHOLOGY AT STELLENBOSCH UNIVERSITY

Supervisor: Prof G.A.J. Van Dyk

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ABSTRACT

The continued and ever growing involvement of the South African National Defence Force (SANDF) to complex peacekeeping operations over the African continent has opened a platform in the academic field to better sharpen the SANDF's performance and contribution to achieve peace in Africa. Previous deployments to various African countries has tested the SANDF's level of preparedness. Although the organisation gives effort to train its forces to reach the desired level of combat readiness, the nature of the operations to which soldiers partake in has proven to be more demanding. This study was driven by the need to explore and provide a broader perspective of what constitute combat readiness. Utilising the SANDF, the study aimed to explore the relationship between the soldier's relationship with the spouse (RWS) and the soldier's relationship with the unit (RWU), and hardiness as a possible mediator variable to combat readiness (CR). Previous research and theories were explored to provide a theoretical background for the study variables. A non-experimental controlled inquiry was used to test the hypothesised relationship among the variables. A sample of 363 participants (across ranks, gender and race) was randomly selected from South African Infantry Battalion Group mobilising for a deployment to Sudan.

Hypothesised relationships among the independent variables, mediator variable and dependent variable was determined using the correlational analysis (Spearman correlation). Partial Least Squares (PLS) – measurement and structural model was used to test the study model for combat readiness. The results showed significant correlations between the soldier's RWS and CR. Furthermore, significant correlations were found between soldier's RWU and CR. Partial mediation was explained by the path coefficients from RWU>hardiness>CR. No full mediating effect was found. The results also showed insignificant correlations between soldiers RWS and hardiness (rather than between soldier's RWS and CR. These results were in support to previous research and proved to add insight to future research on CR.

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CHAPTER 1

INTRODUCTION

1.1   INTRODUCTION TO THE STUDY

The military is mission-oriented and this requires the deployment of soldiers to new possibly hostile environments. Even in peacetime, military operations are greatly varied and the atmosphere is one of crisis, danger, and stress (International Encyclopedia of the Social Sciences, 1968). However, in comparison with traditional wars characterised by high rates of death and calamity, peacekeeping operations exposes soldiers to multiple challenges both physical and psychological. Van Dyk (2009) emphasises the psychological challenges with which peacekeeping soldiers are confronted, ranging from unexpected emotions of fear to hectic states, depression, anger, and apathy.

De Coning (2007) posits that while Western foreign policy, security and media attention were on Iraq, Afghanistan and the Balkans, Africa has emerged over the last decade as the major arena for United Nations (UN) peace operations. De Coning (2007) further alludes that, of the 18 peace operations managed by the UN, eight are in Africa, of which six are large complex peace operations. Over the past decade South African soldiers have been deployed in UN peace operations.

Nowadays, most African militaries provide forces to contribute to the UN effort of world peace. On the African continent, the top 10 countries contributing to UN peace efforts are Ghana, Nigeria, Senegal, Ethiopia, Morocco, South Africa, Kenya, Egypt, Namibia and Niger (De Coning, 2007). "South Africa is a relative newcomer to international peacekeeping," beginning its contributions in Lesotho where it deployed its personnel for the Southern African Development Community (SADC) intervention in 1998 (Lotze, De Coning & Neethling, 2013, p. 1).

Ross (2008, p. 7) alludes to the fact that "the UN was established with a charter that called on member states to resolve their conflict peacefully by means of negotiation, mediation and facilitation." Ross further discusses that although military forces' role was to ensure successful peace processes and that they only had to keep the fighting forces apart, thereby functioning under Chapter VII of the UN, it has become apparent that peacekeepers are often faced with uncertain environments with numerous role players in the peace process as well as in the conflict.

De Coning (2007) affirms that the interpretation and application of the core principles on which the UN complex peace operations in Africa are grounded, and by which they are characterised (i.e. consent, impartiality and the minimum use of force) have undergone significant development. Importantly the use of minimum force implies that UN peace operations may use minimum force necessary to protect itself and others covered by its mandate as a way to prevent or counter serious threats (see Chapter 7). It is evident that military forces operate in environments characterised by increased uncertainty, complexity, and change which increase stress levels along with the challenge to adjust to such environments (Bartone, 2010).

Today's peace operations are of a multidimensional nature and characterised by violence and brutality where peacekeepers are often confronted with atrocities seldom heard of, or seen before (Ross, 2008). According to Bruwer and Van Dyk (2005) the South African National Defence Force (SANDF) had its first peacekeeping experience in 2001 in the Democratic Republic of Congo (DRC), and ever since there has been a growing participation in such operations (Bester & Stanz, 2007). Contrary to Bruwer and Van Dyk (2005), Lotze et al. (2013, p. 1) are of the opinion that "South Africa's first UN deployment came in 1999 in the DRC (MONUC) however, its first major UN contribution came in 2004 when South African troops stationed in Burundi as part of the African Union (AU) mission re-hatted to form the basis of the UN operation in Burundi (ONUB)." The Constitution of the Republic of South Africa states that the SANDF is to act both in defence of the republic and in fulfilment of international obligations.

In the past years, the SANDF's participation in peacekeeping operations has served as an immense learning platform (Bruwer & Van Dyk, 2005). Its participating brought about the realisation that even in peacetime, the possibility of real war exists, and this greatly necessitated that the SANDF give more emphasis to combat-readiness (CR) of its forces. The paradigm of CR is complex. It not only requires training and the use and/or acquisition of advanced technological weapons but also demands a physically and psychologically prepared soldier. Because peacekeeping operations expose soldiers to a multitude of psychological challenges, it would be beneficial to develop soldiers that can cope better with challenges that may strive to lower CR.

Since 2008, Africa's troop contribution to UN peacekeeping has increased substantially, growing from 29% to 38% of military personnel of which the majority of contributions comprised infantry (Gowan & Gleason, n.d, p. 2 – 3). South Africa has emerged as a major provider of uniformed UN peacekeepers, with annual contributions consistently ranging between 1 500 and 2 500 (Lotze et al., 2013, p. 1). Bester and Stanz (2007) noticing the SANDF's growing role in peacekeeping operations raised a significant question, regarding the extent to which South African soldiers are ready and fully prepared to take part in current complex military operations in Africa.

Lotze et al. (2013, p. 2) argue that South Africa's contributions to international peace operations are characterised by a number of trends. The contributions are firstly strongly informed by the country's political engagements on the African continent. Secondly, South Africa's contributions to peace operations are linked to the country's growing self-image as an emerging middle power', and as an African power, in the international arena. The incident in March 2013 in the Central African Republic (CAR), where South African soldiers were faced with a situation where death became a reality and the level of CR was put to the test, served as reality check for the SANDF.

Stupart (2013, p. 1) quotes the Chief of the SANDF General Shoke who stated, "200 paratroopers and special forces troops faced off against 3 000 rebels advancing on a one kilometre wide front was no laughing matter". On the basis of the aforementioned, the most vital question is, how the SANDF can improve CR and which critical factors are to be considered to enable high levels of CR.

A situation like the one in the CAR where the South African Soldier magazine (2013, p. 7) wrote, "… the attack on members of the SANDF deployed in the CAR resulted in the death of 13 of our soldiers, with 27 wounded and one missing". Such a situation demands a soldier who is able to embrace a challenge (ability to treat change as an opportunity for growth rather than as a threat), a soldier who is committed (a sense of internal balance and confidence even in the face of extremely stressful circumstances), and a soldier who has a sense of control (the ability to feel and act as if one is influential rather than helpless) (Kobasa, Maddi & Kahn, 1982).

A soldier with such characteristics would be seen as a 'perfect soldier' or more appropriately a 'hardy' soldier. This implores the question whether the SANDF should then focus on factors that enable high levels of hardiness in order to develop a combat-ready soldier. If true, then it would require addressing not only the physical aspects of CR but also the psychological aspects of moulding a combat-ready soldier. Dhladhla and Van Dyk (2007) affirm that there is a need to prepare South African soldiers better for the hostile, uncertain environments of future operations despite the extensive training undertaken by military personnel.

A soldier who is able to maintain internal harmony while deployed in complex and unstable environment is likely to cope and thus the organisation, i.e. the SANDF, would successfully contribute to UN intentions. Research shows that support from the soldier's spouse and military unit, particularly leadership, has a great influence on the soldier's CR and ability to perform successfully in operations (Kirkland & Katz, 1989; Rotter & Boveja, 1999; Schneider & Martin, n.d.).

Apart from the physical training aimed at improving soldiers' CR, there are other factors perceived to have an influence on the efforts to achieve CR. Soldiers who view their relationship with a significant other as supportive are freed to focus on training and the mission ahead, hence, they perceive themselves as more CR than those who felt unsupported (Kirkland & Katz, 1989). The soldier's state of mind should be that he/she is both physically and emotionally available for the operation. This state is dependent on the soldier's relationship with the military and his/her spouse/family and the manner in which these two entities view one another (Kirkland & Katz, 1989).

Both the military and the spouse demand the soldier's emotional commitment and energy. Conflict between the needs of the unit and the needs of the spouse or family may inhibit a soldier's mental agility essential for CR. Kirkland and Katz (1989) state that when the soldier perceives his/her unit and family as complementary rather than competitive. It strengthens and frees the soldier's state of mind allowing for higher levels of CR. When soldiers perceive their families as supportive of their occupational requirements it enables them to experience a sense of freedom and ease to commit themselves fully to their units, and to devote more physical and mental energies to the operation (Park, 2011). The spouse's supportive nature towards the soldier's military lifestyle results when the spouse believes that the military, particularly the leaders, respect and are concerned about the well-being of the spouse and of the soldier.

The military unit, the individual soldier and the spouse are all systems that cannot exist in isolation from one another. As each of these elements is in their nature complex, so will they have a bearing on the effective operation of each. A commander who recognises this fact, should take all the steps necessary in attempting to integrate the spouse into the soldier's military life through effective communication, dissemination of relevant information, and the development of support groups that will further these ideals. The non-existence of this relationship between the spouse and soldier's unit may only serve to increase stress and can render the soldier ineffective during combat preparations.

As mentioned before, a holistic view of CR requires consideration of a number of facets. Given the circumstances in military peacekeeping operations, possible challenges arising from the unit and the spouse, one may infer that hardiness (the soldier's ability to embrace challenge, to be committed and to be in control) can play a major role in enabling CR. In order to determine the relationship between CR and the mediating factor of hardiness, it is vital to consider the psychological aspects contributing to the relationship, for example the soldier's relationship with his/her spouse (RWS) and the soldier's relationship with his/her unit (RWU). The interaction of these factors and their consequence to the soldier's CR is yet to be explored. This study focused on the SANDF because it is one of the primary providers of combat forces contributing to the aims of the UN in maintaining international peace and security in accordance with the relevant UN chapters within Africa.

1.2   RESEARCH PROBLEM

Given the unpredictable operational environments to which SANDF soldiers are deployed and where they are expected to handle and cope with any given situation successfully, it is important that their CR be determined from a psychological perspective. Militaries, including the SANDF, train their soldiers to be physically fit. Repeated drills ensure technical skills are internalised and/or reflective. The involvement of health professionals, i.e. a multi-professional team (MPT) in CR is limited, and this may be the reason why soldiers associate the use or involvement of health professionals, such as a social worker and psychologist, with a negative stigma. For example, in an operational unit, soldiers who had to consult the psychologist are believed to be weak.

Continuous involvement of these professionals from early stages of CR is essential to reduce the stigma. Understanding the soldier's family dynamics associated with the anticipated deployment and the soldier's perception of CR can be the preliminary focus to assess the psychological state of the soldier.

The prevalent role of soldiers in peacekeeping operations warrants the need to determine and quantify factors that play a vital role in CR scientifically and accurately, as such factors constitute a holistic view. These factors may include but are not limited to how the soldier and spouse react to deployment. For example spouses who are highly dependent on their soldier-husbands may find it extremely difficult to manage on their own and in turn, this knowledge as believed by the deploying soldiers may increase doubt about participation. On the other hand, adding to the soldiers' frustration, the deploying units expect full attention and commitment to pre-deployment preparations, such as mission readiness and CR training.

The soldier's ability to cope with the challenges arising from the family environment is often assumed until the last stages of preparation. Therefore the researcher saw a research gap in current factors postulated to contribute to a holistic view of CR. Hardiness, as a psychological strength to which the soldier holds challenge, commitment, and control (Allred & Smith, 1989; Bartone, Ursano, Wright & Ingraham, 1989; Britt et al., 2001; Kardum, Hudek-Knežević & Krapić, 2012; Kobasa, 1979; Maddi, 1999) is hypothesised to provide the soldier with the cognitive agility to cope with the challenges prevalent in both family and unit challenges influencing CR.

Researchers have explored a number of factors affecting CR; however, the mediating role of hardiness to CR in relation to the effect of soldier's RWS and RWU is a relevant research challenge. Limited research on soldiers' RWS and RWU in relation to CR and the influence of hardiness on South African soldiers in peacekeeping operations indicated a gap in literature and provided an opportunity to explore the relationship of these factors to CR. The significance of the current study is entrenched in the number of outputs that can be obtained from it.

The study aimed to contribute to enrich the literature by providing a new perspective in the research of CR for the SANDF. Limited research on the mediating effect of hardiness to CR for South Africa soldiers and those participating in peacekeeping operations in the African context exists. The current study served to enrich the literature by providing a fresh outlook on CR. The study aimed to create a body of knowledge and awareness of the factors that contribute to soldiers' perception of CR and ultimately to provide other means of improving CR in the SANDF. The researcher intended to determine the relevance of soldiers' RWS and RWU in relation to CR. In doing so, specific research questions were formulated:

a. Is there a theoretical relationship between soldier's RWU and CR?

b. Is there a theoretical relationship between soldier's RWS and CR?

c. Does a positive relationship between RWU and RWS have an effect on CR?

d. Is there a relationship between hardiness and CR?

e. Is there a mediating role of hardiness between levels of RWS, RWU and CR?

Statistical analysis – such as spearman correlation and partial least squares (PLS) – measurement and structural model was used to potentially show the prevalence of the relationship among variables of interest. Spearman correlation analysis can be used to determine the significance or correlations between the independent and dependent variables (Gravetter & Wallnau, 2008). PLS analysis is similar to regression analysis but is much more than that (Sanchez, 2013). PLS is able to avoid parameter estimation biases common in regression by parameter estimates (Calantone, Graham & Mintu-Wimsatt, 1998). PLS analysis allows for the explanations of relationships and predictions of criterion variable of the model (Granzin & Olsen, 1997). It is especially suited for exploratory studies where the measures or relationships have not been tested previously (Lowry & Gaskin, 2014). The different subscales contained in the different dimensions of the measuring instruments are expected to prove the underlying correlations and/or relationships as hypothesised by the researcher.

The empirical results can be used to guide the formulation of recommendations inclusive of the relevant intervention strategies for the SANDF to adequately capture and improve CR for its soldiers.

1.3   RESEARCH OBJECTIVES

The aim of the study was to explore the relationship between soldiers' RWS and RWU, and hardiness as a possible mediator variable to CR.

1.3.1 Main objective

Given the SANDF's growing participation in peacekeeping operations, the main objective of the study was to conduct research and then to explore empirically factors involved in CR by exploring RWS and RWU and their effect on CR possibly mediated by hardiness among soldiers in the SANDF. Figure 1.1 illustrates the hypothesised relationship among the variables. Scientific research methodology was used to test the hypothesised relationship between the independent variables (soldiers' RWS and RWU), the mediator variable (hardiness), and the dependent variable (CR). In this study, there were three factors that defined hardiness, seven factors that defined soldiers' RWS, and seven factors that defined CR (see par. 3.5).

1.3.2 Theoretical objectives

Theoretical objectives of this study were to conduct a broad literature study on the variables of interest in order to determine the basis of their relationship to CR. The study was guided by the following specific theoretical objectives:

a.   To conceptualise CR from a theoretical perspective.

b.   To conceptualise RWU from a theoretical perspective.

c.   To conceptualise RWS from a theoretical perspective.

d.   To conceptualise hardiness from a theoretical perspective

e.   To conceptualise the theoretical relationship between RWU, RWS and CR.

f.   To conceptualise the mediating effect of hardiness on the relationship between RWU, RWS and CR.
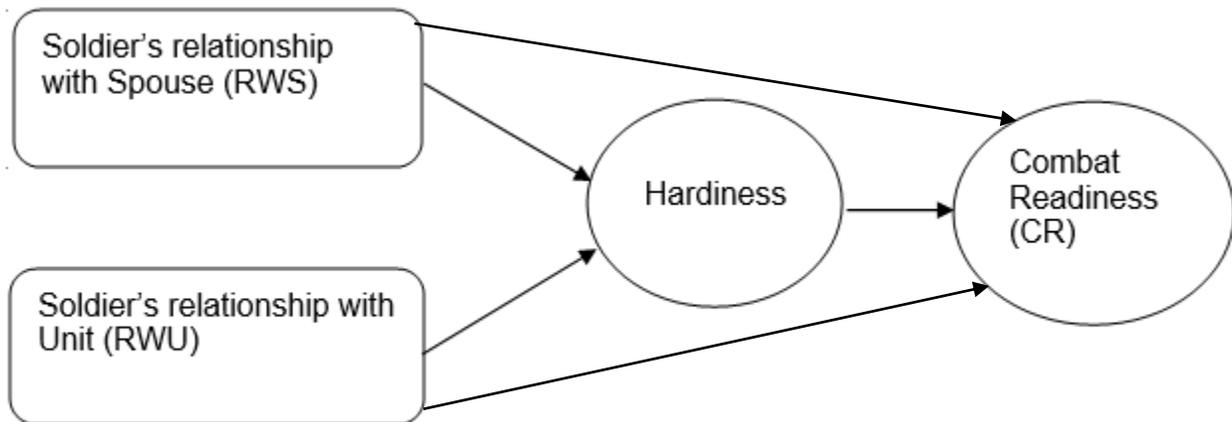
Figure 1.1   **A Proposed Model of Combat Readiness**

1.3.3 Empirical objectives

The empirical objectives were used in an exploratory research methodology to determine the relationships between the variables (i.e. soldiers' RWS, soldiers' RWU and hardiness) and their effect on CR. The objective was to reflect the mediating effect of hardiness on the dependent variable CR. The study was guided by the following specific empirical objectives:

a.   To determine the level of RWU in a sample of South African (SA) military members.

b.   To determine the level of RWS in a sample of SA military members.

c.   To determine the level of hardiness in a sample of SA military members.

d.   To determine the level of CR in a sample of SA military members.

e.   To determine the relationship between RWU, RWS and CR in a sample of SA military members.

f.   To determine the mediating effect of hardiness on the relationship between RWU, RWS and CR in a sample of SA military members.

1.4   RESEARCH PROCESS OVERVIEW

The research was conducted in seven phases, first is the literature review, second is the research design and methodology namely the empirical research, third the presentation of results, and forth is the discussion of the results, followed by the conclusion and lastly research limitations and recommendations of the research.

1.4.1 Phase 1: Literature review

The aim of the literature review was to provide an in-depth description of the factors involved in CR of soldiers through the consultation of previous research. Furthermore, the literature review involved the use of deductive and critical thought patterns in order to create a clear understanding of the literature on the factors of interest for the study (i.e. CR, hardiness, RWS and RWU) and, importantly, an endeavour in terms of available theory in order to determine the relationship between these factors and to describe the psychological aspect of RWS and RWU possibly mediated by hardiness to influence CR.

Specific areas of the study included:

a.   The concept of peacekeeping operations
b.   Peacekeeping stressors and the role of the multi professional team
c.   Combat readiness
   -      Soldier combat-readiness
   -      Material readiness
   -      Unit readiness
   -      Hardiness
   -      Soldier's relationship with spouse
   -      Soldier's relationship with the unit

      d.   Conceptualising the relationship between constructs.

1.4.2 Phase 2: Empirical research

The study used a number of previously developed questionnaires to gather data for specific factors. All questionnaires were paper-and-pencil evaluation tools administered to the deploying infantry battalion group during mobilisation, and were encoded in SPSS to render scientific explanations of their responses. The questionnaires were administered to a sample of 363 infantry battalion group of all rank groups from officers to warrant officers (WOs) and non-commissioned officers (NCOs). The following discussion is a short description of the questionnaires, which are further explained in Chapter three.

Soldiers' CR was measured using the Perceived Combat Readiness Questionnaire (PCRQ) consisting of 78 items developed by Bester and Stanz (2007) and later adapted by Nkewu (2013) with acceptable Cronbach's alphas (see par. 3.5.1). The questionnaire comprised seven subscales, namely confidence in one self, confidence in the team, confidence in the leader, morale and esprit de corps, horizontal cohesion, vertical cohesion, and unit discipline.

The soldier's relationship with his/her spouse was measured using the Family Assessment Device (FAD) consisting of 60 items developed by Epstein, Baldwin and Bishop (1983) with acceptable Cronbach's alphas (see par. 3.5.2). The questionnaire comprised seven scales, namely general functioning, problem solving, communication, roles, affective responsiveness, behaviour control and affective involvement.

The soldier's relationship with the unit was measured using the Soldier's Relationship with Unit Questionnaire (SRU-Q) a subscale of PCRQ developed by Nkewu (2013) with an acceptable Cronbach's alpha, comprised eight items (see par. 3.5.3). The questionnaire was chosen because the items had specific relevance to the research in terms of the theoretical background regarding the soldier's RWU.

Hardiness was measured using the Military Hardiness Scale (MHS), comprising eighteen items, developed by Carol and Adler (2006) with acceptable Cronbach's alphas (see par. 3.5.4). The questionnaire comprised three subscales, namely commitment, challenge and control.

1.4.3   Phase 3: Reporting of results

The results are presented in descriptive statistics (i.e. minimum, maximum, mean and standard deviations). The reliability analyses were conducted using Cronbach's alpha. Spearman correlations of factors derived from CR, hardiness, RWS and RWU were calculated. The analyses were conducted using the STATISTICA 12 and a five per cent level ($p > 0.05$) was used as a parameter for significant relationships. PLS analysis was also used for further analysis to test significance of the proposed model of CR (see Fig 1.1). PLS analysis consisted of measurement model and structural model analysis. The different statistics are further discussed in Chapter three and the output thereof in Chapter four and five.

1.4.4   Phase 4: Discussion of results

The study results of the empirical research are discussed in this section and the explanations are provided.

1.4.5   Phase 5: Conclusion

This section focuses on the conclusions of the study.

1.4.6   Phase 6: Limitations

This section focuses on the measuring instruments and general limitations of the study.

1.4.7 Phase 7: Recommendations

This section focuses on recommendations for future research on the topic, further use of the study results and a discussion on intervention strategies.

1.5 CHAPTER DIVISION

The chapters are presented in the following logical order:

a. Chapter 1: Introduction to the study
b. Chapter 2: Theoretical framework
c. Chapter 3: Research design and methodology
d. Chapter 4: Results
e. Chapter 5: Discussion of results
f. Chapter 6: Conclusion, limitations and recommendations

1.6 CHAPTER SUMMARY

The chapter provides an overview of the SANDF's involvement in complex peacekeeping operations as regulated by the United Nations acting in accordance with the core principles, one of which stipulate the minimum use of force when authorised based on the specific operational circumstances. Entrenched in the SANDF contributions to peacekeeping operations often characterised by uncertainty, violence and brutality contrary to the pre-conceptions of a soldier's role in peacekeeping. Rather peacekeepers find themselves in conflict and war-like situations due to unpredictable circumstances in peacekeeping operations. The chapter also presents the research problem illustrated through the fact that the SANDF is relatively new to international peace keeping and its participation is constantly growing. Challenges faced by the SANDF in the recent years have demonstrated the necessity for South Africa to put more emphasis on combat-readiness.

Given the fact that combat-readiness is a multifaceted construct, factors postulated to have an effect on the way the soldier views him/herself as being combat-ready namely soldier's RWS and RWU, moreover these factors are perceived to have an interaction that can either impede or enable higher levels of CR. Therefore the chapter further proposes that hardiness can play a significant role in mediating possible challenges in a soldier's RWS and RWU to enable CR. Hence demonstrating combat-readiness from a holistic psychological and physical perspective. The chapter also outlines the theoretical and empirical research objectives as well as the research proposed model for CR illustrating the interaction between CR factors. Lastly, the research process overview and chapter division is provided.

CHAPTER 2

LITERATURE REVIEW

2.1   INTRODUCTION

This chapter aims to provide a comprehensive theoretical discussion of CR and factors influencing CR. The purpose of the current study was to explore the relationship between soldier's RWS and RWU, and the mediating effect of hardiness to CR. In order to meet these objectives, this chapter begins by reviewing literature on peacekeeping operations and associated stressors experienced by peacekeepers, in order to provide an understanding of the antecedents encompassed in soldier's CR. The chapter provides an in-depth review on CR, hardiness, soldier's RWS and RWU and an overview of the theoretical interactions between these constructs.

2.2   THE CONCEPT OF PEACEKEEPING OPERATIONS

Peace operations include everything from low-intensity peacekeeping operations, such as military observer duty, to high-intensity peace-enforcement operations (Davis, 1995). Since the creation of the United Nations (UN) in 1945, peacekeeping has become a dominant feature of conflict resolution. The proliferation of peacekeeping missions is indicative of the international mandate of the UN in its attempt to provide the enabling environment necessary for the reconstruction of societies (Onoja, 2008). In international peace operations, the SANDF deploys its forces to various countries in the African continent for peacekeeping purposes (Ditsela, 2012). Ahere (2009) describes peacekeeping as the deployment of people (soldiers, military observers or civilian police) aimed at assisting the parties to a conflict to find ways to resolve their differences peacefully. Allais (2011, p. 2) describes UN peacekeeping as "a unique and dynamic instrument developed by the organisation as a way to help countries torn by conflict create conditions for lasting peace".

Maritell (as cited in Agada, 2008, p. 14) conceptualises peacekeeping as "operations in which personnel owing allegiance to the UN are engaged in military or para-military duties, carrying weapons for their own defence in pursuit of duties designated by the UN as necessary for the maintenance or restoration of peace." Literature shows that peacekeeping involves efforts to re-establish and maintain peace and order by preventing conflicts between opposite sides, implementing basic agreements and protecting humanitarian missions (Allais, 2011; Lobnikar, Vesel & Banutai, 2011; Malan, 2008). According to the collective security system, when differences arise between governments, the parties concerned are obliged to seek a solution by peaceful means firstly through peaceful resolution (under Chapter VI of the UN Charter) mainly through negotiation, mediation, reconciliation, arbitration and peaceful settlement (Agada, 2008).

However, in cases where "peaceful means fail and the dispute escalates into an armed conflict, such threat to peace, breach of the peace or an act of aggression, the Security Council may take enforcement measures to restore international peace, it is then when Chapter VII of the UN Charter comes into play" (Agada, 2008, p. 2). Van Dyk (2009) provides a broad description of how peacekeeping operations have evolved for the worst. In the past, deployed soldiers had to monitor and observe cease-fire agreements between formally belligerent states and belligerents were clearly identifiable. However, this is no longer the case. Peacekeepers become vulnerable to direct attacks and unless Chapter VII of the UN Charter is sanctioned, soldiers may not adequately defend themselves.

An example provided by Agada (2008) illustrates this. Agada states that, as a result of failure to determine the mission mandate and/or political considerations overriding military operational requirements prior to deployment of peacekeepers effectively and adequately, warlords often exploit the weakness of the mandate thus leading to the unnecessary death of UN peacekeepers.

The classical roles of peacekeepers have become the exception rather than the rule (Van Dyk, 2009). This necessitated the deployment of soldiers under Chapter VII of the UN Charter, which has rapidly become evident as the SANDF and other contributing militaries have already began implementing 'force interventions' in the DRC since 2013 in accordance with instructions by the UN Security Council. This was predicted by De Coning (2006) who, deducting from the evolution of peacekeeping operations, wrote … the UN Security Council will deploy new complex peace operations in Africa with mandates that contain elements of Chapter VII enforcement authority.

Soldiers are exposed to specific challenges before, during and after a peacekeeping operation. Generally and irrespective of the type of operation in which military forces participate – whether peace building, peacekeeping or peace enforcement – soldiers are constantly facing life-threatening situations (Kotnik-Dvojmoč, as cited in Lobnikar et al., 2011). Given the fact that the use of force is prohibited in accordance with the memorandum of understanding (MOU) and/or a UN mandate for peacekeeping operations, in reality, the inability to use force when faced with a threatening situation can become overwhelming for soldiers. Soldiers' CR has become a necessity for all militaries (including the SANDF) involved in international UN peacekeeping efforts on the African continent.

2.3   PEACEKEEPING STRESSORS AND THE ROLE OF THE MULTI PROFESSIONAL TEAM

Peacekeeping operations exist for a good cause and are frequently perceived as bearing lower stress intensity than traditional combat situations. Nevertheless, peacekeeping soldiers are subject to potentially traumatic war-zone situations (Litz, 1996). These situations may induce stress, evoking an appraisal process that results in undesirable physiological, psychological, behavioural or social outcomes (Driskell, Salas & Johnston, 2006). Garrido and Munoz (2006, p. 4) refer to stress as "an emergency-adaptive survival process that generates emotions".

Stress can emanate from any stimulus, change or alteration of routine. Stress mobilises a wide range of coping, energising and instigating behaviour regardless of whether the circumstances are positive or negative. In order to support soldiers adequately to cope better with the inherent peacekeeping stressors, it is important to understand exactly the different stressors involved. The military can detach the multi-professional teams (MPTs) to assist deploying soldiers. The MPT may include the chaplain, social worker, clinic sister (nurse), psychologist, and medical doctor. The utilisation of these professionals is perceived to bridge the gap between the physiological component of CR and the psychological component of CR. Even though soldiers train in their technical skills (i.e. manoeuvring and weapon skills), they should also be equipped on how to manage stress.

Stress situations, such as sudden changes in lifestyle, separation from family, exhaustion, adverse climatic conditions, exposure to local populace suffering encountered by soldiers in peacekeeping operations often raise feelings of apathy, despair, melancholy, concern and anxiety (Lobnikar et al, 2011). Stressors, unique to peacekeeping include feelings of helplessness about reducing people's suffering and improving their security, boredom, conflict about rules and duties, taunting and harassment by civilians as well as uncertainty about roles and conditions. These stressors have a direct influence on the soldier's psychological (i.e. cognitive, emotional, and behavioural) and physiological responses (Garrido & Munoz, 2006).

The MPT's presence before and during peacekeeping operations can help soldiers cope with emotions, stress and other challenges. MPTs can play a crucial role in encouraging soldiers to verbalise their day-to-day challenges/stress in a supportive atmosphere; hence, maintaining the psychological aspect of CR for soldiers. MPTs can also help families remaining at home to cope with the overwhelming psychological deployment challenges. Common challenges such as expectation of loss leading to dissonance between the family, feelings of abandonment, adjustment and anxiety require MPT intervention. A comprehensive discussion on challenges faced by both the soldier and spouse is provided in par. 2.4.6.1.

Bartone (2006) provides a list of primary stressors relevant in modern military operations. These stressors, categorised into dimensions, affect the psychological component of CR. The extent to which the MPT should be utilised for soldiers' psychological readiness cannot be over emphasised. The utilisation of the MPT before, during and after the operation, may result not only in soldiers who are physically ready and disciplined, but also soldiers who are psychologically capable to perform their tasks in the mission successfully. Bartone's (2006) stressors are:

- **Isolation**

Because soldiers deploy to remote locations, for example the DRC, Sudan, CAR or any other country, they are separated from their families. Frequently they are without good skills or resilience and this serves to increase the soldier's stress level. Soldiers find themselves in a strange land and culture, feeling isolated and alone. Soldiers who represent the minority to a particular demographic category are more likely to experience social isolation and higher stress levels than the rest of the group (Thompson & Gignac, 2001). Deploying the MPT would help alleviate such experiences through conducting social events, providing consultations and church parade(s). The psychologist could offer invaluable advice to the commander to understand the soldier's behaviour in reaction to such stimuli better and could offer some interventions to help the soldier cope better with unavoidable stressors and maintain his/her CR.

- **Boredom**

Bartone (2006) provides that modern military operations frequently involve long periods of 'staying in place,' often without significant work to do. For instance, whilst the commanders and other team leaders may be occupied planning and strategising, the troops on the other hand 'waiting for orders' may become bored with nothing to do. As weeks and months pass, these feelings of boredom intensify as daily tasks often take on a repetitive dullness, with a sense that nothing important is being accomplished, leaving soldiers with misconduct behaviour.

To some degree, this can be countered by providing more entertainment (social events) and sports activities for soldiers.

- **Ambiguity**

Often the mission and rules of engagement are unclear, there are multiple missions that are in conflict (such as humanitarian and military operations), or the mission changes over a short time (from Chapter VI to Chapter VII). The role and purpose of the soldier may be similarly unclear, and the extent to which soldiers may use force to defend themselves in such situations while awaiting authority from UN Security Council to use force could become overwhelming. Confusion and mystery in the command structure adds to uncertainty (who is in charge of what?). Troops rely on their commanders for clarity and accurate information, and the saying 'comply and complain later' only confuses and adds to the uncertainty and frustration. Rank structures and roles of each commander must be clarified before departure, and because some of the professionals, for example medical officers, the psychologist, social workers and other MPT components may be of the same rank as the overall contingent commander, it is vital that their roles and responsibilities are cleared for troops. Bartone (2006) confirms that there are a number of factors that may cause uncertainty for soldiers, for instance, a lack of understanding the language of the host nation and cultural practices.

- **Powerlessness**

Movement restrictions may extend to peacekeepers unable to interact with the local populace, and restriction on dress and behaviour. Peacekeepers have few choices. Movement and communication restrictions prevent them from learning about local culture and language, and resources that might be available locally. Soldiers may see local people in need for help either wounded, ill, hungry or despairing but be unable to give assistance due to movement and contact rules and regulations (Bartone, 2006). These feelings may manifest as psychological distress in soldiers.

- **Danger**

This dimension encompasses the real physical dangers and threats often present in the operational environment, threats that can result in injury or death of the soldier. Danger includes the reality of being shot at, mines, bombs, ambushes or other hazards in unstable peace operations, as well as the risk of accidents, disease, and exposure to toxic substances. Refugee camps, which military forces guard and where they provide health support to the people, may be bombed by rebel groups trying to 'send a message' to the government of the country. Such action and exposure are likely to leave peacekeepers with feelings of being unsafe and of uncertainty regarding the re-occurrence. Furthermore, such stress (danger) can be direct, representing a threat to oneself, or indirect, representing threats to one's comrades.

Exposure to severely injured or dead people may result in post-traumatic stress disorder (PTSD). Soldiers involved whether directly or indirectly in life-threatening situations must be debriefed. Those unable to cope or who are highly vulnerable to stress disorders, should be identified and given counselling before spreading fear to others thus lowering the level of CR. An individual's response to stress is considered to be influenced by personal and environmental resources available to that person to deal with the stressor. Social support is an important factor in influencing reactions to stress (Dirkwager, Bramsen & Van Der Ploeg, 2003). When preparing for an operation, training is often priority, though absolutely necessary, as it is crucial that the psychological well-being of a soldier is given priority. This intervention can serve to maximise CR and to minimise adverse combat stress reactions. Clearly, there is a significant role for the MPT in enhancing a soldier's psychological readiness.

Some of the functions (such as pre-screening) by the MPTs during preparation for the peacekeeping operation include:

- **Social worker**

The social worker can identify potential social problems, ranging from family relationships or finance. Upon detection of a problem, it is the responsibility of the social worker to conduct interviews with the soldier to determine the severity of the problem. The social worker can also help the soldier through house inspections, where the social worker conducts regular house visits. In this way, possible solutions can be identified and addressed. The development, coordination, and/or putting in place support of systems (such as family members, friends, support groups, etc.) is a process facilitated by the military (such as the SANDF) social workers. The severity of the issues will determine whether other professional interventions are necessary.

- **Clinical sister**

Often during the medical verification as part of CR, clinical sisters are concerned with the different immunisations for soldiers deploying externally; however, the scope of their duties extends beyond that. For instance, if the social worker finds that the soldier is suffering from domestic abuse (physical), resulting in visible bruises. In such a case the clinical sister can treat the soldier and determine whether there is any internal bleeding necessitating medical attention. This process may also help determine the soldier's deployability.

- **Psychologist**

The psychologist has a vital role in the determination of the soldier's psychological readiness. Through interventions, the psychologist can determine whether there are any underlining issues or vulnerabilities that can render the soldier not fit for an operation.

The psychologist can widen the scope of observation, i.e. when taking the family medical history, conditions such as depression, anxiety disorders, suicidal behaviour, adjustment problems, etc. can be identified. This can assist in determining the soldier's vulnerability in stressful conditions presented by peacekeeping operations and overall coping strategies for the soldier.

- **Medical doctor**

The medical doctor determines the medical condition of the soldier. This may include a description of whether the soldier is chronically ill and establishing the degree of severity of the illness and/or whether the soldier is taking medication that may result in an adverse reaction outside the South African borders. This may also assist in determining whether the soldier can endure any physical training.

- **The chaplain**

The chaplain is the spiritual leader in a unit and provides religious support to the soldiers and their families (U. S. Army Deployment Cycle Readiness: Soldier's and Family Member's Handbook, 2008). The chaplain is there to see to the spiritual well-being of the soldier through prayers that enable the soldier to feel at ease and comfortable to talk about any challenges. At unit level the chaplain can also facilitate esprit de corps to build cohesiveness, enthusiasm and devotion among deploying soldiers.

Programmes where chaplains can take part such as morale, welfare and recreation (MWR) can be used to reduce soldier's stress levels, build coping skills through encouraging self-confidence and self-reliance, and are good measures of fostering unit esprit de corps (Marshall-Mies, Westhuis & Fafara. 2011). Because the chaplain often deploys with the unit, the unit must ensure there is a designated chaplain for the spouse at home.

The utilisation of the MPT before, during and after deployment is invaluable, and would ensure a stable state of mind, in which soldiers would feel free and confident in their abilities to perform and have undoubtable trust that the military as an organisation that cares about them. The U. S. Army Study of the Human Dimension in the Future 2015-2024 (2008, p. 138) delineates the essence of managing the psychological element of soldiers participating in complex military operations stating that, "... in spite of the range of differences associated with the spectrum of future military operations, all soldiers require emotional, cognitive, and behavioural control over common symptoms of stress". MPTs together with military leaders, can be used to help, soldiers cope. Military leaders also have a significant role in buffering peacekeeping stressors, supporting their troops, clarifying expectations associated with different roles, informing troops so as to eliminate rumours. Such actions from the leaders can result in higher levels of commitment and self-efficacy which will culminate in group efficacy (Kgosana, 2010).

The discussion provided thus far reflected a summary of the dynamics and factors encompassed in military operations, such as peacekeeping, together with available interventions or strategies, which the military can utilise to minimise potential psychological distress and maintain a stable state of mind for forces participating in peace support operations. The following discussion focuses on CR. CR is a complex construct and the discussion includes a number of factors associated with CR.

2.4   COMBAT READINESS

> … the worst moment for me came in Congo (DRC) in 2003 when there was suddenly a risk that the whole situation in the north-eastern part of the country (DRC) would unravel. Massacres were happening in Ituri and Bunia. We (MONUC) clearly did not have enough troops on the spot for the crisis, and our reserve force consisted of only one battalion that was not trained to address an emergency like this one.
>
> (Ross, 2008, p. 6).

A number of researchers have explored the concept of CR in the past years and this has led to a proliferation of its definition (Bester & Stanz, 2007). In 1986, Gal provided the first operational description of CR. In operationalising the concept of CR, Gal described CR as a psychological attribute in terms of a soldier's choice or degree of commitment to, and persistence in effecting a certain course of action (Bester & Stanz, 2007).

In support to Gal's perception of CR, Kirkland and Katz (1989) describe CR as a notion referring to the soldier's degree of commitment, where such a degree is branded not only by the soldier's willingness to train and to deploy, but where necessary, to fight. Consequently, if this degree of commitment is achieved the soldier's state of mind would be that he/she is both emotionally and physically available for the operation; a feat that is in no small part dependent on the relationship that the soldier shares with the military as his/her employer and his/her family, and the manner in which those two important entities interact and view one another (Kirkland & Katz, 1989). Naryshkin (n.d., p. 129) defines CR as "a state of troops that allows them to begin combat operations in an organised manner at a time designated in advance and to successfully fulfil the tasks assigned to them in the course of these combat operations". A description of CR is also provided by Schumm, Bell, Rice and Schuman (1996) who describe readiness as a level of preparedness for performing one's combat mission. Rich and Drezner (1982) argue that there is no widely accepted definition of readiness, and that one should rather view the notion of readiness in the context of a specific wartime scenario.

Taking from the mentioned researchers' conceptualisation of CR, the author views the concept of CR as the soldier's level of preparedness as being prepared psychologically, and physically through training and psychological interventions aimed at developing a soldier's capability to perform a given military task successfully. Such a level of CR is achieved through the utilisation of military leaders working hand- in- hand with the MPT for the purpose of developing a soldier who will be able to withstand any challenges (family and/or unit), a soldier able to cope successfully with operational stressors and thus is able to perform effectively in complex and unpredictable military operations.

The current study focused on the individual soldier's state of mind in preparing for military operations, such as peacekeeping. Nowadays, the complexity of operations requires soldiers who are both physically and psychologically prepared to withstand the calamity presented by the operation and possible non-military challenges (such as the separation from loved ones). The soldier's apprehension and reaction to such unpredictable environments are affected by the level of preparedness, the soldier's state of mind and the level of hardiness at that moment.

Thorough appreciation of anticipated challenges can be readily addressed before departure to the mission. With recurring demands for peace interventions in the African continent, recently evident in CAR and DRC incidents, there is a need for militaries to establish a more robust crisis response capability as a priority (Warner, 2014). De Coning (2007, p. 1) writes,

> Of the 18 peace operations currently managed by the UN, eight are in Africa, of which six are large complex peace operations…this explains why 75% of the approximately 100,000 military, police and civilian UN peacekeepers currently deployed can be found in Africa.

Agada (2008, p. 56) says "… due to the fluid nature of conflict, it can change quite rapidly from low intensity conflict into unrestrained violence". The unpredictability of the environments into which soldiers are deployed, whether Sudan the DRC or the CAR requires a soldier who can easily adjust and be able to react to a given situation. Such a soldier would be hardy and 'versatile' (an enduring characteristic) he/she should have the ability to cope with a wide range of tasks regardless of the place and the degree of complexity, and the military has a duty to equip its forces to be ready and able to respond to any threat posed by the different circumstances of the operations. CR is a complex construct. There are therefore a number of significant factors that attribute to the development of a combat-ready soldier. Training a soldier provides the physical agility to perform in military operations and has been long founded to be a significant aspect of CR; however, the psychological aspect of developing CR is quite complex.

Researchers have partly studied components of psychological CR from the unit perspective factors, such as morale, esprit de corps, cohesion to organisational identity (Albert & Whetten, 1985; Etzioni 1975; Gal, 1986; Holz 1986; Houston, 2000; MacCoun, 1993) and individual factors such as personality, self-efficacy, locus of control to resiliency (Adler, Bliese & Castro, 2011; Bandura, 1982; Cole, Field & Harris, 2004; Lau & Schaffer, 1999;Spector, 1988).

The soldier's state of mind as a psychological component to CR may be broad. Some of the dimensions in influencing the soldier's state of mind in order to cope with challenges of the operation may include and are not limited to intra-psychic ability, ego power, self-confidence, self-efficacy, hardiness, dareness and other components of personality (Parrewė & Ganster, 2011). These psychological components have an effect on the soldier's willingness to fight and a will power of commitment in which a soldier is prepared to die for his/her unit and country. Perhaps the psychoanalytic theories capture the essence of what motive human behaviour from a cognitive perspective. Sigmund Freud's theories of personality including the unconscious mind, psychosexual stages, and defence mechanisms provide a comprehensive perspective in understanding the psychodynamics of personality.

For the purpose of understanding the following discussion, it is important first to define personality and its relation to the state of mind. Pervin, Cervone and John (2005, p. 6) define personality as "those characteristics of the person that account for consistent patterns of feelings, thinking, and behaving". Larsen & Buss (2005, p. 4) define personality as a "set of psychological traits and mechanisms within the individual that are organised and relatively enduring and that influence his or her interactions with, and adaptations to, the intra-psychic, physical and social environments". Freud believed that most human behaviours are caused by thoughts, ideas and wishes imbedded in the brain (Larsen & Buss, 2005; Unknown, 2004). Freud described the mind as an iceberg divided into three components, the conscious, pre-conscious and unconscious (VanKatwyk, 2003).

According to Freud's theories, only 10 per cent of human behaviour is caused by the conscious mind and 90 per cent is attributed to the unconscious mind (Larsen & Buss, 2005; Parrewė & Ganster, 2011). Freud also described personality structures also known as the provinces of the mind (i.e. ego, superego and id) that help us understand human behaviour. The ego (or self) develops through childhood and operates according to the reality principle mediating the id and superego demands. Although the ego is considered to be partly conscious and partly unconscious, it is responsible for the realistic satisfaction of instincts. For example, a soldier who finds him/herself in a combat zone would shoot towards the enemy in an effort to survive. The ego is considered to be the 'voice of reason'. This is often only fully developed at maturity (Parrewė & Ganster, 2011). The superego greatly influenced by learning from family and society, provides standards for judgment (the conscience). It serves as the moral compass creating feelings of pride and guilt according to the beliefs learned within one's family and the culture (Möller, 1993). Soldiers deployed in the most devastating parts of Africa, for example, find it difficult not to assist the starving populace at that specific time (as per UN MOU). This is because in our mind, we have been cultured to care for one another. According to Freud's theories the id is believed to be the unconscious component of the mind, and it is not rational (VanKatwyk, 2003).

The unconscious operates according to the pleasurable principle satisfying our biological urges and drives for instance, the human predisposition to avoid pain and to seek pleasure (Parrewė & Ganster, 2011). The unconscious precludes actions made automatically (innate reactions) (Unknown, 2004). The conscious mind is organised by events, memories and the sensations along with emotional processes, for example, a person not only perceives and understands but also responds (acts) (VanKatwyk, 2003). Human actions are often directed by the need to achieve goals, making decisions and overcoming difficulties encountered through efforts in controlling oneself (Parrewė & Ganster, 2011). The ego and the superego are believed to be naturally at conflict. This struggle represents the typical intra-psychic conflict 'conflict within the mind'. Naturally when the id is too strong, a person would be rude and egotistic.

On the other hand, when the superego is too strong, such person would be constantly overwhelmed with worry, anxiety and full of guilt. The ego is perceived to mediate (balance) the id and superego. As a defence mechanism, the ego uses self-deceptions to mediate the id and superego. Larsen and Buss (2005) posit that intra-psychic conflict is present throughout life: what a person wants to do (id) versus what the person should do (superego) versus what the person actually does (ego). VanKatwyk (2003, p. 2) quotes William James who delineated the concept of the "divided self" and "conflicted self" stating that "some persons are born with an inner constitution which is harmonious and well balanced from the outset. Their impulses are consistent with one another, their will follows without trouble the guidance of their intellect, their passions are not excessive and their lives are little haunted by regrets. Others are oppositely constituted; and are so in degrees which may vary from something so slight as to result in a merely odd or whimsical inconsistency, to a discordance of which the consequences may be inconvenient to the extreme." It is important that a state of equilibrium within the self be maintained to attain healthy functioning (Parrewė & Ganster, 2011), which is important to support CR.

Maslow believed that the highest human motivation and drive of people is self-actualisation, which is a process of self-fulfilment, finding and becoming our true inner self (identity) (Dörner, 2006). This motivation is considered to be the end of our true inner personality. The fulfilment of *self-actualisation* is highly dependent on the fulfilment of the other drives and needs which must be fulfilled first. The second-highest need in the hierarchy following self-actualisation is *esteem,* believed to be the need for self-esteem, achievement, competence, and independence, a need for recognition and respect from others. Third in the hierarchy is *belongingness,* which is a need to love and be loved, to belong and be accepted, the need to avoid loneliness and alienation. *Safety* needs relate to the desire to feel that the world is organised and predictable. The need to feel safe, secure, and stable is the second-lowest need in the hierarchy, and finally, the *physiological* needs to satisfy hunger and thirst are the most basic and important needs.

This knowledge on personality is important especially during the selection of peacekeeping soldiers, as well as for the MPT to identify vulnerabilities in soldiers and to develop a good model for treatment. Soldiers with high levels of self-esteem, self-actualisation and self-fulfilment will be better equipped with high levels of CR. These motivations and urges are explained in the conscious mind (ego-functioning on the reality principle) and unconscious mind (id-functioning on the pleasurable principle) and thorough put the different schools attempting to understand personality that drive human behaviour (the working of the mind). Joseph (2007) explored the psychodynamics of combat reaction demonstrating the individual soldier's reaction, and confirms that soldier's reaction in operations is attributed to complex psychological facets. Even though most research on soldiers' reactions focused on the combat situation and capitalised on clinical psychological aspects, it is nonetheless applicable and relevant in understanding the antecedent variables influencing the soldier's state of mind and general perception of CR such as constant fear and uncertainty that may lead into paranoia. Parsa and Kapadia (1997) are of the opinion that psychodynamically, soldiers in combat often merge their narcissistic defence mechanisms with an idealised object such as a unit and that such idealisation heightens the soldier's belief of invulnerability to death.

This perception or belief is fuelled by the trust and commitment of the soldier in his/her peers, leaders and the unit at large. Glass (as cited in Joseph, 2007) conceptualised the effects of group cohesiveness among unit members as a psychological facet that plays a mitigating role in soldier's apprehension and response when faced with dangerous circumstances. Such perception extends to facilitate support among soldiers in such a way that individual needs and values become subordinated by the group's needs and standards of conduct (Glass, as cited in Joseph, 2007). Having interpersonal skills, would enable a person to reach out to other people, in doing so, buddy relationships are formed, horizontal/vertical cohesion builds on trust with a resilience to support, providing the aggrieved person with hope and strength to bounce back. This relationship ensures an emotional reload.

Joseph (2007) further sees this relationship as reciprocal between members of a unit and an individual soldier, this capacity to form attachments with others emanate from the individual's past history (positive transference)   which the individual soldier had with his/her primary care giver as a child for instance, parents. Joseph (2007, p. 4) attests that … during combat an individual overcomes the fear of death through a tri-dimensional relationship with the unit; consisting of delusion of omnipotence, magical belief in the leaders, or belief that in time of need, peers will be able to provide for him/her". As a result, an individual's ego ideals subsequently merge with that of a group and are internalised as the soldier's own (Shaw, 1983). The soldier's ability to react effectively and to cope under complex situations not only depends on training but is also attributed to the soldier's personality. Such personality is characterised by confidence, tough-mindedness, self-efficacy, situational awareness, a strong ego power component and an internal locus of control that enable the soldier to cope with any challenges (Joseph, 2007). These characteristics protect the soldier against fear and sense of mortality. In an operation, a number of challenges may arise such as (a) non-military challenges (for example, family) and (b) unit and operational challenges. These challenges may be mitigated by utilising established support factors and interventions (i.e. unit support programmes, training, morale, and horizontal and vertical cohesion) from the unit.

Emphasising the significance of the human component in military operations, the U. S. Army Study of the Human Dimension in the Future 2015-2024 (2008, p. 9) writes, "the army's ability to perform its mission depends ultimately on its human element, soldiers, who must perform effectively as individuals and as members of a unit if the army, the joint force and the National defence efforts are to succeed". Hence, the current study explored the soldier's state of mind through hardiness as the mediating variable in demonstrating CR, because a soldier is a member of the unit and of a family. Both institutions demand the soldier's commitment, and this may produce overwhelming challenges for a soldier preparing for an operation. Personality and individual factors (such as hardiness) could prove to be invaluable in enhancing coping mechanisms. The other dimensions that contribute to the soldier's state of mind enabling CR may be attributed to the psycho-religious dimension, a spiritual belief in an external force, a greater power outside oneself such as GOD or a god seen as a guardian providing

external security. James (as cited in VanKatwyk, 2003) describes the role of religion in unifying the self as religion providing a sort of characteristic relief. Furthermore, religion transforms the most intolerable misery into the profoundest and most enduring happiness. Wulff (as cited in VanKatwyk, 2003) further posits that religion serves as a soothing function by the creation of an illusory, intermediate area of experience that helps throughout life to bridge inner and outer realities sharing this role with other cultural forms.

According to Both (1984), CR levels are supported by components such as personnel readiness, material readiness and training level/unit readiness. Meijer and De Vries (2005) concur, stating that there are many factors to which a combat unit maintains CR, and these factors include material readiness, training level, personnel readiness and combat exposure. In support to Both (1984) and Meijer and De Vries (2005), Dunn (2013, p. 1) also holds that "readiness is three-legged, the personnel, equipment, and training 'legs' that need to be balanced and in sync to support the load". Figure 2.1 represents a complete structure for CR as a state of mind.

Personnel Readiness

- *Intra psychic*
- *Ego power*
- *Self confidence*
- *Self-efficacy*
- *Dareness*
- *Though mindedness*
- *Hardiness*
- *Interpersonal skills*

Material Readiness

- *Serviceable vehicles*
- *Serviceable weapons*
- *First line repair equipment*
- *Medical equipment*

Unit Readiness

- *Training - Physical agility*
- *Vertical cohesion*
- *Horizontal cohesion*
- *Esprit de corps*
- *Morale*
- *Teamwork*

CR: A State of Mind for a Soldier

Figure 2.1 **Combat Readiness: A State of Mind for a Soldier**

2.4.1 Soldier's combat-readiness

Over the past years, it has become evident that the SANDF has an emergent role in peacekeeping operations, particularly in the African continent. The recent incident in the CAR, where the deployment of soldiers was formerly centred on training purposes, and the prevalence of violent rebel attacks called for an immediate intervention, which resulted in the deaths of 13 SA soldiers (Stupart, 2013). In view of the increased participation of SANDF soldiers in peace-support operations more effort is necessary to increase soldier's level of CR.

"…We must never forget that it is the soldier-well-trained and well-equipped-fierce, disciplined, mentally and physically tough, intelligent, flexible, and compassionate-who ultimately represents and enables the capabilities which our military provides to our Nation. Confident, and competent soldiers who are able to adjust imbued with the military's values and warrior ethos, fight wars and win the peace. The soldier is the vital ingredient in enhancing the effectiveness of the current force, and to realising future capabilities" (Deployment Readiness Quick Reference Guide, n.d., p. 105–106).

The aforementioned statement encompasses a holistic view of what a combat-ready soldier is. High-quality, motivated and well-trained personnel in necessary numbers and ranks are essential to CR (Dunn, 2013). The doctrine makes provision for the necessary number of personnel according to different services (SA Army, SA Navy, SA Air Force and SAMHS) of the necessary number of personnel. Research shows that last-minute replacements impede on unit CR and to some extent, unit cohesion. Shared experiences go a long way and enhance support and provide greater solidity among soldiers.

Certainly, advanced functional technology and the best training are necessary when preparing for an operation; however, the human factor remains the key element in military operations. Castro and Adler (2000, p. 4) hold that 'soldier readiness' refers to "the state of being prepared mentally and physically for some experience or action". In a unit, the fulfilment of soldiers' CR cannot the attested without the utilisation of military leaders.

2.4.1.1   The impact of military commanders on soldier's combat readiness

Leadership is the cornerstone for success in the military (Van Dyk & George, 2006, p. 777). Daft (2001) conceptualises leadership as a people activity distinctive from administrative paperwork or planning activities. A study by Litz (1996) on peacekeeping in the post-Cold war (citing events from Bosnia and Somalia) affirms the dangerous and conflict-laden nature of peacekeeping. Taking from this, Van Dyk and George (2006) conclude that military leaders in peacekeeping operations cannot only be peacekeepers but also need to be strategic leaders in war situations.

Dunn (2013, p. 6) describes military leadership as "the catalyst for the personnel dimension of combat readiness", it is an irreplaceable force multiplier, and it depends on the inherent ability honed by training and experience, which significantly spells the difference between disaster and success. Military leaders (commanders) have a very important role in soldiers' CR and overall state of mind given their daily interaction with the soldiers at individual and group level during mission training and during the operation. Therefore, military leaders can build or break a soldier's confidence in his/her perception of CR. Griffith (2002) found that company-level soldier task support from the commander had strong positive relations to well-being and overall group CR.

Apart from enhancing soldiers' confidence, well-being and group CR, military commanders may intentionally expose solders to stressful conditions during CR training (Nash, 2006). Nash posits that this exposure is essential to familiarise soldiers with the real, somewhat complex nature of combat in order to make soldiers more capable of and hardy to challenges they are likely to face during operations. The results of such exposure allow commanders to easily identify soldiers struggling to cope and to make early referral to the MPT. Nash (2006, p. 2) holds that "the fundamental tools for prevention, selection, training, leadership, and unit camaraderie and esprit de corps, all lie in the hands of military leaders at all levels".

The current study, however, perceived the fundamental tool for soldier's CR as achievable where a good relationship exists between commanders and MPTs working together at all levels, constituting a holistic view of and feedback on soldier's CR. The psychological aspect of a soldier's well-being (developing a hardy soldier) lies with the utilisation of the MPT; hence, a close partnership between military leaders and the MPT would benefit both the soldier and the military organisation to a large extent. It is important to acknowledge the fact that soldiers often associate formal sources of support, such as counselling, with a negative stigma, and they may therefore prefer confiding in their co-workers or commanders when stressed or faced with challenges.

Griffith (2002) acknowledges that positive leader behaviour, such as consideration, respect, and recognition, could serve as an enhancement to a soldier's pride, well-being, and identification with the leader, unit, and the military organisation. For instance, charismatic leaders are perceived to have the ability to elicit positive responses from their subordinates because their source of influence comes from personal power as opposed to position power; thus, their followers admire, respect and identify with the leader (Daft, 2001). Evidently, leaders who can appeal to the emotional and cognitive inquisitiveness of their followers can gain the trust and abiding faith of their followers without exerting their status (i.e. authority) to influence others and, in turn, soldiers may feel at ease to confide in them about any challenges.

The complexity of peacekeeping operations requires that military leaders become super-leaders. In the military, super-leadership can be achieved through a process in which junior military leaders are educated and trained to become leaders to their people, and have self-confidence, self-esteem and the ability to acknowledge and develop others to be self-leaders (Van Dyk & George, 2006). A military leader requires a strategic ability (Van Dyk & George, 2006, p. 778) and an ability to acknowledge and put into perspective what others cannot (Taylor & Rosenbach, 1992). Manz and Sims (2001) describe a super-leader as a person who leads others to lead themselves and who provides several core principles of super-leadership, which can prove to be advantageous for military leaders deploying to various African military operations.

Manz and Sims (2001, p. 13-14) outline distinctive strategies of a super-leader in leading others to lead themselves as:

- Listening more and talking less.

- Asking more questions and giving fewer answers.

- Fostering learning from mistakes, not fear of consequences.

- Encouraging problem solving by others rather than solving problems for others.

- Sharing information rather than hoarding it.

- Encouraging creativity, not conformity.

- Encouraging teamwork and collaboration, not destructive competition.

- Fostering independence and interdependence, not dependence.

- Developing committed self-leaders not compliant followers.

- Leading others to lead themselves not to be under the control of others.

- Establishing organisational structures that support self-leadership, such as self-managing teams, virtual teams and distance working.

- Establish information systems through the intranet and internet that will support self-leadership.

- Establishing a holistic self-leading culture throughout the organisation.

Hamilton (2010) argues that the way a leader presents him/herself becomes crucial, from how a leader dresses to levels of fitness and behaviour. Leadership is looked to for motivation and guidance; the lack thereof at leadership level becomes evident at troop level. Because subordinates closely monitor leadership, leaders should regularly demonstrate their skills for subordinates to witness before operations. This will serve to reinforce the confidence of the troops' (the subordinates) confidence in their commander's competencies to lead the unit to success. If a shadow of doubt exists, troops may be hesitant to commit their lives on their leader's command or decision; hence, there will be no unit cohesiveness (Manning, 1991).

Studies confirm that company and platoon cohesion is strongly related to the confidence that soldiers report in themselves, their peers and importantly their leaders (Kirkland; Griffith; Marlowe; Manning & Ingraham, as cited in Bartone & Kirkland, 1991).Military organisations have long resorted to developing leaders whom their followers believe in, have confidence in their leadership skills and have absolute trust in their leader's decisions even in the face of extremely dangerous circumstances.

Importantly, the quality of leadership may result in leaders who can extend their charisma to a whole unit not just few individuals. Leaders become a model of inspiration for others to follow when they display high levels of motivation and can set standards, which others emulate (MacCoun, 1993). Good commanders have substantial influence on cohesion among subordinates (Bartone & Adler, 2000), which is crucial in CR. Cohesion refers to the bonds of trust between members of a small group. It may be a form of informal social support often used in stressful situations rather than formal sources, such as a chaplain or social worker (Sudom, Dursun & Flemming, 2006).

McClure and Broughton (2000) describe vertical cohesion as concerned with relations between superiors and subordinates, conceptualised as members' perceptions of competence, fairness, and compassion of their immediate supervisors. Poor interpersonal relationships with supervisors and co-workers stimulate negative emotions and increases emotional distress (Menaghan, 1991) altering efforts to achieve CR.

Shils and Janowitz (as cited in Bartone & Kirkland, 1991), in their study of armies as social groups, explored the factors attributing to the German military units' ability to fight effectively. The authors concluded that German soldiers' excellent performance during World War II was attributed to material and social support attained from their units, squads, platoons and companies where, organic and psychological needs were provided by the unit and unit leaders provided purpose, competence and caring. The essence of the social phenomenon of cohesion was seen through the soldier's identification with his/her unit and leaders which thus enabled combat units to fight effectively and to resist disintegration (Bartone & Kirkland, 1991).

According to the Department of Defence (1998, p. 70) military leadership is the "art of influencing and of directing people to an assigned goal in such a manner as to command obedience, confidence, respect and loyalty". Although military leadership differs from civilian leadership as perceived by (Van Dyk & George, 2006), there are some similarities. Studies show that military leadership practices can significantly affect soldier's well-being (i.e. lower work-related stress) and performance (i.e. productivity).

There are a number of factors at play when determining the effect of leadership in military operations. A leader with presence is regarded as having attributes such as (a) *'military bearing'* seen as projecting a commanding presence and a professional image of authority, (b) *'physical fitness'* having sound health, strength, and endurance, the ability to sustain emotional health and conceptual abilities under prolonged stress, (c) *'composed and confidence'* projecting self-confidence and certainty in the unit's ability to succeed in whatever it does; able to demonstrate composure and outward calm through steady control over emotion, and (d) *'resilience'* a leader that has the ability to recover quickly from setbacks, shock, injuries, stress and adversity while maintaining a mission and organisational focus (Department of the Army, 2009, p. 1).

The character of military leaders is significant in determining success and the ability to lead a section, squad, company or contingent (overall military unit). A leader who, for instance, embraces military values and empathy is a leader who inspires soldiers to be like him/her, to have trust in his/her leadership, and to follow him/her, to have trust in his/her leadership, and to follow him/her willingly even in combat. Johnson (1985) and Waddell III (1994) emphasise that leadership is the art of influencing and directing people (followers) to accomplish the mission in a particular environment. Dobreva-Martinova and Little (1999) and Dobreva-Martinova (1999) found that positive leadership styles predicted higher unit morale and cohesion both during and after the deployment of soldiers on a peacekeeping operations in Bosnia.

Dunn (2013) is of the opinion that morale is vital to CR and also that morale is a function of leadership, training and the overall condition of the force. Morale is conceptualised as both an individual and a collective phenomenon (Gal, 1986). Tucker, Sinclair and Thomas (2005) describe morale as a state of mind of an individual (for instance, dedication/commitment, willingness to sacrifice), or of a group (for instance, collective enthusiasm toward achieving goals). It involves the motivation for being ready to perform duties. For a group, morale involves facets of group readiness, teamwork, and effectiveness, and for an individual, morale involves awareness of self-efficacy where individuals demonstrate confidence and pride in their task performance (Murphy, Farley, Dobreva-Martinova & Gingras, 1997). Both individual and group morale hold a high degree in mitigating psychological strain (Hamilton, 2010).

Stressful experiences resultant from complex peacekeeping operations in Africa can influence morale and performance among soldiers (Halverson, Bliese, Moore & Castro, 1995). When the military has to deal with dangerous situations and uncertainties, effective leadership is crucial. Salo (2008) attests that leaders have the potential to influence performance and general group life positively. The leader's competencies can elevate follower's morale (Gal, 1986), it can improve cohesion (Bartone & Kirkland, 1991) and it can "enhance group performance" (Vogelaar & Kuipers 1997, p. 209).

Jelusic (2004) indicates that if the core concepts of military combatants, such morale, cohesion and motivation guiding the combatants' actions in war can be used to explain the soldiers' willingness to fight, then these concepts can also be used to explain the behaviour of soldiers in peacekeeping operations. Salo (2008, p. 62) writes "… soldiers who identified with their leaders received quality training, had self-efficacy in terms of their good mental and physical health as well as personal performance in wartime, and perceived better collective efficacy in wartime group performance". The Department of the Army (1986, p. 26) wrote "… well-trained, cohesive units under good leadership sustain far higher average effectiveness … because modern combat requires greater dispersal of units, the quality and effectiveness of junior leaders has a proportionately greater impact".

2.4.2 Material readiness

According to the Department of the Army (2009, p. 9), functional, reliable and maintained equipment is essential for the success of an operation. Dunn (2013) argues that unreliable equipment can hamper the effectiveness and efficiency of the most highly motivated and skilled soldiers. It is therefore vital that the military ensure the serviceability of the equipment. This necessitates continuous maintenance and repairing of equipment. Soldier's perception of being CR includes having confidence not only in his/her own abilities but also confidence in the resources provided to effect the success of the operation. For instance, a well-trained infantry soldier would feel at ease to go on patrols with the knowledge that weapons are serviceable irrespective of whether they may actually be used. The knowledge of serviceability serves to ease the soldier's state of mind and boosts the soldier's confidence (feelings of being ready for action). There are two factors involved in equipment readiness: the number and type of equipment used and the operational status of the equipment (Dunn, 2013). During the interaction between SA soldiers and the rebel group in the CAR, it became evident that the rebels' weapons were more advance and more efficient and available in large numbers (Stupart, 2013). Such realisation only serves to reduce the soldier's sense of readiness and his/her state of mind for CR.

Large numbers of equipment that is old and worn out can lower the standard of CR. Just as a doctor or nurse requires a functional, fully equipped sickbay or hospital, an infantry soldier requires a serviceable weapon so as to fulfil his/her function. Unserviceable equipment defeats any perception of CR and only adds to the soldier's frustration of being helpless in a foreign land. Therefore, the military should not neglect the procurement of modern, effective equipment. This not only goes for weapons but also for vehicles. It is imperative that the equipment matches the environment where it is to be utilised. For example, having soft-skin vehicles in a rough terrain with just gravel paths, makes the equipment (vehicles) less effective and collapses the perception of material readiness. Dunn (2013, p. 6) writes, "… poorly led and trained personnel trying to operate unreliable equipment and living in substandard conditions will most likely have low morale and not be very combat effective".

It is important for the military to acknowledge that having the most sophisticated equipment does not automatically translate into successful CR; hence, training is crucial. The SANDF's Defence Inspectorate, Van Vuuren emphasises "… the more accurately readiness is captured and quantified, the better the chance to allocate effort and resources to the right places ..." (as cited in Bester & Stanz, 2007). The U. S. Army Study of the Human Dimension in the Future 2015–2024 acknowledges that "… first and foremost, the army is soldiers … no matter how much the tools of warfare improve; it is soldiers who use them to accomplish their mission … soldiers committed to selfless service to the nation are the centrepiece of army organisations" (2008, p. 13).

Davis (1995) argues that the ground combat forces, mechanised infantry, armoured units, and units that are heavily equipment-dependent (such as artillery) face the greatest combat skill erosion when they participate in a peace operation. These soldiers are limited in the use of their weapons or equipment, particularly when they participate in peacekeeping operations without their equipment and perform tasks that are significantly different than the combat tasks to which they train. Matching the equipment and the soldier's skills to the type of operation ensures effective utilisation of the soldier's abilities and the overall success of the operation.

2.4.3 Unit readiness

From a military perspective, one cannot view CR as only concerned at individual level rather than looking at the unit as a whole. This is also established in the Ministry of Public Works and Government Services of Canada (1997) who stated that the concept of CR is the state of preparedness in which a unit performs its assigned role. Unit readiness refers to the "ability of a unit to deliver the output for which it was designed" (Meinhart, 2001, p. 116). Unit readiness can be affected by many factors which may be analysed both subjectively and objectively (Blankmeyer, 1998). Blankmeyer says that these factors can range from an increase in operational tempo to the amount of training funds available, the retention of personnel with special skills and the quality of new recruits.

Factors of interest for this study included training, unit cohesion and unit performance in preparation for peace operations. The Department of the Army (2009, p. 5) states, "effective training is the cornerstone of operational success", and continues that nowadays, the operational environment is characterised by complexity and danger regardless of whether in peacetime or wartime. Such an environment requires soldiers who are of character and intellect encapsulated in the military context. Operations require well-trained leaders, soldiers, and units who are not only proficient in core war-fighting competencies but also mentally agile and able to adapt those competencies across the spectrum of conflict (Department of Army, 2009). The responsibility to maintain character and mental power does not only depend on military leaders but also the unit as a whole.

For a deploying unit, confidence in the capability of soldiers – both leaders (officers) and non-commissioned officers and troops on the ground – represents a critical foundation observable in a unit well-trained and ready for the operation. The mental power allows soldiers and especially leaders to develop an ability to exercise mature judgement in a specific situation and to use initiative under stress. Agility and confidence are achieved when training allows the development of tactical and technical competence. Training not only addresses the physical component of the soldier; "training [also] develops discipline, endurance, unit cohesion, and tolerance for uncertainty" (Department of Army. 2009, p. 6). Commanders are responsible for training their direct subordinate units as they have the platform to create training conditions that prompt subordinates to be self-starters and creatively overcome challenges in both their military life and challenges from home. Every commander, soldier, and unit must be trained and ready to deploy (Walsh, 1998).

Commanders of ground combat units, such as the infantry, whose main function involves patrols and who are more likely to engage rebels in cases of an ambush or surprise attack, often differ on when special peace operations training should be provided (Davis, 1995). Ross (2008) says that, in preparing a military unit to be combat-ready for deployment, the preparation should commence at least four to six months before departure of the unit to the mission.

Furthermore, such preparation would ensure that possible challenges that may be encountered during CR preparation can be addressed. In order to ensure that soldiers would be able to perform the tasks that would be expected from them, the military should empower them with the relevant skills and knowledge (Ross, 2008). Often when units are timeously identified for an operation, the implementation of special training for the specific operation should take effect. Commonly, units who have been involved in long-standing peacekeeping operations, such as in the DRC and in Sudan, have received extensive pre-deployment training. Such units are notified from four months to one year and of the time provided before deployment. These units usually obtain about three months' training depending on the type of unit and its function in the operation (Davis, 1995).

Unit readiness requires time, proper planning and most importantly, making training as practical as possible to the real situation to which soldiers will deploy (Dunn, 2013), and the type of equipment suitable to the environment is crucial. "When operations result from developing world conditions, initial deploying units may not have time to conduct special training prior to deployment" (Davis, 1995, p. 23). This was recently evident in the deployment of SANDF forces into the CAR, where soldiers had no specific training on how to handle the situation in the CAR and had to rely on their previous experience and training from operations in DRC and Sudan. Often soldiers of the supporting forces (such as logisticians, personnel clerks or officers), receive notification for deployment less than two weeks before departure and under these circumstances, units tasked are not afforded enough time to practice their combat skills and capabilities before deployment.

Soldiers deploying under these circumstances suffer as a result of overwhelming emotions and fear for their own lives, and their state of mind is that of a soldier without confidence and/or self-efficacy. A trained soldier would have high levels of self-efficacy and control in combat situations. Self-efficacy refers to the soldier's personal judgement of how well he/she can perform in the courses of action required when dealing with a situation. It serves as a motivational source and persistence in the face of challenges (Bandura, as cited in Ditsela, 2012).

Bester and Stanz (2007, p. 71) term this "confidence in self", which is the degree to which an individual believes in him/herself and his/her abilities to perform well during military operations. Davis (1995) notes the importance of training, stating that the extent to which soldiers receive or do not receive peace operation training may have an effect on the unit's ability to perform in the mission and it may prove to be difficult to assess the unit's ability to perform effectively in specific types of military operation. Davis further explains that there are a number of factors in such an assessment, such as the nature of the operation and the unit's prior experience. Adding on these factors is the difficulty to identify measures of success in peacekeeping operations easily. After-action reports and lessons learned from previous operations and information concerning the positive effect of providing training in unique aspects of peace operations show that training should be incorporated into standard unit training as there may not be enough time prior to deployment to prepare soldiers fully (Davis, 1995).

Training to high standards is essential in both peace and war time. Walsh (1998, p. 1) postulates, "soldiers and units will fight as well or as poorly as they are trained". Every peacekeeping operation offers unique conditions that may affect combat capabilities differently, depending upon the nature (such as a sudden shift from peacekeeping to peace–enforcement), duration and other variables involved in the operation, such different skills of the soldiers of the deploying unit (Davis, 1995). In cases where there is a prevalent erosion in a soldier's combat proficiency, the military may alleviate this by selecting units with the most applicable skills for the operation, limiting the length of the deployment by rotating forces if necessary, and providing quality in-theatre training opportunities (Davis, 1995). Dunn (2013) emphasises that personnel must train with their combat equipment and thoroughly practice their combat missions under realistic, demanding conditions. This ensures their effectiveness when faced with a combat situation. It is acknowledged that certain skills required for peace operations may overlap with those required for war (Davis, 1995). With the prevalent uncertain environment and circumstances faced by soldier in complex African peacekeeping operations, it would be advantageous for the military to train their soldiers for both offensive and defensive positions.

Such training would ensure that soldiers would be able to react in unpredictable situations of the operation and would surely result in minimal if not non-combat casualties. Realistic and demanding training serves as a confidence booster to the soldiers that extends to their own units' capabilities and also builds confidence in joint and combined teams (Dunn, 2013). Thomson and McCreary (2006) support the abovementioned statements, saying that military training usually focuses on skill acquisition, the development of technical proficiency, endurance, teamwork, discipline, and strength through repeated drills which thus honest specific competences. In addition, such repeated drills have a psychological benefit that can help reduce the uncertainty associated with technical aspects of performing certain tasks, thus increasing confidence in the soldiers' skills (Thomson & McCreary, 2006).

The period during which a unit is informed of an upcoming deployment is vital in determining the amount of time the unit has for an opportunity to train properly for a specific operation. Davis (1995) discusses this view by explaining that not all unit commanders incorporate peace operation training in standard unit training, although some commanders do incorporate peace operation training as they believe it is good to be prepared for such operations should they receive little advance notice to participate. Yet other commanders believe in preparing their troops for the worst-case, combat-oriented scenario.

Though necessary due to the likelihood that soldiers might have to engage rebel groups directly, it is however equally important to avoid trigger-happy soldiers who may be incapable to function in purely peacekeeping operations. Familiarising soldiers with the types of conditions they may encounter in a peace operation increases confidence and reduces the likelihood of incidents that may result in political embarrassment (Davis, 1995). Training should not only focus on the technical aspects, but should also encompass mental readiness training including methods to make the unknown known.

Mental readiness methods such as visualisation aided by a familiarisation training, dissemination of information and discussion (Kellet, 1990) (this may include developing a sand model, so that soldiers could have an informative visual image of the operational environment), relaxation, meditation, self-hypnosis, focus techniques and photos are all measures for preparing soldiers mentally for an operation. This will allow the soldier to be able to control competing responses, such as thoughts and emotions, particularly when performing complex tasks.

Dunn (2013, p. 6) quotes Field Marshall Erwin Rommel, who said, "the best form of welfare for the troops is first-class training, for this saves unnecessary casualties". Thomson and McCreary (2006) emphasise the importance of integrating mental readiness training. These researchers argue that the incorporation of psychological coping principles into dynamic military training environments at all levels of training would allow human flexibility when performing under strenuous conditions the same way technical skills are reflexive after training (Thomson & McCreary, 2006). Davis (1995) affirms that robust and flexible military forces can successfully accomplish both peacekeeping and peace-enforcement operations.

US Army Manuals (n.d., p. 28) also support Thomson and McCreary stating, "both the mind and the body must be trained for soldiers to be effective under the stress of military operations". Although such integrated training requires an intense amount of time, the benefits thereof are much greater for the individual soldier and the military unit. The US Army Manuals (n.d., p. 28) argue that, "the mere physical performance of mission essential tasks, while necessary, is not sufficient to develop the attributes desired." Stress within the unit often builds on when the deployment date for unit approaches and the tempo of preparations intensifies (Sudom & Eyvindson, 2008). Soldiers frequently complain about the mundane and repetitive training schedule in units. Research shows that combat proficiency declines during extended peace operations (Blankmeyer, 1998) and through repeated practice (Landry, 1997).

At this point, the true objective should be focused at instilling confidence, demonstrating that soldiers in the unit are technically, physically and mentally proficient to tackle any combat situation resultant from any possible shift from peacekeeping to peace enforcement. Thus, training should be aimed at producing seasoned soldiers able to survive on a battlefield. Although soldiers may complain that time is wasted on training as they may feel confident that their skills or technical trades are well understood and that required levels of proficiency had been attained long ago, lessons learned from previous operations should provide the soldiers with the ability to adapt old tactics, procedures and techniques to new era operations in Africa that are non-linear and asymmetric peace operations (Sudom & Eyvindson, 2008).

Research shows that it is through training before departure to any military operation that unit cohesion is built, and thus commanders must never allow training to become irrelevant or unchallenging. Research further shows that cohesion has a relation to individual performance and group performance (Kellett, 1982; Marshall, 1966; Mullen & Cooper, 1994). 'Military cohesion' refers to the unit member's ability to bond together in such a way as to sustain their will and commitment to each other, their unit and the mission (Johns et al., as cited in MacCoun, 1993). Salo and Siebold (as cited in Salo, 2008, p. 46) refer to military unit cohesion as "an ongoing process of social integration (a) among the members of a group, (b) with group leaders, and (c) with the larger secondary organisations of which the primary group is part of, including the military institution (e.g. the Army)." Siebold and Kelly (as cited in MacCoun, 1993, p. 288) define cohesion as "a unit or group state varying in the extent to which the mechanisms of social control maintain a structured pattern of positive social relationships (bonds) between unit members, individually and collectively, necessary to achieve the unit or group's purpose" Henderson (as cited in MacCoun, 1993, p. 288) adds that "... cohesion exists in a unit when the primary day-to-day goals of the individual soldier, of the small group with which he/she identifies, and of unit leaders, are congruent with each, giving his/her primary loyalty to the group so that it trains and fights as a unit with all members willing to risk death and achieve a common objective".

Types of cohesion (Stewart, as cited in McBreen, 2002):

- *Horizontal cohesion* is the trust shared between peers. It refers to the bonds of confidence between men within a single unit or horizontally between leaders of separate units.

- *Vertical cohesion* is the bonding between subordinates and leaders. It refers "to the affective and instrumental bonds between the leader and the other group members" (Etzion,i 1975, p. 281). It enculturates "the degree to which group members identify and positively relate to their leaders" (Holz, 1986, p. 317). Cohesive units are strengthened when subordinates trust that their leaders are competent and caring.

- *Organisational cohesion* refers to the relationship between the soldier and the larger military organisation. Organisational cohesion binds small groups to a higher purpose.

- *Social cohesion* refers to the nature and quality of the emotional bonds of friendship, liking, caring, and closeness among group members. A group is socially cohesive to the extent that its members like each other, prefer to spend their social time together, enjoy each other's company, and feel emotionally close to one another. (Hamilton, 2010; MacCoun, 1993).

- *Task cohesion* refers to the shared commitment among members to achieve a goal that requires the collective efforts of the group. A group with high task cohesion is composed of members who share a common goal and who are motivated to coordinate their efforts as a team to achieve that goal (Hamilton, 2010; MacCoun, 1993).

A cohesive unit is a small unit, a squad, crew or section, that has trained together to develop the collective will and bonding, mutual trust and interdependency, and the collective skills needed to fight successfully on the battlefield (McBreen, 2002).

Salo (2008) is of the opinion that cohesive military units involve at least three types of bonding such horizontal, vertical and organisational. Cohesive units fight better, suffer fewer casualties, train better, do not disintegrate, require less support and provide members with a high quality of life (McBreen, 2002). This results from the "strength of mutual positive attitudes among the members of a group" (Lott & Lott, 1965, p. 259). The central requirement of cohesion is personnel stability. Stability, stress, and success build horizontal cohesion in units, shared experiences among members of the unit, affinity and supportive ties to group members, and enhance the degree of confidence in unit members' competence and compassion (McBreen, 2002; Sudom et al., 2006). Horizontal cohesion between leaders is built on shared experiences. Leaders who understand their people build vertical cohesion. It is "a complex social psychological construct involving both group and individual characteristics (e.g. pride, commitment, sense of purpose and meaning)" (Griffith, 1988, p. 164). Vertical cohesion between leaders is built on clear standards (McBreen, 2002).

MacCoun (1993) concludes that task and social cohesion have different determinants and that good leadership, in conjunction with important work and shared goals, are key factors in enhancing task cohesion. On the other hand, similarity among group members and familiarity arising from proximity enhance social cohesion, especially in smaller groups (MacCoun 1993). Military leaders have an important role in enhancing unit cohesion. Hamilton (2010) depicting a number of variables mainly leadership, trust, shared experience, and realistic training, concludes that all these variables strongly influence cohesion in units and, in order to reach desired CR outcomes, these variables must be addressed thoroughly.

2.4.3.1   Unit performance and cohesion

Since the 1950s, there is a significant believe that the concept of cohesion is the reason why soldiers fight successfully and that the soldier's ties with peers experiencing similar situations have proven considerably the existence or ability to keep units together under fire (Winkler, 2008).

Bartone and Kirkland (1991) argue that units marked by high levels of cohesion, esprit de corps and morale had a significant increase in their performance levels. Unit cohesion enhances military-effective fighting qualities; hence, priority should be afforded to attaining cohesion among soldiers during deployment preparations so as to achieve optimal unit performance. Studies of the World War II conflict era are central in describing how unit cohesion improves unit performance. In 1947, peer group support was seen by Marshall's Men against fire as more important in enhancing the American soldiers' fighting abilities. Shils and Janowitz (1948) found that strong interpersonal ties resultant of the German soldiers' shared combat experience were what kept German units together, and such ties were more significant than a mere ideology during the conflict. Word War II studies by Stouffer, Lumsdaine and Lumsdaine (1949) and Van Creveld (1982) attest that high levels of cohesion among soldiers such as peer group relations were more than any other factors and kept the soldier's fighting power higher than the idea of the war itself.

Studies on recent conflicts similarly arrive at the same conclusion (Winkler, 2008). The author state that extensive research by a host of social scientists on cohesion also confirms the belief that cohesion improves troop performance. These studies suggest that there is a link between cohesion and unit performance and call for more in-depth examination. In the past years, the soldier's role in peacekeeping operations has become more complex demanding a soldier to be prepared not only for observational posts but where necessary also to engage in combat situations (Mensch & Rahschulte, 2008). Successful performance by previous peacekeeping operations may enhance cohesion required to perform well in complex future peacekeeping operations under Chapter VII. In highly stressful non-combat circumstances, for instance peacekeeping operations, cohesion may serve to reduce psychological casualties in combat and may prevent groups from disintegrating (Winkler, 2008). Achieving and maintaining cohesion afford the unit the opportunity for higher morale and increased effectiveness, and its absence brings quick disintegration to the fighting force, low morale and little desire to stay the course (Hamilton, 2010).

Griffith (2002) argues that even though archival data does not fully comprise behavioural measures of performance, a more relevant standard for performance would be the extent to which soldiers perform in combat. Griffith further advocates, the more members of a group can perform their task well, the more likely that the individual soldier can be able to perform his or her job tasks. This results from the belief that military units encourage interdependencies among soldiers when performing a specific task. Leaders who provide task support to their followers help group members to perform effectively in the quest to achieve group goals and to build a general frame where performance is implemented (Salo, 2008). Soldier task support, at individual level was found to serve as a performance enhancer, as it positively correlated with positive relations to perceived individual and group CR (Griffith, 2002).

2.4.4   A holistic view of factors involved in combat-readiness

This study focused on soldiers' state of mind contributing to CR; thus, the holistic view of the three dimensions or factors was centred on the significance of the soldier. When preparing for an operation, the military force owes as much to the soldiers' state of mind as it does to their training and operational equipment; hence, the process of only focusing on material and training is one that is mechanistic and structured (Bester & Stanz, 2007). The mere fact that the military unit is equipped with the most expensive and technologically advanced weapons while the operator (soldier) is not trained in such weapons, can only give rise to drastic failure of the entire operation. This indicates that it is critical that the soldier is trained on how to use the equipment and to fully prepare for a successful operation. The soldier must be prepared psychologically and physically to take on the operation under austere and dangerous conditions. Bester and Stanz (2007) hold that a mission is likely to fail when an individual soldier does not have confidence in his/her own abilities and in how to use the equipment provided and does not believe in training even if he/she received the best training and equipment. It is important that the military understand what constitutes CR and how to capture and measure CR.

How the soldier perceives him/herself as CR is influenced by the soldier's state of mind observed in his/her attitude and behaviour in completing the necessary training encapsulated in CR. Conclusively, quality personnel, equipment, and training are the essential dimensions to support CR as a state of mind (Dunn, 2013).Literature indicate that military commanders also have a significant role in enhancing the soldier's CR. Understanding the environment to which soldiers are to be deployed, commanders can ensure that training encompasses the realistic nature of the operation. The different types of leadership (charismatic, transactional and transformational) can have different influences to soldiers' CR and can also effect on how soldiers perceived their own, peer, and unit CR. Unit cohesion is perceived as having an influence on unit performance in peacekeeping operations. The extent to which leaders are perceived as supporting, professional and encouraging to their followers creates an atmosphere of trust and commitment that will support CR as a state of mind.

In the current study, soldiers' CR was measured using the Perceived Combat Readiness Questionnaire (PCRQ) consisting of 78 items, developed by Bester and Stanz (2007) and later adapted by Nkewu (2013) with acceptable alphas (see par. 3.5.1). The questionnaire consisted of seven subscales, namely, confidence in one self, confidence in the team, confidence in the leader, morale and esprit de corps, horizontal cohesion, vertical cohesion, and unit discipline.

2.4.5 Hardiness

According to Kobasa and Maddi (1977), hardiness is a well-known concept theoretically grounded in the work of existential philosophers and psychologists such as (Binswanger, 1963; Frankl, 1960; Heidegger, 1986). These researchers conclude that hardiness involves the creation of meaning in life, even when life is sometimes painful or absurd, and having the courage to live life fully despite its inherent pain and futility. Kardum et al. (2012) contend that Kobasa was the first researcher who introduced the construct of hardiness. Kobasa described hardiness as a resistance resource when confronted with stressful situations.

Hardiness is considered to comprise of a pattern of personality characteristics encompassing three mutually related dispositions (namely commitment, control, and challenge) (Bartone, Kelly & Matthews, 2012; Kardum et al., 2012; Shepperd & Kashani, 1991). Maddi (1999) is of the opinion that individuals high on hardiness are often actively involved in whatever situation, life- or work-related. Such individuals actively try to influence the outcomes of their life events and they have the ability to withstand their positive or negative circumstances. For these individuals, each circumstance irrespective of its nature provides a learning opportunity.

One may infer that hardy individuals embrace the concept of positive psychology, first where at individual level, where traits such courage, interpersonal skill, perseverance, spirituality, high talent, future-mindedness, forgiveness and wisdom are viewed as positive traits enabling individuals to learn from their experiences. These traits enhance the ability to get rid of negative emotions that might otherwise lead to mental illness (Seligman, 2000). Secondly, where valued subjective experiences such as well-being, contentment and satisfaction (in the past), hope and optimism (for the future), flow and happiness (in the present) embrace the concept of positive emotions that widen the individual's thought processes, built up over time and mounded to create a 'protective reservoir' upon which a person can draw from during unpleasant or distressing times (Bonanno, 2004; Maddi, 2006; Seligman, 2000).

Wong (2011) explains that when individuals focus on the positive aspects of their life or circumstances, such individuals have the ability to reduce the negative adverse experiences or consequence of their lives. Wong (2011) further acknowledges that negative emotions and feelings experienced by individuals can serve as a learning platform and can in turn be the means that drive individuals towards positive change in order to prevent these negative emotions in the future. Individuals high on hardiness tend to approach the demands of life actively with the perception that they can handle them successfully. They view these demands as meaningful and useful, which results in less stressful experiences (Maddi, as cited in Seligman, 2000).

Individuals low on hardiness tend to view adverse circumstances as threatening (instead of as an opportunity for growth or learning opportunity) and such individuals would most likely withdraw themselves and thus become vulnerable to stress (Maddi, 1999). Because research on the effects of hardiness revolves around the work context, and as such, the protective nature of hardiness may become evident in accordance with individual's work context and different circumstances. For instance, soldiers are constantly faced with challenging and dangerous work situations evident in military operations. According to Kardum et al. (2012), the effects of hardiness on cognitive appraisal and coping efforts refer only to the individual differences in reactions to actual stressful situations. According to Bartone (2006), the military profession is inherently stressful. Within a military context, stress can be described as an adverse reaction of individuals to excessive pressure or other types of demands placed on them such as military operations (Azari, Dandeker & Greenberg, 2010). Kardum et al. (2012, p. 487) acknowledge, that "hardiness acts as a protective factor in stressful situations, especially in work context". Military operations across the entire range of conflict expose military personnel to a multitude of stressors, and the effect of these stressors cannot be emphasised enough (Bartone, 2006).

There are six primary psychological stress dimensions experienced by soldiers when deployed in peacekeeping operations (Bartone, 2001; Bartone, Adler & Vaitkus, 1998). As mentioned previously (see par. 2.3), military occupational stressors associated with deployment may require a hardy soldier who is able to cope with challenges presented by both work and family situations. Military occupational stressors include (a) isolation, for instance, soldiers deploy to remote locations, far away from home, separated from their families, frequently without good tools or methods for communication, (b) ambiguity, such as unclear mission or changing mission and unclear rules of engagement (c) powerlessness, such as constraints on rules of engagement and response options and inability to influence what is happening with family back home (d) boredom, such as the occasional lack of work that can be construed as meaningful or important (e) danger, such as the risk of life threating situations and (f) workload, for instance, deployment entails heavy workloads at times and extremely long days of duty with no time off (Bartone, 2006).

Dolan and Adler (2006) conclude that hardiness has been found to moderate the effects of military occupational stressors. Cole et al. (2004) attest that various stress conditions and psychological strain have an effect on the individual's ability to be productive. These conditions and/or strain are perceived to threaten the individual's well-being and to have a lasting effect on performance and coping abilities (Weiten, Lloyd & Lashley, 1991). The skill sets necessary for soldiers to persist and prosper in peacekeeping operations in a foreign environment necessitate "a mental rigor quite different from the mind-set required to wage war" (Azari et al., 2010, p. 586). In an endeavour to determine the effects of hardiness Britt et al. (2001) conducted a study on soldiers participating in peacekeeping operations. The results of the study showed that soldiers who were high on hardiness were able to find more meaning in their activities despite its complex nature than those who were low on hardiness. The study also revealed that benefits derived from individual's resources such as better abilities to cope with stressful situations and better personal experience.

Kardum et al. (2012, p. 487) argue that the individual's work environment, such as a peacekeeping operation, places additional psychological demands on individuals low on hardiness and can have a negative effect on how they view themselves (in terms of self-efficacy and the ability to cope successfully) under such circumstances. There are a number of benefits to hardiness, Sezgin (2009) affirms that individuals high on hardiness often perceive their job in a better light, are committed to their organisations, are more efficient in stressful tasks (Manning, Williams & Wolfe, 1988) and demonstrate responsible work behaviours. Hardiness is an overall perspective that affects how one views the self (self-confidence and self-efficacy), others (vertical and horizontal cohesion), work (unit performance in peacekeeping operations), and even the operational environment (Bartone, 2006). Tartasky (1993) argues that hardiness alters two appraisal components. Firstly, hardiness reduces the appraisal of a threat and increases an individual's expectations that coping efforts will be successful. Secondly, research describes hardiness as associated with the individual's use of active, problem-focused coping strategies when dealing with stressful events (Gentry & Kobasa, 1984; Kobasa, 1982).

These two mechanisms are thought to reduce the amount of psychological distress one experiences and thus they contribute to an individual's long-term psychological well-being (Bissonnette, 1998). There are three interrelated hardiness components or attitudes which are thought to influence two underlying mechanisms that enhance the health and performance of an individual under stressful conditions (Kobasa, 1979; Maddi, 1999). These hardiness attitudes are; commitment, control, and challenge. A number of researchers (e.g. Allred & Smith, 1989; Bartone et al., 1989; Britt et al., 2001; Florian, Mikulincer & Taubman, 1995; Maddi & Hightower, 1999) concur that these hardy attitudes play a significant role in influencing how individuals experience and cope with stressful life circumstances.

Commitment is defined as a "tendency to involve oneself in (rather than experience alienation from) whatever one is doing or encounters" (Kobasa et al., 1982, p. 169). It involves the "tendency to involve oneself in the activities in life and have a genuine interest in and curiosity about the activities, things and other people" (Kardum et al., 2012, p. 488). Control is defined as a "tendency to feel and act as if one is influential (rather than helpless) in the face of the varied contingencies of life" (Kobasa et al., 1982, p. 169), Kardum et al. concur that control is the "tendency to believe and act as if one can influence the life events through one's own effort" (2012, p. 488). The last hardiness component, challenge is defined by (Kobasa et al., 1982, p. 169).as a "belief that change rather than stability is normal in life and that the anticipation of changes are interesting incentives to growth rather than threats to security". In this regard, 'challenge' "refers to the belief that changes in life are opportunities for personal growth" (Kardum et al., 2012, p. 488).

Kobasa (1979) characterises hardiness as a commitment to oneself and work, a sense of personal control over one's experiences and outcomes, and the perception that change represents challenge, and hardiness is therefore treated as an opportunity for growth rather than as a threat.

According to Cole et al., (2004), the commitment facet of hardiness builds on the work of Antonovsky in 1974, whose sense of coherence entailed commitment and engagement with others, which lend resistance to the ill effects of stress. Hardiness- commitment provides a sense of internal balance and confidence which are important for realistic assessment of stressful and threatening situations like peacekeeping operations (Cole et al., 2004), and will probably maintain CR of members in such circumstances. The control facet of hardiness derives primarily from Julian Rotter's concept of locus of control (Cole et al., 2004). Locus of control is defined as the "extent to which individuals believe that they can control events and behavioural results in their lives" (Judge & Bono, as cited in Van Heerden, 2012, p. 77) or the "extent to which people believe that the rewards they receive in life can be controlled by their own personal actions" (Wang, Bowling & Eschleman, as cited in Van Heerden, 2012, p. 77).

Control is perceived as a tendency to believe and act as if one can influence the life events through one's own effort (Kardum et al., 2012). Cole et al. (2004) note that challenge involves an appreciation for variety and change in the environment, and a motivation to learn and grow by trying new things, to develop higher self-efficacy and perceived competency levels which are necessary to keep up CR when under fire. According to Cole et al. (2004), theoretical influences on challenge were described by Fiske and Maddi in 1961, as the variety in experience, and engagement vs. alienation by Maddi who in 1967 used the term ideal identity to describe a person who lives a vigorous and proactive life, with an abiding sense of meaning and purpose, and a belief in his/her own ability to influence things, meaning a soldier who believes in his/her contribution to change wars to peace, to change Africa from a war-making continent to a developmental continent for his/her fellow Africans.

Although hardiness is described in terms of these three personality traits (commitment, control and challenge), it is best considered as a general style, a holistic pattern rather than individual, discrete traits (Cole et al., 2004). Hardiness equips individuals to draw upon a personal sense of commitment and control to find meaning in their tasks when faced with ambiguous situations (Bartone et al., 1989).

Hardy individuals purposely engage in strategies to transform the activity (war) into something perceived as more positive (peace), for instance, maintaining motivation to perform a worthwhile activity (Sansone & Harackiewicz, 1996). Given the fact that the military as an organisation expose soldiers to a number of stressful situations, a hardy soldier would be of value and benefit for the organisation especially in their utilisation in peacekeeping operations. Maddi (2007, p. 61) embraces this view, stating that "hardiness is a pattern of attitudes and skills that provides the courage and strategies to turn stressful circumstances from potential disasters into growth opportunities instead … hardiness is particularly relevant to inherently stressful settings, such as military service … as such, hardiness would seem especially valuable in military contexts, because of their characteristic stressfulness".

According to Britt et al. (2001), hardiness increases the perception of meaningful work, which in turn increases the perception of positive benefits associated with a stressful military deployment. Hardy persons have a strong sense of life and work commitment, a greater belief of control, and more openness to change and challenges in life than those individuals' low on hardiness (Bartone, 1999). Furthermore, soldiers tend to interpret stressful and painful experiences as a normal aspect of existence, as part of military life (Bartone, 1999). When soldiers deploy they leave their family or spouses behind with the hope of returning to their loved ones. The mere thought of separation may introduce overwhelming emotions amongst the soldier and may family. In strict rigid family systems where there are clearly defined roles between the spouse and the soldier, deployment can prove to be challenging for both parties.

The soldier not only has to cope with the predetermined operational stressors additional to the well-identified stressors associated with deployment, such as intensive training, lack of sleep, exhaustion, constant threat of death in unstable operations, etc.; the soldier also has to deal with family challenges back home. With the rapid demand for militaries to participate in African peace support operations, this raises significant questions such as, how the military can fully equip their soldiers to withstand challenges posed by the operation and family in order to enhance CR.

Should the military rather train their forces with hardiness skills to sustain CR? Could military leaders have an influence on hardiness within their units? Bartone (2006) provides a compelling argument regarding the extent to which the military can help influence hardiness for their forces by utilising leaders within units. The author conceptualises the military nature (in the form of a unit) as "group oriented and highly interdependent … structure frequently puts leaders in a position to exercise substantial control and influence over subordinates" (Bartone, 2006, p. 138) and as such, leaders can play an important role in how their subordinates perceive their experiences in the military context.

Researchers posit that the development of a context-specific conceptualisation of hardiness can have a positive outcome for the military at large, through designing interventions that can specifically provide soldiers with personal resources to cope better with occupational challenges (Bartone, 2006; Dolan & Adler, 2006). Military efforts to enhance hardiness among soldiers can begin from the early stages of preparing for an operation (i.e. training). Maddi (2007) conducted a study with the aim to determine the relevance of hardiness assessment and training to the military context, Maddi compared studies, namely the natural experiment at Illinois Bell Telephone (IBT) from the 1970s to 1980s. Participants to these studies were interviewed and asked to describe their early life history.

Data gathered was compared and classified into groups (those who survived and thrived in the upheaval and those whose performance and health declined). Data revealed that those who survived and thrived tended to describe their early life as stressful and their parents as encouraging and supportive of their efforts to grow, their capability for coping and thriving and as a result, this inspired them to work hard. Maddi (2007) concluded from the results that hardiness is learned rather than inborn. These results suggest that hardiness training can have a significant effect on individuals low on hardiness. By establishing relevant context-specific hardy training, the military can benefit from these programs/training.

Studies indicate that occupation-specific training has positive trends in enhancing hardiness (Maddi, Kahn & Maddi, 1998). Maddi, Klioshaba and Pamnienter (1999) are of the opinion that military leaders could play a significant role in enhancing military hardiness. Dolan and Adler (2006) provide a comprehensive frame in which leaders could influence hardiness attainable when leaders demonstrate commitment, control and challenge through modelling a hardy approach to military life and work. Leaders could enhance commitment by emphasising military identity. By emphasising the significance of individual contributions to the mission, control could be enhanced. Furthermore, leaders could encourage the perception of challenge by framing work-related events as opportunities for military personnel to work at their full potential (Dolan & Adler, 2006).

Hamilton and James (2004) provide that each component of hardiness is perceived to offer appraisal and coping mechanisms. Commitment allows the individual to appraise events as meaningful and to develop self-efficacy. The control facet assists the individual in appraising events as part of a longer-term life plan and confers the impetus to initiate necessary action. Challenge allows the individual the ability to tolerate ambiguity and to adjust easily to new experiences (Hamilton & James, 2004). Theory on hardiness suggests that the military could benefit from establishing training programmes comprehensive enough to include the psychological elements when preparing for an operation, a programme that could equip the soldier with relevant coping skills, and an ability to appraise and respond to the different demands encapsulated in their military life. Research shows that the hardiness dimension tend to function as a significant buffer of stress (e.g. Bartone, 1989; Contrada, 1989; Kobasa et al., 1982; Roth, Wiebe, Fillingim & Shay, 1989; Wiebe, 1991). Employees high on hardiness perceive their job in a better light, are more committed to their organisations (Sezgin, cited in Kardum et al., 2012), have more responsible work behaviours and perform more efficiently in stressful tasks (Manning, Williams & Wolfe, cited in Kardum et al., 2012).

In the current study hardiness was measured using the Military Hardiness Scale (MHS) consisting of eighteen items developed by Carol and Adler (2006) with acceptable alpha's (see par. 3.5.4). The questionnaire consisted of three subscales, namely commitment, challenge and control.

2.4.6 Soldier's relationship with spouse

The terms spouse and family are often used interchangeably when describing soldier's relationship with those he/she hold dearly to heart and with whom he/she shares emotional bonds. In fact, the term family refers to couples in long-term cohabiting relationships, couples who have been together for a long time and who have developed some kind of shared history (Brockwood, 2007). Even non-married couples who themselves claim to have a stable relationship are perceived as a family. Moelker and Van der Kloet (2003, p. 241) provide a broad description of a military family as "a married man and woman or a man and a woman living together, with or without children, including any adopted children, residing at the same location of which at least one of the partners has a military occupation".

The word spouse or the entitlement to be called a 'spouse' emanates from "a legal union (marriage) between one man and one woman as husband and wife, and thus spouse referring to a person of the opposite sex who is a husband or a wife. In the military context, spouse refers to what (Kgosana, 2010, p. 14) describes as a subsystem to a family unit to which a soldier belongs, "formed when two adults of the opposite sex join with the express purpose of forming a family" and, although the agreement does not have to be legal to be significant, members must however be able to fulfil certain roles (Minuchin & Fishman, 1981). In practicality of the aforementioned, the current study saw a spouse as a person, 'a significant other' with which the soldier has a relationship or some kind of arrangement, irrespective of the inclusion of children and marriage; rather, the bond between the two parties.

As a family, the soldier and spouse, function in a systemic way in which both parties share an emotional bond, providing mutual satisfaction for each other's needs without compromising the emotional environment necessary for growth (Dallos & Draper, 2000). Every individual forms part of various systems, the family system obviously taking priority (Kotze, n.d.). Connell (2010) points out an important fact, namely that the family has a structure irrespective of whether members of the family recognise it or not, and this structure is greatly influenced by cultural beliefs. This supposition especially applies in African families. Salvador Minuchin and Braulio Montalvo are the founders of this structural approach, which has proved significant in family therapy. Minuchin (1974, p. 51) defines family structure as "the invisible set of functional demands that organises the ways in which family members interact". Minuchin (1974) also posits that family interactions 'transactions' repeated in such a way that they form transactional patterns then become a family structure; therefore, they translate the family relationships. Understanding this structure and exercising sensitivity especially in African families, is crucial for clinicians (i.e. MPTs). This would allow the MPTs to gain trust from the family and to diagnose the challenges faced by the family clearly. The influence of culture within the family structure is seen when for instance it defines the role of men and women and children and consequently has influences across generations (Connell, 2010).

Each family is unique; hence, the influences of an established structure would be unique to every family. For example, commonly, a family structure is organised in such a way that the father is the control figure and is seen as having the authority and the mother is seen as subordinate. It is important that MPTs understand how the family as a system is structured, each member's role within the structure and how external factors (such as culture) influence the family system. Minuchin (1974) explains that each family not only has a structure but each has subsystems as well. Although subsystems are the second-important components of the family structure, they extend to include spousal, parental, and sibling subsystems which can extend to include grandparents (Gladding, 2007). Kotze (n.d.) says that each family member can be part of a variety of subsystems in the family. These systems or subsystems are defined by generation, gender, age, interest, functions, etc and may even take a hierarchical form (Kotze, n.d.; Minuchin 1974).

The family structure is reinforced by established rules or boundaries. Boundaries serve to preserve the differentiations within the family system and subsystem. Vetere (2001) explains further that each subsystem has specific functions and places particular demands on its members. In order to achieve proper functioning, subsystem boundaries must be clear. Therefore, boundaries between the spouse and the soldier should also be kept clear and consistent (Minuchin, 1974). According to Kotze (n.d., p. 19), "a boundary must be such that it allows its members to fulfil their functions without unnecessary interference, while contact between the members of the subsystem and other subsystems can occur". When boundaries are unclear, they also interfere with family structure and consequently may have a ripple effect on all family transactions (Nichols & Schwartz, 2008). Minuchin (1974) describes boundaries as varying from rigid to diffuse. Kgosana (2010) highlight the negative consequences of boundaries.

Kgosana is of the opinion that when boundaries are inappropriately rigid, disengagement from the community may result. This is the result of the overly restrictive and independent yet isolating nature of rigid boundaries. Although this may foster autonomy, it however limits support from other subsystems, and only after experiencing extreme stress may mutual support be sort from the system or subsystem. It is vital that the MPTs' recognise families bounded by rigid boundaries as they may be more vulnerable to stress, anxiety and adjustment disorders (Kgosana, 2010), which may lead to an inability to cope with challenges and demands posed by the military lifestyle. On the other hand, boundaries can become diffused (Minuchin, 1974). Diffused systems or subsystems offer heightened mutual support; however, this requires sacrificing any independence and autonomy. Kgosana (2010) states that the spousal system becomes so enmeshed and fused together that each individual loses a sense of self. This may also prove to be problematic when, for instance, the soldier is deployed and the wife is left behind to take charge of all family affairs.

Nowadays, most couples accept interdependency and operate as a team. Issues of gender-specific roles, division of labour, and identity are often affected by how the issue of gender is negotiated (Kgosana, 2010). Nichols and Schwartz (2008) classify this type of relationship as a state in which the couple is accommodating in such a way that each partner tries to organise the relationship along familiar lines. Further, such couples negotiate the nature of the boundaries between them, as well as the boundaries separating them from the outside (Nichols & Schwartz, 2008, p. 181).

External relationships between the spouse and soldier concern their connections to the outside community. How the couple identifies themselves as a family or life partners is essential and is a consequence of how they perceive and respond to the external environment. Members develop a set of perspectives, beliefs about themselves as a 'family' and what kind of a family they are whether close/distant, argumentative/harmonious, formal/informal, and traditional/modern (Dallos & Draper, 2000, p. 9). The interaction and response to external systems affecting the couple's functioning, such as having a spouse who is affiliated with the military, may build or break even the strongest relationships if the couple's internal relationship is not well established. Nichols and Schwartz (2008) also posit that family systems must be stable to ensure continuity and flexible enough to accommodate the ever-changing circumstances of life as problems arise when family structures are inflexible.

The military unit and the family of the soldier are described as 'greedy institutions' seeking the undivided attention and loyalty of the soldier (Drummet, Coleman & Cable, 2003; Kirkland & Katz, 1989). Both the military and the family possess characteristics of greedy institutions with demands such as commitment, loyalty, time and energy placed on the individual soldier (Kirkland & Katz, 1989; Segal, 1986) and thus poses additional challenges to the soldier when a harmonious relationship between these institutions is non-existent. Segal (1986) confirms that greedy institutions pressure individuals to weaken their ties or not to form ties in the first place with other institutions or individuals that make demands conflicting with their own demands.

Like any other couples, the military husband and wife begin their married life with caring expectations (Don & Lagrone, 1978). Traditionally women would marry men in the military because they found the men's courage appealing. The husband was perceived as strong and independent, and the wife often perceived as weak and dependent. However, women become disappointed when they find that their husbands are compliant, tightly bound to the military and unsupportive of their needs (Don & Lagrone, 1978). These authors point out that, when the husband-soldier is assigned to duty away from home, the wife has to take over his family functions and in the process becomes independent. However, the manner in which this occurs may cause problems when there are no clearly established boundaries between the soldier-husband and the spouse.

This may result in the spouse feeling rejected, and the soldier may return to an independent woman rather than the dependent wife. The soldier's need to feel strong is then threatened and the family system is shaken (Don & Lagrone, 1978). In the past years, divorce rates among military couples have increased significantly, as multiple long-term separations in particular can have a harmful effect upon even the best relationships (Schwerdtfeger, 2009). Dimiceli, Steinhardt and Smith (2010) argue that efforts by the military to support family needs of their soldiers can result in more committed families who would be supportive of military goals.

Segal and Segal (1999) are of the opinion that military practices, policies and programmes have significant effects on family acceptance and adjustment to military demands, on family satisfaction, and on soldier's commitment to the service. Bourg and Segal (1999) provide an example showing that positive perceptions by soldiers and their spouses that unit leaders care about their families have direct positive effects on affective commitment of soldiers (and their spouses) to the military. These perceptions serve to motivate and encourage endurance of any challenges presented to the families in association with the military.

Data (by Kirkland & Katz, 1989) revealed a positive synergy between the unit and the family experienced by the soldier in each. This synergy as experienced by the soldier strengthens his/her ability to function successfully in both institutions. The soldier's improved functioning raises the performance level of the unit and the stability of the family. When there is a well-integrated unit and stable family integration within which the soldier functions optimum enhancement will occur. Kirkland and Katz's (1989) model of stable and unstable families and well-integrated and poorly integrated units describes the importance of the soldier's RWS and its effect on the soldier's level of CR.

For the purpose of describing the soldier's RWS, the discussion focuses on Kirkland and Katz's (1989) model of the stable and unstable family. Stable families are those built on trust and communication, whereas unstable families are the opposite. In a stable family, members listen to each other, believe in each other, take each other's needs into consideration and act in a way that is beneficial to others in the family (Bentovin & Kinston, 1991; Kirkland & Katz, 1989; Palmer, Freeman & Zabriskie, 2007; Schaneveldt & Young, 1992). On the other hand, "unstable families are those characterised by indifference, mistrust and inability to communicate" (Kirkland & Katz, 1989, p. 2).

Lobnikar et al. (2011) refer to unstable families as disconnected families who struggle to support and help each other, where both soldier and spouse struggle with constant worry, low self-esteem, and high levels of anxiety. This relationship of instability can lead to less or no communication between a soldier and the spouse as neither knows how the other would react in given stressful situations. Distance between the couple builds as the deploying soldier becomes pre-occupied with training thus spending less time with the spouse. In extreme circumstances, intimacy between the couple windles, and the inability of physical excitement increases. The US Army Research Institute (2001) characterises this as a consequence of a physical, but above all a psychological problem. Common expected reactions are feelings of intimacy, closeness, trust and connection, but also feelings of being lost and alienated, a lack of trust and uncertainty. In stable families, however, a soldier's participation in peacekeeping operations does not have a negative effect (Lobnikar et al., 2011).

Well-prepared, informed and stable families have in the past proved to be instrumental in the creation of a combat-ready soldier. The spouse remaining home can be proud and confident in his/her ability to handle family affairs during the soldier's deployment. This, in turn, affords the soldier a sense of freedom and ease in the knowledge that his/her spouse is supportive of the soldier's occupational requirements, and is able to manage his/her life effectively in the soldier's absence. This creates freedom for the soldier to be able to focus on the task at hand without being clouded by concerns for his/her family's well-being and safety.

The commander can play an important role in establishing communication between the family/spouse and the soldier whilst on deployment to reinforce this notion held by the soldier (Park, 2011). In unit–soldier–family dynamics indicative of the soldier's relationship with his/her spouse during preparation for CR, there are three categories affecting the soldier's performance (Kirkland & Katz, 1989). The first category, presence, is referred to as "the soldier's timeously reporting for duty or deployment rather than reporting in sick, ghosting or going AWOL (absent without leave), missing movement or declining to reenlist" (Kirkland & Katz, 1989, p. 2). A supportive relationship between the soldier and spouse as proved by Kirkland and Katz assures that the soldier reports for duty or deployment. Soldiers who experience support from their spouses describe their spouses as the helpmate, confidence builder and encourager making it possible to endure hardships.

The second category, commitment, "encompasses eagerness to learn and help others, readiness to offer ideas and take initiative, and willingness to carry a share of the burdens and to give 100 percent" (Kirkland & Katz, 1989, p. 2). The authors affirm that by reducing attrition, improving retention and confirming soldiers' dedication to the military, committed and supportive families can strengthen the fighting potential of units. The lastly category, concentration, is referred to as "the fact that families, competent in managing their own affairs and finding satisfaction in their lives, liberate soldiers to focus on their duties rather than worry about their families" (Kirkland & Katz, 1989, p. 2).

Soldiers who are aware of their family's ability to manage independently feel frees from worries that might otherwise distract them from the mission. On the other hand, an incompetent or unreliable spouse degrades duty performance and overall CR. The three categories in which the spouse is supportive simulate the concept of family cohesion. Timmer and Veroff (2000, p. 39) define family cohesion as "the degree to which members of a family spend and enjoy time together, work well together and care for one another". Stevens, Minnotte, Mannon and Kiger (2007, p. 2) define cohesion as "the extent to which family members are concerned and committed to the family and are helpful and supportive to each other".

Cohesive families have qualities such as commitment to and appreciation for each other, good communication, togetherness, and problem-solving ability (Schaneveldt & Young, 1992). On the other hand, in troubled families, where a poor relationship between the soldier and spouse exists, the couple often shows either low cohesion or cross-generational coalitions, with parents being closer to their children than to one another (Feldman & Gehring, 1988).

Schwerdtfeger (2009) reports that about 40% of military marriages report distress and plans to pursue divorce or separation, and this results from increased separation and a lack of communication and intimacy during deployment among military couples. The U. S. Army Deployment Cycle Readiness: Soldier's and Family Member's Handbook (2008, p. 12) describes it as follows, "deployment is a very emotional time for all involved". There is a definite and predictable cycle that couples/families go through with each and every deployment. It is for this reason that soldiers and their families must be taken care of, with focus being maintained on ensuring the implementation of policies and practices that would best allow for a harmonious interaction between the soldier, his/her family, and the military. Kalamdien (2008, p. 2) posits that "deployment can be a wrenching experience for any military family" as separation is an inherent consequence of deployment and can be a daunting experience for family members left behind (Gimbel & Booth, as cited in Kalamdien, 2008). Military efforts to help families cope with the psychological challenges include the utilisation of MPTs.

Psychological denial, sadness, numbness, feelings of isolation and abandonment, withdrawal behaviour, and frustration have been identified as common family reactions to deployment. MPTs have the skills necessary to assist families cope with the inherent deployment challenges. These professionals can schedule regular intervention programmes in accordance to their scope of practice to monitor family well-being through regular interaction with the families of deployed soldiers. The development of a family hotline where families can report their challenges could ensure an effective use of the MPTs'. The MPTs could also be pro-active by regularly contacting families so as to ascertain the state of their well-being throughout the phases of deployment.

Studies focusing on the consequent relationship of the soldier with his/her spouse as affected by the military unit, comparing marital satisfaction relationships and military way-of-life satisfaction and general quality of life (Katz, 1988; Martin & Ickovics, 1987) have made it evident that family support and positive family-unit relationships may play a crucial role in increasing CR (Gal & Syna 1988). On the basis of such a relationship, the soldier's sustainability during combat and ability to cope with daily stress and retention are enhanced. On the other hand, it has long been recognised by commanders that troubled families create troubled soldiers who, in turn, can create problems within the unit in their effort to meet acceptable levels of CR (Gal & Syna 1988). In such situations, hardiness may play a crucial role in mediating the challenges between the family, soldier and unit (see par. 2.4.5) for a comprehensive discussion of hardiness.

Understanding the deployment cycle, its psychological processes and expected responses is critical for service members and their families to manage deployment challenges more effectively and to strengthen family relationships. There is no doubt that military couples are faced with a number of challenges resulting from military duties such as deployment. The challenges as mentioned by Schwerdtfeger (2009) may include (a) changes in marital roles and expectations, (b) new or inconsistent routines, (c) physical and emotional separation, (d) limitations on communication, (e) problems with children and operating as a single parent, (f) dealing with trauma, grief, and injuries resulting from combat, and (g) inability to work on a problem as a couple due to extended separation.

2.4.6.1   Deployment cycle challenges faced by the soldier and spouse

Military units are deployed for lengthy periods and are replaced by rotating individual soldiers six-monthly or annually (Winkler, 2008). In addition, units spend time in training prior to deploying, and more time in recovery upon returning home. Research seems to concur on the challenges inherited in the cycle of a soldier's deployment (Pincus, House, Christenson & Adler, 2007; Schwerdtfeger, 2009; Sheppard, Malatras & Israel, 2010). Failure to negotiate the challenges that may present themselves adequately can lead to strife for both parties (Pincus et al., 2007). Schwerdtfeger (2009, p. 6) argues, "… the couple relationship is more likely to become distressed during deployment and reintegration periods … once distressed, military couples tend to become stuck in particularly intense self-perpetuating cycles of distance, defence, and distrust". The cycle involves pre-deployment, deployment, sustainment, re-deployment, and post-deployment. Pincus et al. (2007) posit that each phase in the cycle brings about a challenge which must be mastered and dealt with by both the soldier and spouse.

- **Pre-deployment phase**

Pre-deployment comprises the initial phase that begins with a form of warning order for deployment (Kalamdien, 2008). During pre-deployment, the spouse of a deploying soldier typically experiences emotional turmoil, such as anxiety and denial in anticipation of the departure (Schwerdtfeger, 2009). In the period leading up to the actual deployment, the spouse that is to be deployed may be kept occupied with various deployment-specific exercises in preparation of the execution of the mission (McFarlane, 2009). Laser and Stephens (2011) postulate that the combination of denial of the soldier leaving and the expectation of loss leads to dissonance between the family and ultimately those feelings of anger, intolerance and betrayal may be directed at one another within the family unit.

The length of time that this phase occupies is largely dependent on the time between when the order was issued, and the time of departure, which is not a stable variable owing to the often volatile nature of military operations. This pre-deployment phase is widely considered to be the most important phase within the cycle of the deployment, as the manner in which the phenomena encountered here is dealt with may have a significant influence on the family's ability to cope effectively with the challenges associated with the deployment (Rotter & Boveja, 1999).

- **Deployment phase**

Deployment refers to the period that the deployed soldier is away from home (Laser & Stephens, 2011). Kalamdien (2008) describes this phase as starting from the departure of the soldier until the soldier returns back to his/her family. During the first month of deployment, both the spouse and the deployed soldier experience feelings of sadness, isolation and abandonment. The spouse who has to deal with the realisation of deployment and stress adjust to roles (Schwerdtfeger, 2009) The spouse attempts to reach a state of equilibrium or to achieve a new sense of normality in the absence of the soldier, whilst the deployed soldier will be torn between focus on the operation at hand and concern for the loved ones left behind.

- **Sustainment phase**

Sustainment represents a phase in which the family settles into new routines and go on in the regular manner (Pincus et al., 2001). Schwerdtfeger (2009) notes that during sustainment, in an attempt to establish and settle to new roles and responsibilities, conflict may arise in the couple's relationship due to minimal communication and change in roles. Rotter and Boveja (1999) describe this phase as the adjustment phase, and remark that it lasts for most of the deployment. They propose that the families' main focus during this phase should be on establishing a routine, maintaining communication and promoting self-growth. Kalamdien (2008) comments on the issue of communication, suggesting that resolution of conflict may often prove to be difficult owing to misperceptions derived from distorted messages or misperception.

- **Re-deployment phase**

Re-deployment is regarded as a phase from one month before the soldier is scheduled to return until the physical return to his/her family (Pincus et al., 2007). Milgram and Barr (1993) describe this phase as characterised by intense anticipation, conflicting emotions and possibly some anxiety along with excitement. Schwerdtfeger (2009) concurs with this notion stating that during re-deployment, the soldier and spouse experience conflicting emotions about the upcoming return (i.e. anticipation, anxiety and excitement). Kalamdien (2008) highlights that the spouse may be anxious as to whether the returning spouse will approve of the decisions that have been made during the course of the deployment, and whether this may cause friction within the family dynamic.

- **Post-deployment phase**

The post-deployment phase begins with the soldier's arrival back home and ends with the re-establishment of family equilibrium, which may take months, usually up to three to six months (Kalamdien, 2008; Pincus et al., 2001). During this phase, the couple learns to re-adjust to changing roles and responsibilities, and noticeable conflict may arise in the couple's relationship due to a lack of communication and intimacy and it may therefore take several months to adjust to changes of the soldier being home (Schwerdtfeger, 2009).

The soldier's relationship with his/her spouse becomes critical in determining the soldier's hardiness towards diverse challenges and/or changes that may arise due to his/her career as a man/woman in uniform and overall CR. A relationship in which partners are patient, trusting, communicative and supportive can have a positive influence on the soldier's effectiveness and performance. Deployment is challenging, yet it can provide an opportunity to strengthen resilience when military families' successfully handle deployment demands (U. S. Army Deployment Cycle Readiness: Soldier's and Family Member's Handbook, 2008).

Pisano (2010) suggests that families need to recognise the effect of separation on both deployed and non-deployed members as each will experience changes in roles and sense of purpose, which may create challenges when the soldier and spouse have different purposes. Pisano suggests helpful strategies that can help build a shared sense of purpose and a stronger family involvement to deployments.

These strategies include that soldier and spouse should (a) communicate expectations in advance. Pack (2011) suggests that open and honest communication should be encouraged. Aspects and concerns regarding the deployment must be expressed by both parties, to create mutual understanding of the challenges, and this will foster an atmosphere where both the soldier and the spouse are able to regroup emotionally and come to term with the deployment, (b) set aside time to do things as a family, experiment with new hobbies and activities, (c) prepare for short tempers during the initial transition (d) try and remain positive, (e) get help when needed as psychological trauma will require additional support and resources (Pisano, 2010). Kirkland and Katz (1989) propose that the partnership between the soldier and his/her spouse, where each supports the other and each believes in the calling, assures that the soldier invariably will report for duty or deployment and will do his/her best.

The energy that develops from ownership will result in a family that takes pride in what their soldier does; hence, this can lead to understanding and satisfaction in living the military lifestyle and being family ready (U. S. Army Deployment Cycle Readiness: Soldier's and Family Member's Handbook, 2008). Gal and Syna (1988) strongly hold that family support and positive family unit relationships have a significant role in increasing CR. It also enhances the soldier's ability to cope with daily and ultimately increases the soldier's retention rate (Gal & Syna, 1988). Connecting as a family goes hand in hand with connecting as a unit, therefore, if the family feels some pride and ownership in the profession, they will also feel pride and satisfaction from being members of their soldier's unit (U. S. Army Deployment Cycle Readiness: Soldier's and Family Member's Handbook, 2008).

The military can also assist in maintaining the soldiers' relationship with their spouse through availing the MPT, professionals with the knowledge and necessary skills to help the spouse and soldier cope better with the challenges inherent in each phase of the deployment cycle. For example, during pre-deployment, the psychologist should screen the soldier in order to gain a more holistic understanding of the family dynamics. The military can also put into place certain measures to communicate and/or ensure that families be made fully aware of the nature of the deployment, what the employment will entail, and what will be expected of the soldier. This briefing should include information about steps the military is planning to offer support to the family (Adler et al., 2011). This should be done to ascertain the spouse's current level of understanding at the time prior to deployment of the soldier.

Providing MPTs to address the various facets contained within the family dynamic could prove to be the best efforts by the military in addressing psychological issues inhibiting CR. These professionals with expert knowledge could provide assistance in accordance with their respective areas of expertise so as to create a sound support system for the family. Information regarding the ability of the spouse or the family to handle any affairs would ultimately allow for a more stable and mentally prepared and readily deployable solider. The military has the duty to establish and maintain lines of communication to allow for the spouse to be able to keep in touch with said professionals.

Van Breda (1999) emphasises the importance of proper planning prior to deployment to avoid surprises. Preparation in all aspects of domestic affairs should be addressed so that the mind of the soldier and that of the family are put at ease. This will have a direct effect on the CR of the soldier. All precautions should be taken to lessen the burden of concern for the spouse during the period of separation. Attending to these issues may leave the couple preoccupied. It is however, important that romance and intimacy is maintained throughout this period, allowing for greater congruency amongst the couple, and ultimately to assist in creating an amicable and comfortable atmosphere in the period leading up to deployment and throughout the cycle.

The stronger and more stable the relationship between the soldier and his/her spouse, the greater an aide they will prove to be in the CR of the soldier. If mutual expectations have been established regarding the relationship of the spouses, a stable, self-assured couple will be better equipped for the separation. In the current study, the soldier's relationship with his/her spouse was measured using the Family Assessment Device (FAD), which will be further discussed under the research design and methodology (see par. 3.5.2).

2.4.7 Soldiers relationship with the unit

According to Bartone (1999), the soldier's unit can influence how experiences are interpreted. Griffith (2002, p. 235) says, "military analysts have documented how relations among soldiers and their identification with organisational units have varied considerably depending on the conflict". Furthermore, Griffith, takes examples from (a) World War II, during this time soldiers identified predominately with the company, and (b) in the time of the Korean War, soldiers largely identified with small groups of soldiers, such as soldiers in their squads or buddy systems (Griffith, 2002).

Kirkland and Katz (1989) and Shils and Janowitz (as cited in Griffith, 2002) hold the view that military leaders and others involved with military training have long recognised the importance of soldier identification with the unit and with the military to ensure effective soldier adjustment and unit performance. From this point, one should endeavour to understand the meaning of CR and the way enhances the soldier's relationship with the unit. The soldier's relationship with his/her unit is very important for the soldier's state of mind in preparing for an operation and this relationship can extend to the soldier's spouse. Kirkland and Katz (1989, p. 6) confirm, "soldiers who experience trust and respect from their leaders had strong morale, self-esteem and commitment to their units … they shared their positive attitudes with their spouses and children … the spouse, in turn, reinforced the soldiers' commitment to the unit". The attitude of spouses toward providing advice varies in terms of perceptions the spouse has of the soldier's unit (Kirkland & Katz, 1989).

The unit has an imperative role to play in supporting soldiers preparing for the mission, during and post-deployment, which can also enhance psychological CR. According to Kirkland and Katz (1989), the soldier's experiences in his/her unit will affect the soldier's feelings about the military, the unit, and the self. The soldier expresses his/her attitudes to the family and recounts his/her perceptions of events in the unit to his/her spouse. Because the soldier talks to his/her spouse about the unit, the soldier in his/her role as a member of the unit carries these perceptions, attitudes and feelings to his/her family. It is important that the soldier's experiences in the unit convince the soldier's family that unit leaders respect and are concerned about the soldier's family well-being. This will reinforce the soldier's commitment to the unit and will provide the soldier with the freedom to devote both mental and physical energies to the mission (Kirkland & Katz, 1989).

Support to the soldier's spouse by the military unit ranging from financial affairs, regulated business, social affairs, health, etc. prior to departure and while the soldier is deployed is essential in maintaining the soldier's CR and a positive relationship between the soldier and his/her unit (Lobnikar et al, 2011). Lobnikar et al. further explain that when soldiers are deployed they cannot help the spouse at home from a foreign country and utterly rely on the military to provide support as they are expected to focus on the mission at hand. If this belief (military support to spouse) is shaken and issues at home are unregulated, the soldier cannot completely focus on his/her work of the mission. This results in poor work performance and as a member of the peacekeeping operation, unit CR is thus compromised.

Amongst many factors, deploying soldiers at individual level are often concerned about the health and safety of their spouse remaining home as well as his/her ability to settle daily home affairs and financial matters (De Soir, 1996). If the soldier believes (after taking into consideration the family capabilities to process stressful situations) there is no other party to take care of his/her spouse except the soldier him/herself, this may prove difficult when reaching the decision to deploy.

Other factors relating to the upcoming peacekeeping operation may include the spouse's previous experience with long-term absence of the soldier, including important family events missed and support from the military organisation. Because some soldiers may be vulnerable to posttraumatic stress disorder (PTSD) after exposure to conflict situations this only serves to make the decision to deploy more difficult. The military has the role to inform the soldier and spouse during preparation and during the mission on what to expect, issues concerning communication possibilities, living and work conditions such as food, recreation and hygiene, tragedies of families, threat to life to deploying soldier in cases of an ambush and overall restriction for the soldier as this though alarming, may help the soldier and spouse to adequately prepare themselves (Barabé 1999; Carlson & Ruzek, 2002; Roger & Leigh, 2002).

The U. S. Army Study of the Human Dimension in the Future 2015–2024 (2008, p. 158) affirms that,

> … "the Army family has a major impact on combat-readiness and there is every reason to believe this impact is just as critical … experience and extensive research demonstrate a synergy between the unit, the soldier, and the family that can positively affect retention and commitment to the unit, the mission, and the Army".

Families are inevitably involved in the CR equation because a soldier is a member of a family, as well as a member of a unit (Kirkland & Katz, 1989). When the unit and soldier are informed of the upcoming deployment, the unit should, in support, encourage the soldier to provide information such as contact numbers of his/her spouse or family members and make sure that the spouse has all the relevant contact information of commanders and MPTs. The degree to which families have the power to influence the effectiveness of the soldier positively is dependent on the manner in which they are dealt with by the military. Families who feel prioritised and taken into consideration not only develop greater levels of understanding for the need to deploy, but also provide greater support to the soldier and thus increase his/her level of CR.

One can argue that the provision of an open and communicative relationship between the soldier's family and the soldier's unit can result in a well-integrated unit and a stable family interaction, Kirkland and Katz term this the optimum enhancement. Family Readiness Groups (FRGs), and Rear Detachment Commanders (RDCs) are some of the measures a military unit can utilise in order to foster support to a soldier's family (U. S. Army Deployment Cycle Readiness: Soldier's and Family Member's Handbook, 2008). FRG is the most common measure used by the military to support military wives and important partners. Dimiceli et al. (2010) describe FRG as an event that is held once a month for the spouses of military servicemen to congregate, and the event takes place at the military base and is intended to provide resources through information and support from other spouses.

Kirkland and Katz (1989) view the FSG as the most important element of familial welfare designed for the purpose of orientating new families and proving links between families and the unit and among individual families when the unit is deployed. This kind of support from the unit strengthens the soldier's perception of a positive relationship with the unit. Dimiceli et al. (2010, p. 366) are of the opinion that providing such services may help families believe that "the military takes care of its own" and this will result in less conflict between the greedy institutions of the military and the family. This in turn will allow the soldier to focus on the mission ahead.

The U. S. Army Deployment Cycle Readiness: Soldier's and Family Member's Handbook (2008) makes provision for this by putting in place programmes in support of the soldier and his/her spouse such as (a) "my Army life too", this assists all spouses, army family members and soldiers with up-to-date information about programmes and services, which serves as a "one-stop knowledge center," (b) Army Emergency Relief (AER) provides emergency financial assistance to soldiers and their spouse/family members in case of legitimate financial emergencies. If soldiers are aware of such programmes, which are available at all times for his/her spouse or family, this knowledge may enable the soldier to trust and believe in his unit.

Pete Geren, Secretary of the Army, as cited in U. S. Army Deployment Cycle Readiness: Soldier's and Family Member's Handbook (2008) emphasises the importance family involvement in military life, and says

> … "we recognize the strength of our soldiers comes from the strength of their families ... we are committed to providing our families a strong, supportive environment where they can thrive … we are committed to building a partnership with military families that enhances their strength and resilience".

There are many ways in which the military unit can demonstrate or foster a supportive relationship to the deploying soldier. Kalamdien (2008) believes that utilising MPTs is important in support to the soldier and his/her family. Through the military unit, the professionals can provide professional support throughout the deployment cycle for both the spouse at home and soldier at the deployment site. The support can range from spiritual assistance, to providing counselling and clinical care and managing finances for the couple. The unit can provide communication measures to enable effective and timely communication between the soldier and spouse during the deployment phase. These measures may include, letters, e-mail, and phone calls. During the separation period, communication between the spouses is important, as it can enhance emotional motivation and reduce feelings of loneliness (Kalamdien, 2008). Because these communication measures can become extremely expense for abroad communication, the military unit could make the facilities available for those who do not have access to them and in the process, reduce the stress levels of the spouse and strengthen effective coping for the deployed soldier. In the current study, the soldier's relationship with the unit was measured using the Soldier's Relationship with Unit Questionnaire, a subscale of PCRQ. This is further discussed in the research design and methodology section (see par. 3.5.3).

2.5   CONCEPTUALISING THE RELATIONSHIP BETWEEN CONSTRUCTS

Combat-readiness encompasses the soldier's degree of commitment to a certain course of action (Bester & Stanz, 2007), characterised not only by the soldier's willingness to train and deploy but, where necessary, the willingness to fight (Kirkland & Katz, 1989). Furthermore, commitment achieved through a soldier's state of mind that is both emotionally and physically available, is largely dependent on the relationship that a soldier shares with the military unit and his/her family and the manner in which both entities view each other.

In order to develop and maintain such a degree of commitment, in which the soldier is psychologically and physically ready for deployment the utilisation of the MPT and the military leaders may assist in establishing a positive relationship between the unit and the soldier and the soldier and his/her spouse. A positive relationship between the soldier and spouse can enhance the soldier's commitment to the military and his/her ability to cope in operations. The soldier's relationship with the military unit, mainly influenced by the leaders, through support to the spouse and by building the soldier's confidence and trust, has a significant influence on how the soldier's spouse views the military and supports the soldier. This invariably has an influence on the soldier's holistic view of CR.

Hardiness will therefore either contribute to the workings of these relationships or contribute to the overall CR of the soldier to perform successfully under unpredictable and psychologically challenging military operations such as peacekeeping missions. Hardiness centres on the creation of meaning in life, having courage despite life's inherent pain and futility (Kobasa & Maddi, 1977). Hardiness reduces the appraisal of a threat, allowing the perception of successful coping efforts and enables the individual's active use of problem-focused coping strategies in the face of a stressful event and/or challenges (Hamilton & James, 2004).

Hardiness is perceived as having a mediating effect on the achievement of CR, by enabling the soldier to cope better with challenges from both the soldier's relationship with his/her spouse and the soldier's relationship with the unit. Hardy persons have a strong sense of life and work commitment, a great belief of control, and more openness to change and challenges in life (Bartone, 1999). These are characteristics that may be developed through the utilisation of the MPTs' and military leaders in support of the soldier. The MPT may prove to create a positive relationship between the military and soldier's family.

Based on the literature, it is proposed that the soldier's higher level of hardiness, will allow the soldier to better cope with challenges arising from soldier's RWS than those with low levels of hardiness. Furthermore, high levels of hardiness will enable the soldier to cope better with possible unit challenges. Therefore, the soldier's high level of hardiness is proposed to be a mediating variable, thus enabling the soldier's combat-readiness as illustrated in Figure 1.1 of the proposed model of CR.

2.6   CHAPTER SUMMARY

This chapter reviewed a number of facets theorised to influence CR. In doing so, the chapter first reviewed the concept of peacekeeping operations, followed by the stressors and the role of MPTs in order to capture and understand the environment to which soldiers deploy and the relevant stressors associated with peacekeeping operations fully. Literature shows that CR is a multi-faceted construct. The CR construct was discussed extensively (see par. 2.4). CR was first defined and then the relevant sub-factors were discussed. This included the discussion and definition of soldier's CR followed by a detailed discussion on the influence of military commanders on soldiers' CR. Literature also revealed that military leaders of different types can play a vital role in developing and training soldiers to be combat-ready, both physically and psychologically. A discussion of material readiness and unit readiness was also provided (see par. 2.4.2 and par. 2.4.3). Unit performance and cohesion were found to be significant facets observable in unit CR (see par. 2.4.3.1).

A holistic view of these factors was also provided in order to interpret and delineate the perceived theoretical relationship between CR factors as provided by the literature (see par. 2.5). Hardiness was clearly defined in par. 2.4.5. Hardiness attitudes such as control, commitment and challenge were found to be pervasive factors determining behaviour. The literature also revealed that hardiness can be learned. The soldier's relationship with his/her spouse was discussed (see par. 2.4.6). The discussion focused on stable and unstable families, describing how unit demands and/or participation to peacekeeping operations can negatively or positively affect the soldier's relationship with his/her spouse. The discussion also included the prevalent challenges of the deployment cycle faced by the soldier and his/her spouse. A discussion on the soldier's relationship with the unit was provided (see par .2.4.7). Literature revealed that supportive units gain trust and commitment from the soldier. The last theoretical discussion in the chapter focused on describing the hypothesised interaction between the factors and as such, a model was proposed (see Fig. 1.1).

CHAPTER 3
RESEARCH DESIGN AND METHODOLOGY

3.1   INTRODUCTION

This chapter presents the research design and methodology used to determine the proposed model for CR in this study empirically. Chapter two of literature review provided the theoretical foundation for the hypotheses described in this chapter. It is important to review, the study objectives in order to appreciate the proposed research methodology.

The stated theoretical research objectives for the study were to conceptualise CR, RWU, RWS, and hardiness from a theoretical perspective, and also the theoretical relationship between RWU, RWS and CR. Finally, the theoretical objective was to conceptualise the mediating effect of hardiness on the relationship between RWU, RWS and CR. The theoretical background and framework in chapter two culminated in a theoretical model (Fig. 1.1), which theorised the hypothesised relationship between variables of interest. The theorised relationship led to the hypothesis that such a relationship may be determined empirically utilising the SANDF as a sample. The stated empirical objectives were to determine the level of soldiers' RWU, RWS, hardiness and CR in a sample of SA military members in order to determine the relationship between soldier's RWU, RWS and CR. Lastly, the empirical objective was to determine the mediating effect of hardiness on the relationship between RWU, RWS and CR in a sample of SA military members.

The literature review (chapter two) forms the theoretical foundation for the hypotheses outlined in this chapter. This chapter further provides an explanation of the research design, the sampling design, measuring instruments and statistical analysis for the study. The discussion of these factors (i.e. hypotheses, research design, sampling design, measuring instruments and statistical analysis) provides a systematic framework and understanding on why the current research was done.

Research as a scientific method (explicit and systematic) was used through a process of testing out preconceptions in order to make sense of things and to provide information and answers to raised questions (Hancock, Windridge & Ockleford, 2007; Rosnow & Rosenthal, 2008). Babbie and Mouton (2001) maintain that a research design is a plan or structural framework according to which the researcher intends to conduct the research process in order to solve the research problem and to expand knowledge and understanding. This allows researchers to explore the significance of constructs objectively with the aim of discovering or expanding knowledge on a specific construct. Research design is a strategy used by researchers to gather evidence about knowledge desired (De Vos, Strydom, Fouché & Delport, 2005).

Research methodology serves the epistemic ideal through two characteristics, namely objectivity and rationality (Babbie & Mouton, 2001). Babbie and Mouton (2002, p. 647) define research methodology as "the methods, techniques, and procedures that are employed in the process of implementing the research design or research plan, as well as the underlying principles and assumptions that underlie their use". Research methodology is "the procedures by which researchers go about their work of describing, explaining and predicting phenomena" (Rajasekar, Philominathan & Chinnathambi, 2006, p. 4). Research can be quantitative, qualitative or even both (a combination) of these (Babbie, 2013; Gravetter & Wallnau, 2011; Rajasekar et al., 2006; Rosnow & Rosenthal, 2008). The current study utilised a quantitative research design because thistype of design emphasises variable analysis, which allows the quantification of constructs through quantitative measurement, and describing and analysing human behaviour (Babbie & Mouton, 2001).

Quantitative research design emphasises the analysis of more than two variables and makes provision for the use of statistical analysis to determine the significance of the results (Neuman, 2003; Rosnow & Rosenthal, 2008). This approach ensures that the research results are not influenced or affected by the researcher. The current study was an exploratory type of study. According to Babbie and Mouton (2001), an exploratory type of study allows the researcher to explore new interests in a particular field.

Due to a lack of empirical evidence to prove the existence of the relationships between the independent variables (RWU and RWS) and CR mediated by hardiness in the SANDF, the researcher embarked on an exploratory study.

3.2   HYPOTHESES

The objective of the current study was to determine the relationship between the variables (i.e. soldiers' RWS, soldiers' RWU, and hardiness) and the effect of these variables on CR. Through the literature review, the relative significance of each factor was elaborated. The apparent influence of these factors through theory warranted the investigation into the potential effect they have on soldiers' CR. Literature served to establish the theoretical relationship between these variables through conceptualising and providing held arguments on the variables' interaction with CR. After consideration of the stated relationships, the study proposed a model for CR (see Fig. 1.1). In order to determine the proposed model, empirical objectives were formulated. The necessity to determine the relationship between the variables of interest is relevant. Given the high involvement of the SANDF in complex peacekeeping operations in Africa and the likely challenges culminating in the nature of their functions and role in the operations, high levels of CR are imperative. For soldiers to achieve CR, they must be both physically and psychologically prepared; hence, having a free state of mind.

According to the literature, this state of mind to attain CR can be affected by a number of factors, particularly the soldier's RWS and RWU. Hardiness reflects the soldier's encompassing control, commitment, and challenge behaviours, and is described as possessing a positive attitude or psyche that allows the individual to cope with daily and occupational challenges. The current study viewed hardiness as a possible mediator variable enabling the soldier to cope and to achieve CR despite potential challenges emanating from either the soldier's RWS or his/her RWU. In order to provide answers to the research problem (see par. 1.2) and to satisfy the research objectives as stated (see par. 1.3), the following hypotheses were formulated to determine the empirical relationship between the variables.

H₁: There is a significant relationship between RWS and CR.

H₂: There is a significant relationship between RWU and CR.

H₃: Hardiness has a mediating effect on the relationship between RWS and CR.

H₄: Hardiness has a mediating effect on the relationship between RWU and CR.

3.3   RESEARCH DESIGN

In order to explore the relationship between the variables of the study, a non-experimental research design was used. In order to understand the research design chosen for the study (i.e. research design strategy) better, a distinction between an experimental and an *ex- post- facto* approach is important. According to Kerlinger and Lee (2000), experimental research allows the researcher to manipulate and control one or more independent variables and to observe the dependent variable for variation related to the manipulations of the independent variable(s). When a researcher does not intend to manipulate the variables of the study, the *ex- post- facto* research approach is relevant. *The ex- post- facto* research approach is a systematic empirical inquiry where the researcher does not have direct control of the independent variables (Kerlinger & Lee, 2000). Oehley (2007) affirms that in social science studies, this strategy is ideal because variables are measured with no attempt to manipulate them, resulting in an *ex-post- facto* research design.

The main distinction between these approaches is that in experimental research, the researcher has manipulative control over the variables of the study, while in *ex- post-facto* approach direct control of variables is not possible. Resultant from the *ex- post-facto* approach, the researcher can make correlational inferences by measuring two or more variables as they exist naturally where the aim is to establish that a relationship exists between variables and to describe the nature of the relationship (Oehley, 2007).

The ex- post- facto strategy; however, does not exist without limitations. Kerlinger and Lee (2000) provide three important limitations that researchers should take into consideration:

- Inability to manipulate independent variables – thus inferences about relationships between variables are made without direct intervention from related variation of independent and dependent variables;

- Inability to randomise – it is not possible to assign subjects or treatments to groups at random; and

- Risk of improper interpretation – inability to make clear inferences on causality from significant coefficients as correlations do not imply causation.

Non-experimental research design allows the researcher to observe the relationships between variables without manipulating them (Kerlinger & Lee, 2000) and this inability to control variables allows for the adoption of *ex- post- facto* correlational approach. In the current study, the researcher aimed to explore the study variables by empirically determining how they were related to each other, and the nature of their relationship without any manipulation by the researcher. The study comprised of dependent variables; independent variables and a mediator variable. A dependent variable is the observed variable measured to determine how it is affected by the independent variable(s) (Babbie & Mouton, 1998; Field, 2009). CR was the dependent variable of this study. An independent variable is the factor selected to determine its effect on the observed phenomenon (Welman, Kruger & Mitchell, 2005). The independent variables of the current study were soldiers' RWS and RWU as these variables are postulated to have an effect on CR. The study also included a mediator variable. According to Baron and Kenny (1986) a mediator variable provides an explanation on how the dependent variable is affected by the independent variable. Hardiness was the mediator variable for this study.

3.4   SAMPLING DESIGN

The population under study as described by Babbie and Mouton, (1998) was the total group of study for which conclusions were drawn, a collection of research subjects sharing the same characteristics in which the researcher was interested in. For this study, the population comprised of the SANDF soldiers (uniformed members). The SANDF consists of four divisions, namely the SA Army, SA Navy, SA Air Force, and the SA Military Health Services.

For the study sample, the researcher utilised SANDF soldiers, both officers and non-commissioned officers (NCOs) mobilising for a peacekeeping operation deployment to Sudan (Operation Cordite). A sample is a small subset of the population. Data collected from the sample is often used to make inferences about the whole population in which the researcher is interested. Only uniformed soldiers from the infantry battalion (SA Army) of various ranks from the senior ranks of (lieutenant colonel, major, captain, and lieutenant), and non-commissioned officers (warrant officers, staff sergeants, sergeants, corporals, lance corporals, and private) across race and gender were used.

Prior to commencing with the research and data collection, ethical clearance was obtained from the Stellenbosch University Ethics Committee. Because the study was conducted in the military, prior to the mobilisation, permission from the relevant SANDF authority was obtained to commence with the research, particularly from Defence Intelligence (DI), by means of a formal letter. Permission was also obtained from the Infantry Officer Commanding in order to get access to the participants. During mobilisation at the Department of Defence Mobilisation Centre (DoD Mob Cen), participants were gathered in two lecture rooms at times convenient to them. The researcher explicitly explained the purpose of the study and potential non-financial benefits for both the SANDF as an organisation and the soldiers for future CR preparations. The participants were also informed of the nature of their participation (voluntary and confidential) and that they could withdraw at any time. Utilising the Stellenbosch University consent form, written consent was obtained from participants.

The consent form was part of the questionnaire; thus, the participants had the freedom to either take part in the research by ticking in a box either to agree to participate voluntarily in the research study or to decline the invitation to participate in the research study under the stipulated conditions. Completion of the questionnaire took approximately 60 minutes. Once completed, questionnaires were checked for completeness to ascertain that each item was responded to. Data was collected from a sample of 363 soldiers from the mobilising infantry battalion (n = 363) deploying to Sudan for a peacekeeping operation by using a convenient sampling method as described by (Babbie & Mouton, 1998). An optimal positive response was received from the groups. A total of 365 questionnaires were administered to the infantry battalion participants and 363 questionnaires were returned completed. This represented a response rate of 99, 5% which is indicative of a good response.

3.5   MEASURING INSTRUMENTS

The research questionnaire consisted of two sections, Section A and B. Section A focused on the participant's biographical information, which included information regarding the participant's age, gender, race, rank, length of service, contractual terms, marital status, arm of service, language, and highest level of education completed. Section B consisted of scales measuring various variables.

3.5.1 Perceived Combat Readiness Questionnaire (PCRQ)

The Perceived Combat Readiness Questionnaire (PCRQ) as adapted by Nkewu (2013) from Combat Readiness Scale (CRS) (Bester & Stanz, 2007) was used to measure CR. PCRQ measures the extent to which a soldier perceives him/herself as combat-ready. The questionnaire consists of a seven-point Likert-type scale with responses ranging from 1 = (do not agree at all) to 7 = (completely agree) for scoring each item.

The questionnaire consisted of 78 items distributed among seven dimensions relevant for this research: confidence in one-self (7 items), confidence in team (6 items), confidence in leaders (6 items), morale and esprit de corps (6 items), horizontal cohesion (14 items), vertical cohesion (25 items), and unit discipline (7 items). These subscales had an estimated reliability score of Cronbach's α .88 (Nkewu, 2013).

3.5.2 Family Assessment Device (FAD)

The soldier's relationship with his/her spouse was measured using the Family Assessment Device (FAD) developed by (Epstein et al., 1983). The FAD is based on the McMaster Model of Family Functioning (MMFF) with its six dimensions of family functioning, a clinically oriented conceptualisation of families (Epstein et al., 1983, p. 172). It is a 4-point Likert-type scale with responses ranging from 1 (strongly agree), to 2 (agree), 3 (disagree), and 4 (strongly disagree). The scale consists of 60 items in total. The FAD is made up of seven dimensions. One of these dimensions, general functioning, assesses the overall health/pathology of the family, and the other six scales assess the six dimensions of the MMFF. The FAD has a reliability score of Cronbach's α for general functioning = .81; problem solving = .68; communication = .70; roles = .67; affective responsiveness = .82 behaviour control = .64 and affective involvement = .45 (Epstein et al., 1983). Table 3.1 provides a description of the six MMFF dimensions conceptualising family functioning.

Table 3.1

Description of the MMFF's six dimensions

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Dimension	Description
Problem solving	Refers to the family's ability to resolve issues which threaten the integrity and functional capacity of the family at a level that maintains effective family functioning.
Communication	Is the exchange of information among family members (clear verbal messages with respect to content and direct in the sense that the person spoken to is the person whom the message is intended for).
Roles	Refers to the family's ability to establish patterns of behaviour for handling a set of family functions which include providing resources, providing nurturance and support, supporting personal development, maintaining and managing the family systems, and providing adult sexual gratification.
Affective responsiveness	Refers to the extent to which individual family members are able to experience appropriate affect over a range of stimuli (welfare and emergency emotions).
Affective involvement	The extent to which family members are interested in and place value on each other's activities and concerns.
Behaviour control	Refers to the way in which family members express and maintain standards for the behaviour of its members in different situations (i.e. dangerous, psychological and social) assessed as a different patterns of control (flexible, rigid, laissez-faire and chaotic).

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(Epstein et al., 1983, p. 172–173)

3.5.3 Soldier's Relationship with Unit Questionnaire (SRU-Q)

The soldier's relationship with his/her unit was measured using the SRU-Q a subscale of the PCRQ derived by Nkewu (2013). The SRU-Q is a questionnaire with responses ranging from 1 = (do not agree at all) to 7 = (completely agree), with a reliability score of Cronbach's α = .88 (Nkewu, 2013). The questionnaire is aimed at determining the soldier's perception about the SANDF's support (financial, administrative, spiritual and communicative) to the soldier's family during the soldier's participation in peacekeeping operation(s). In the current research, only the support to family dimension of PCRQ α = .86, adapted and reduced to eight items relevant for the research was used.

3.5.4 Military Hardiness Scale (MHS)

The Military Hardiness Scale (MHS), developed by Carol and Adler (2006), was used to measure hardiness. In the current study, the purpose of the scale was to measure the soldiers' different aspects of hardiness. The MHS is a 4-point Likert-type scale with responses ranging from 1 (strongly agree) to 2 (agree), 3 (disagree), and 4 (strongly disagree). The scale consists of 18 items in total, reflecting the three military-specific components, namely –

(i)   Commitment (i.e. strong identity with the military and commitment to the mission);

(ii)   Control (i.e. job control and personal influence on mission outcomes); and

(iii)   Challenge (i.e. the degree to which the individual exerts personal resources in response to occupational demands) to the mission (Carol & Adler, 2006). The scale has a Cronbach's α of .90 (Carol & Adler, 2006).

3.6   STATISTICAL ANALYSIS

Data was analysed by using STATISTICA 12 and partial least squares (PLS) with the software Smart PLS 2. A five per cent significance level (p<0.05) was used as guideline for significant relationships. Using STATISTICA for analysis, factors were computed for each scale used.

In order to provide an overview of the sample's responses of different factors, descriptive statistics were calculated in which important sample characteristics were summarised and organised in the form of percentages. Reliability analyses were conducted for each scale and subscales using Cronbach's alpha. Correlational analysis on various variables (RWS and RWU) to determine their relationship with CR was computed for further data analysis and hypothesis testing. Correlation is a statistical technique that is used to measure and describe a relationship between two variables (Gravetter & Wallnau, 2008). Stated hypotheses (see par. 3.2) were tested using the Spearman correlation, a non-parametric measure of the agreement between two variables (Gravetter & Wallnau, 2008).

PLS was used to model multi-variate relationships explaining CR (particularly the mediating effect of hardiness) and to test the relationship of a set of independent variables to a dependent variable; thus, testing the proposed model for CR. Sanchez (2013) posits that PLS has to do with regression analysis but it is much more than that. According to Pullman, Granzin and Olsen (1997, p. 221), "the objective of PLS is explanation of the relationships and prediction of the criterion variables of the model". Starkweather (2011) says PLS modelling is often used as an alternative to traditional modelling techniques, contrary to traditional modelling techniques which rely on covariance decomposition, PLS is a variance-based (or components-based) technique and does not carry with it many of the assumptions of covariance methods (i.e. distributional assumptions). Pavlou and Chai (2002, p. 246) attest that "PLS allows for a simultaneous analysis of both whether the hypothesized relationships at the theoretical level are empirically acceptable, and also how well the measures relate to each construct". A number of researchers in different fields of study certainly favour the use of PLS for statistical analysis. Ainuddin, Beamish, Hulland and Rouse (2007, p. 56) posit that the use of PLS is "especially suited to exploratory studies where the measures are new and the relationships have not been previously tested".

Using parameter estimates, "PLS better reveals the strength and direction (i.e. positive vs. negative) of the relationships among variables compared to correlation coefficients" and in doing so, "PLS avoids parameter estimation biases common in regression analysis" (Calantone et al., 1998, p. 28). According to Inkpen and Birkenshaw (1994), by using PLS methods, concerns about multicollinearity are eliminated as all relationships are modelled simultaneously. PLS allows simultaneous analysis of a model (Bhakar, Bhakar, Bhakar & Sharma, n.d.). Both the measurement model and the structural model were evaluated through Smart PLS for this study.

3.7   CHAPTER SUMMARY

This chapter first provided a detailed overview on the bases of the proposed theoretical hypotheses. Discussions on the research methodology were elaborated, this included an overview of the research design, sample design and measuring instruments. An overview of the statistical analysis was also provided. The next chapter provides the empirical results of the study.

CHAPTER 4
RESULTS

4.1   INTRODUCTION

The various statistical analyses from the data collected are presented in this chapter. In presenting the results obtained in this study, firstly, the descriptive statistics of the sample and the results of the four variables of interest in a form of measures of central tendency will be outlined. Secondly, a discussion on the reliability (item analysis) of the different measures (subscales) used in the study is provided. Thirdly, using the inferential statistics correlations aided by the Spearman correlation coefficient, the different hypothesised relationships among the variables are tested. Following the inferential statistics, PLS analysis particularly, the overall reliability and validity of the model (measurement model) and structural model are presented to test the relationships among the variables and the mediating effect of hardiness (as hypothesised in Figure 1.1. the proposed model of CR) further. Lastly, conclusions are drawn on the basis of the obtained results.

4.2   DESCRIPTIVE STATISTICS

Descriptive statistics "are statistical procedures used to summarise, organise and simplify data" (Gravetter & Wallnau, 2008, p. 6). According to Mendenhall, Beaver and Beaver, (2012, p. 4), descriptive statistics "consists of procedures used to summarise and describe the important characteristics of a set of measurements". Asaad and Hialaya (2001, p. 1) further describe descriptive statistics as referring to the "methods employed in summarising the obtained data into frequency distribution, percentage distribution, measures of central tendency, measures of position, measures of dispersion, measures of skewness and kurtosis". A measure of central tendency (i.e. means and standard deviations), one of the descriptive statistics methods (Asaad & Hialaya, 2001) was calculated in order to reflect the general tendencies of the participants in relation to the variables of the study.

Sekaran (1992, p. 260) defines a mean as "a measure of central tendency that offers a general picture of the data without unnecessary inundating one with each of the observations in a data-set". On the other hand, a standard deviation is often used to describe the amount of consensus or variability of the participants regarding the mean (Babbie, 1992).The SANDF sample utilised in this study consisted of 363 SA Army deploying soldiers. The following discussion is followed by a presentation of some (though not all) descriptive results by means of a graph. The participants represented different age groups, ranging from 20 years and below to over 50 years (see Fig. 4.1). The smallest group category was that of 20 years and below with only of 2 participants (1%) in the group. The majority of participants were in the age group 21–30 years, which comprised 165 participants (45%) of the study sample. In the age group 31–40 years, there were 77 participants (21%) of the study sample, in the group 40–50 years of age, there were 113 participants (31%), and in the group over 50 years, there were 6 participants (2%).
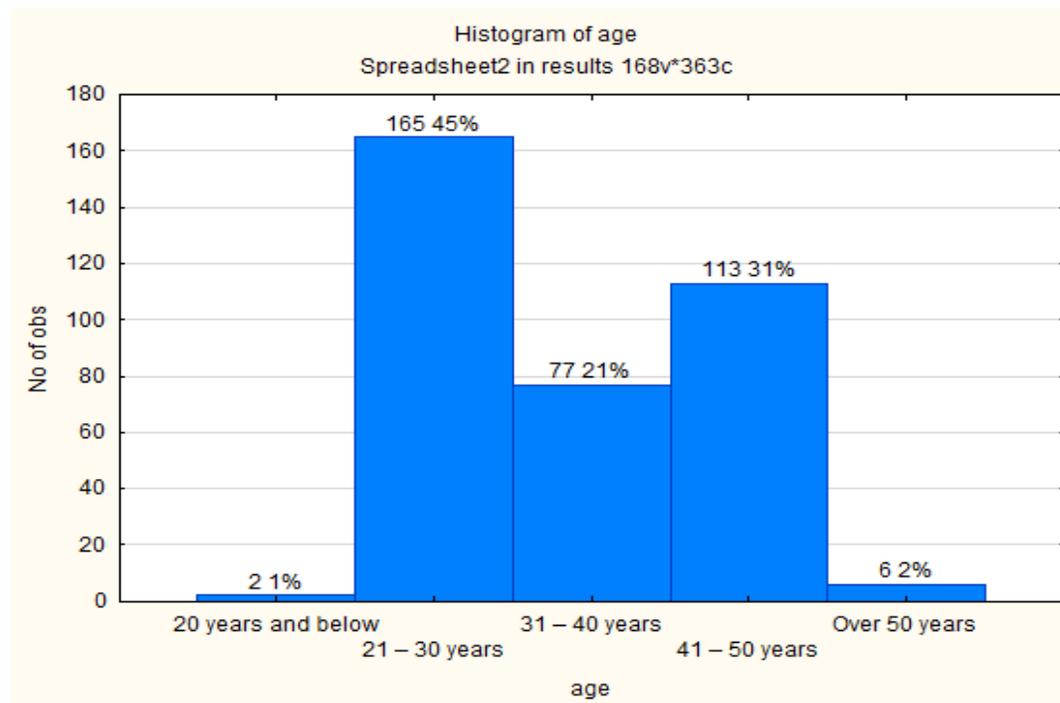

Figure 4.1   **Histogram of Age**

In terms of gender, the sample comprised of 288 (79%) males and 75 (21%) females. All the different South African races were represented (see Fig. 4.2).

The majority of the participants were African at 339 (93%) followed by Coloured/Asian 20 (6%), White 3 (1%) and Indian 1 (0%).
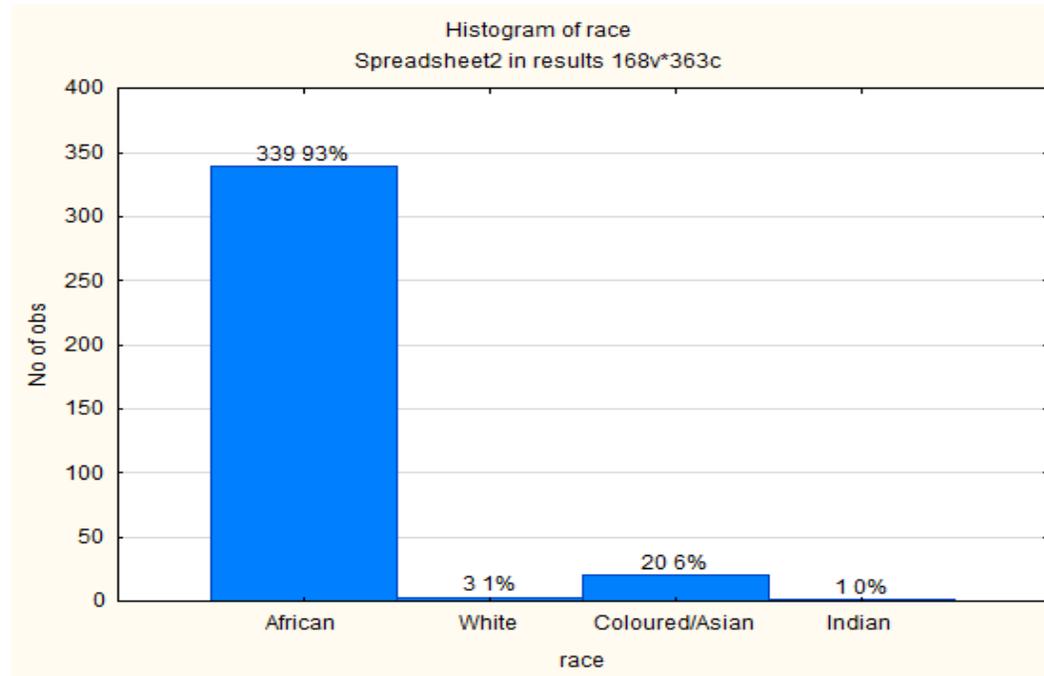
Figure 4.2   **Histogram of Race**

The participants were categorised according to rank groups. Non-commissioned officers (NCOs) held the majority of the sample at 344 (95%), officers comprised 14 parsticipants (4%), and the smallest group was comprised of warrant officers, namely 5 (1%). The length of service for the sample was categorised into five groups. There were 46 participants (13%) below 2 years, there were 43 participants (12%) with 3 – 5 years, 29 participants (8%) with 5–7 years, 60 participants (17%) with 7–9 years, and the majority of participants 185 (51%) had 10 years and above of service in the SANDF. The sample further consisted of three categories describing their terms of employment. The majority of participants of 170 (47%) were on contractual terms, 111 (31%) permanent force members and 82 (23%) were reserve force members. Most of the participants were either married or had a life partner. Of the group, 129 (36%) were married or living with a life partner 129 (36%).

This was followed by single 95 (26%), divorced 8 (2%), and widow/widower 2 (1%) as depicted in Figure 4.3. regarding the level of education, the majority of the participants were matriculants 226 (62%), followed by participants at secondary level of education 63 (17%), those with a certificate/diploma were 60 (17%), a degree 9 (2%), primary and below 3 (1%) and there was 1 at post-graduate level.
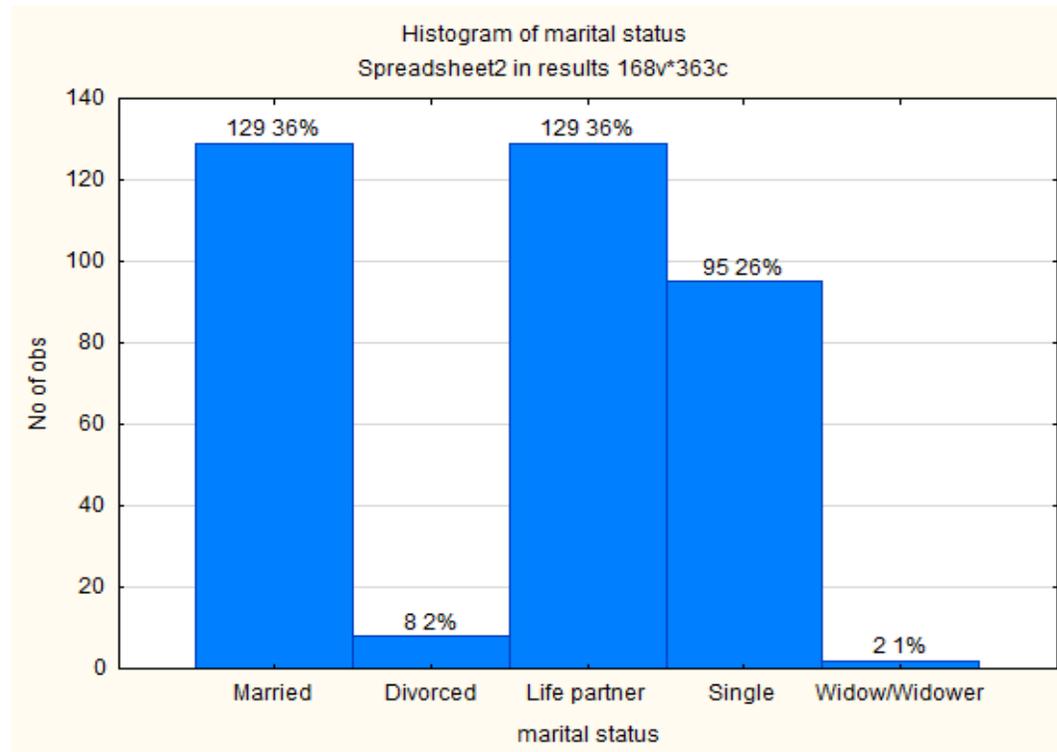
Figure 4.3   **Histogram of Marital Status**

In order to determine whether there was a relationship between the variables of interest, further sample descriptive statistics were performed. Using the measures of central tendency, which are normally used to determine the typical score attained by a group of subjects (Howell, 2010), certain empirical objectives were determined. The set of questionnaires consisted of four variables, namely (a) RWS – calculated using the FAD with 60 items to which the respondents had to indicate their level of agreement to each item using a four-point scale, (b) RWU – calculated using the SRU-Q with eight items to which the respondents had to indicate their level of agreement to each item using a seven-point scale, (c) hardiness – calculated using the MHS with 18 items to which the respondents had to indicate their level of agreement to each item using a four-point scale

and (d) CR – calculated using the PCRQ with 71 items to which the respondents had to indicate their level of agreement to each item using a seven-point scale.

Table 4.1

Measures of central tendency: Variables

_____

Variables	N	Minimum	Maximum	Median	Mean	Std. Deviation
RWS	363	2.00	3.79	2.94	2.96	0.33
RWU	363	1.0	7.0	4.5	4.48	1.62
Hardiness	363	1.29	4.0	3.31	3.26	0.49
CR	363	1.07	7.0	5.32	5.18	0.95

_____

The results in Table 4.1 reflect that a minimum of 2.00 and a maximum of 3.79 at a median of 2.94 indicate that the participants were in agreement or had a good relationship with their spouse (RWS). The mean of 2.96 and a standard deviation of .33 indicate that the participants had relatively high levels of general family functioning. For RWU, the results show a minimum of 1.0 and a maximum of 7.0 at a median of 4.5, the participants were thus in relatively high agreement that there was a good relationship with their unit. The mean of 4.48 and the standard deviation of 1.62 indicate high levels of RWU among the participants. A minimum of 1.29 and a maximum of 4.0 at a median of 3.31 indicate that there were high levels of hardiness among the participants. The mean of 3.26 and a standard deviation of .49 reflect that the participants had relatively high levels of hardiness. The minimum of 1.07 and a maximum of 7.0 at a median 5.32 indicate that there were high level of CR among the participants. The mean of 5.18 and the standard deviation of .95 indicate that the participants had high levels of CR.

These results were used to provide answers for the stated empirical objectives (see par. 1.3.3). Accordingly, the results show that there were high levels of RWU, RWS, hardiness and CR, therefore, objectives (a) to determine level of RWU in a sample of SA military members, (b) to determine level of RWS in a sample of SA military members, (c) to determine level of hardiness in a sample of SA military members, and (d) to determine level of CR in a sample of SA military members were all confirmed.

4.3   RELIABILITY ANALYSIS

Gerber and Finn (2005, p.187) acknowledge, "an important characteristic of psychological instruments is their reliability as it indicates the amount of variation to expect in the measurement". Reliability "is the stability or consistency of a measurement" (Gravetter & Forzano, 2009, p. 82). Indexes of reliability (reliability coefficients computed) can range from 0.0 (the measure has no reliability and may vary) to 1.0 (the measure has perfect reliability) and will be consistent (Gerber & Finn, 2005; Gravetter & Forzano, 2009). A commonly used coefficient of internal consistency (Cronbach's alpha) is "based on the consistency of responses from one item to another" (Gerber & Finn, 2005, p. 187–188). Item analysis indicates how each item contributes to the internal consistency of the measuring instrument. Items that do not contribute much to the reliability of the total measurement can be rewritten or deleted to improve the measurement scale (Gerber & Finn, 2005; Osterlind, 2002; Spector, 1992).

All four scales (FAD, SRU-Q, MHS, and PCRQ) utilised in this study were item-analysed using the SPSS reliability procedure to test for reliability of the scales used to measure the variables of interest and to support the validity of the research generally. Item analysis is internal consistency analysis that measures the extent to which items in the scale measure the same attribute or construct (Field, 2009; Nunnally, 1978). Each of the scales was previously documented in literature to have acceptable internal consistency (see par. 3.5).

Researchers concur that an alpha value (>0.70) is acceptable (Field, 2009; Gerber & Finn, 2005; Gravetter & Wallnau, 2008). Pallant (2007) acknowledges that it is not rare to find lower Cronbach alpha values such as .50. especially in scales consisting of items fewer than ten. The study yielded the following analysis results:

- Item 4 in the subscale "roles" of the FAD ('when you ask someone to do something, you have to check that they did it') was flagged as a problematic item. The item had positive but low inter-item correlation (.08). The item was retained as there was no significant change to the overall Cronbach alpha if the item was deleted.

- Item 5 in the subscale "affective involvement" of the FAD ('if someone is in trouble, the others become too involved') had a negative and the lowest inter-item correlation in comparison to other items of the scale (-.05). Such results could have been poor due to the way the item was phrased; thus, it might have been not clear to the participants. This item was flagged as problematic; however, it was retained due to the fact that there was no substantial change to the Cronbach alpha if the item was deleted.

- Item 32 in the subscale "behaviour control" of the FAD ('we have rules about hitting people') had positive but low inter-item correlation when compared to other items in the scale (.08). As a result the item was flagged as problematic. Although the item had a positive inter-item correlation, deleting the item made no significant increase to the overall Cronbach alpha. Due to this fact, the item was retained.

- Item 9 in the subscale "affective responsibility" of the FAD ('we are reluctant to show our affection for each other') and item 57 ('we cry openly') were flagged as problematic items. Item 9 had a negative and the lowest inter-item correlation (-.03) and item 57 had a positive but low inter-item correlation (.08). These items could have been poor due to a number of factors. First, it could have been he results of occupational factors, such as the military culture (i.e. soldiers are trained to ensure hardship).

- Second, it could have been the influence of cultural differences and gender, as the majority of the participants were Africans (93%) and males were also in the majority at (79%). In an African culture, males are perceived as brave and emotionally strong; consequently, crying may be perceived as weakness challenging masculinity. Third, the language factor could have resulted in participants being unable to understand or interpret the item clearly. Although the content of the items matched the affective responsibility, the stated factors could have influenced the poor result. If the items were deleted, the Cronbach alpha would have changed artificially from .25 to .32, but the change was not significant enough to justify deleting these items. Further analyses were performed and when the total reliability of the subscale was tested to determine how it predicted the variable to which it measured (affective responsibility), the subscale had a positive and relatively moderate item total correlation of .60. Due to this fact, items 9 and 57 were retained.

- Item 71 in the subscale "discipline" of the PCRQ ('how willing are you to abide to military rules') had a negative and the lowest inter-item correlation when compared to other items in the scale (-.00). As a result, the item was flagged as a problematic item. However, there was no significant change to the overall Cronbach alpha if the item was deleted; therefore, the item was retained.

By using Cronbach's alpha as explained by Rosnow and Rosenthal (2008), the reliability of the various subscales was estimated. Table 4.2 presents the internal reliability of the subscales and Cronbach alpha's is followed by a discussion on the reliability coefficients for the scales.

Table 4.2

Subscales internal reliability

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Scale	N	α
Family Assessment Device:		
General family functioning	360	.79
Problem solving	363	.68
Communication	360	.63
Roles	360	.61
Affective involvement	361	.57
Behaviour control	359	.57
Affective responsibility	363	.25
Soldier's Relationship with Unit Questionnaire:		
Support to family	363	.92
Military Hardiness Scale:		
Commitment	362	.88
Challenge	362	.77
Control	362	.83
Perceived Combat Readiness Questionnaire:		
Confidence self	362	.91
Confidence team	362	.91
Confidence leaders	363	.93
Morale	362	.91
Horizontal cohesion	361	.92
Vertical cohesion	362	.97
Unit discipline	363	.84

According to these analysis results, the different subscales of the FAD (general family functioning, problem solving, communication, roles, affective involvement, behaviour control, and affective responsibility) used to measure the soldier's relationship with his/her spouse yielded varying reliability coefficients ranging from a low Cronbach's alpha .25 to an acceptable high Cronbach's alpha .79 (see Table 4.2). Although subscales such as problem solving (α = .68), communication (α = .63), roles (α = .61), affective involvement (α = .57), behaviour control (α = .57), and affective responsibility (α = .25) yielded lower Cronbach's alphas (< .70) as described by researchers (Field, 2009; Gerber & Finn, 2005; Gravetter & Wallnau, 2008). All these results were kept for further statistical analysis. Gliem and Gliem (2003, p. 87) posit, "Cronbach's alpha reliability coefficient normally ranges between 0 and 1"; however, there is no lower limit to the coefficient. They further explain that although "the closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale" one should bear in mind that "while a high value for Cronbach's alpha indicates good internal consistency of the items in the scale, it does not mean that the scale is unidimensional". Further reliability analysis was performed to determine how well the subscales measured the soldier's relationship with his/her spouse. Interestingly, the affective responsibility subscale had a substantial increase from (α = .25 to .60).

Furthermore, reliability analysis was performed for the support to family dimension used to measure the soldier's relationship with his/her unit. The analysis yielded a significant reliability coefficient of .92. Subscales (commitment, challenge, and control) used to measure hardiness yielded significant reliability coefficients of .77 to .88. Reliability coefficients for the dimensions (confidence self, confidence team, confidence leaders, morale, horizontal cohesion, vertical cohesion, and unit discipline) used to measure CR had significant reliability coefficients of .84 to .97 and the dimensions were all kept.

Table 4.3

Scales reliability coefficients results

_____

Variable (Scale)	Cronbach alpha (α)
Soldier's Relationship with Spouse (FAD)	.86
Soldier's relationship with Unit (SRU-Q)	.92
Hardiness (MHS)	.76
Combat Readiness (PCRQ)	.84

Further reliability analysis was performed to determine how well the instruments measured the research variables. As described in Table 4.3, the analysis yielded acceptable and significant Cronbach's alpha levels ranging from .84 to .92.

4.4   INFERENTIAL STATISTICS

Inferential statistics consists of procedures used to make inferences about population characteristics from information contained in a sample drawn from the population (Mendenhall et al., 2012). The objective is to make inferences such as drawing conclusions, making predictions, and decisions about the characteristics of a population from information contained in a sample (Gravetter & Wallnau, 2008; Mendenhall et al., 2012). Inferential statistics refer to the statistical methods utilised to determine when it is appropriate to make generalisations from the results from a sample (the obtained test scores) to an entire population (Asaad & Hialaya, 2001; Gravetter & Forzano, 2009). According to Field (2009), inferential statistics can be used to confirm or reject predictions (or hypotheses).

In the current research, inferential statistics performed for hypotheses testing (see par. 3.2) were correlation analysis, particularly Spearman correlation. A correlational research strategy involves measuring two or more variables to describe the relationship between the variables. The variables are measured and then reviewed to identify any directionality or pattern(s) of relationship that may exist between the variables and to measure the strength of the relationship. Correlational analysis is discussed in par. 4.4.1.

4.4.1 Correlational analysis

In the current study, Spearman correlation (used to measure monotonic relationships) was used. The Spearman correlation "measures the degree to which the relationship is consistently one-directional or monotonic" (Gravetter & Forzano, 2009, p. 434). A correlation or correlation coefficient of 1.00 indicates a perfectly positive correlation, while a correlation of -1.00 indicates a perfectly negative correlation and a correlation of 0.00 indicates no consistent relationship whatsoever (Field, 2009; Gravetter & Forzano, 2009). A correlation of ±.80 to ±1.00 is regarded as a high correlation and is most preferred, a correlation of ±.60 to ±.79 is moderately high and is acceptable, a correlation of ±.40 to ±.59 is regarded as moderate correlation and is also acceptable, and a correlation of ±.20 to ±39 is regarded as low. Any correlation below .20 is regarded as negligible (Field, 2009; Gravetter & Forzano, 2009; Gravetter & Wallnau, 2011). The following results were obtained from the correlational analysis.

Table 4.4

Spearman correlations between the independent variables (RWS and RWU), mediating variable (hardiness) and dependent variable (CR)

Variable	N	CR	Hardiness	p
RWS	363	0.18		0.00***
RWS	363		0.13	0.02
RWU	363	0.62		0.00***
RWU	363		0.22	0.00***
Hardiness	363	0.29		0.00***

Notes: * Indicates that correlations is significant at 10% (p<0.1),
** Indicates that correlation is significance at 5% (p<0.05), and
*** Indicates that correlation is significant at 1% (p<0.01)

Table 4.4 reflects a summary of the correlation results between the independent variables (RWS and RWU), the mediating variable (hardiness) and the dependent variable (CR). These results were used to provide answers for the stated empirical objectives (see par. 1.3.3). The objective was to determine the relationship between RWU, RWS, and CR in a sample of SA military members. Both RWS and RWU (independent variables) yielded significant results when correlated to CR (dependent variable); therefore, the objective was confirmed. The following discussion is on hypothesis testing.

Hypothesis 1: There is a significant relationship between RWS and CR.
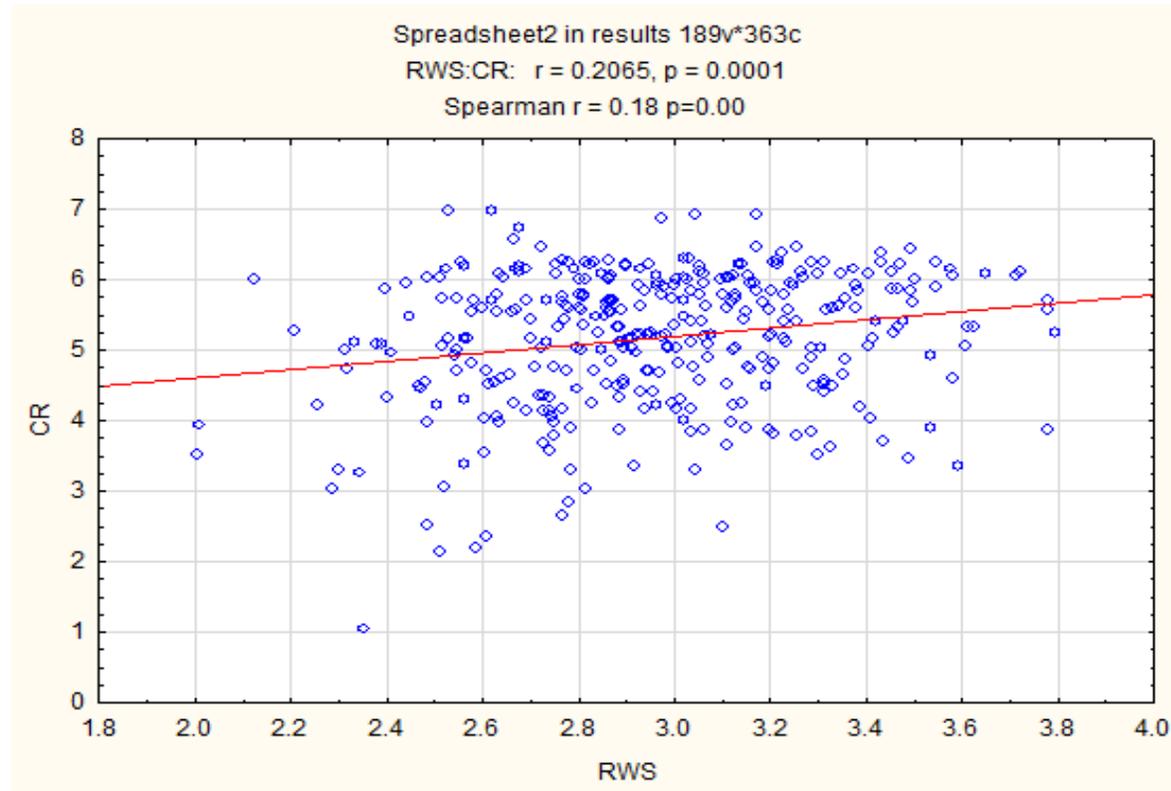

Figure 4.4   **Scatterplot of RWS and CR**

The results in Figure 4.4 show a weak linear but significant positive correlation between RWS and CR ($r = 0.18$; $p<0.001$). This means that, as the soldier's relationship with his/her spouse increases, CR also increases in the same direction. H_1 was accepted.

<u>Hypothesis 2</u>:   There is a significant relationship between RWU and CR.
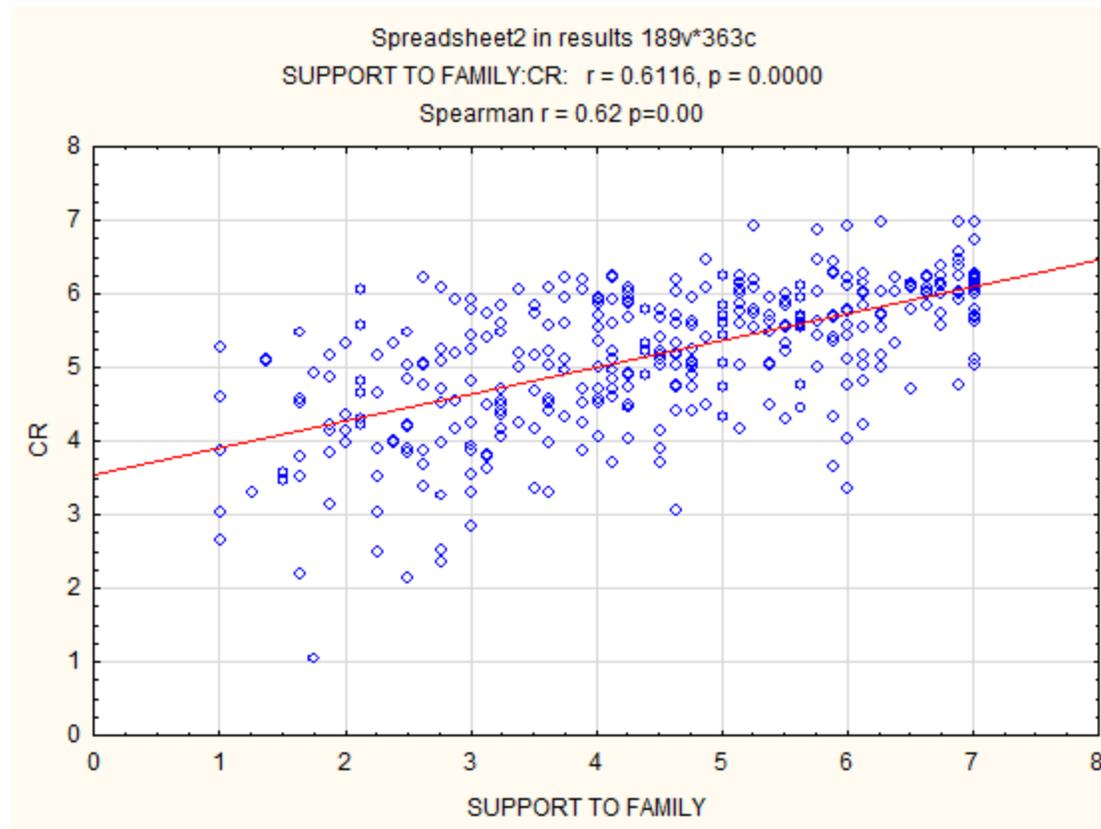
**Figure 4.5   Scatterplot of Support to Family and CR**

The correlation results in Figure 4.5 show that soldier's relationship with unit (RWU) dimension: support to family and CR (r = 0.62; p<0.001) has a strong linear and significant positive correlation. This means that as soldier's relationship with the unit increase, combat readiness also increases in the same direction. H_2 was therefore accepted.

Hypothesis 3:   Hardiness has a mediating effect on the relationship between RWS and CR.

Spreadsheet2 in results 189v*363c
RWS:Hardiness: r = 0.1020, p = 0.0565
Spearman r = 0.13 p=0.02
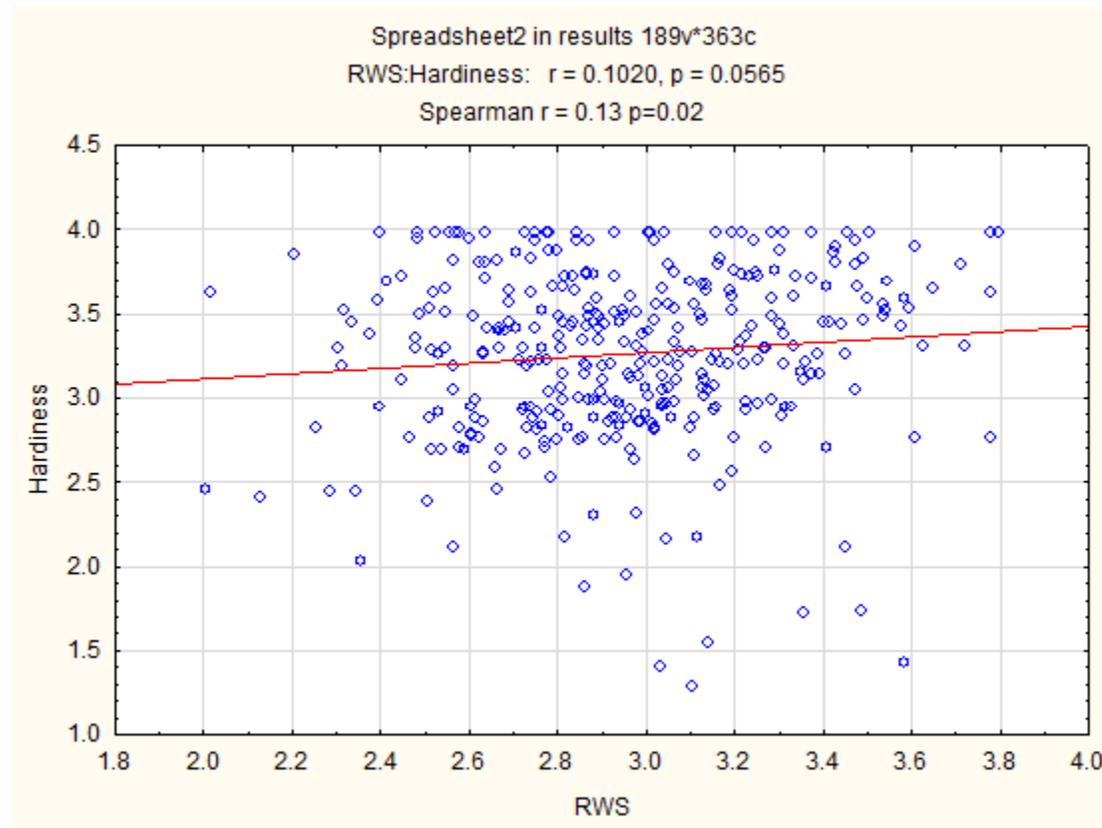
Figure 4.6   **Scatterplot of RWS and Hardiness**

The results in Figure 4.6 show a weak and insignificant correlation between RWS and hardiness (r = 0.13; p<0.02). Although there is a positive significant correlation between RWS and CR (see Fig. 4.4), there is no significant correlation between hardiness and RWS mediating the relationship between RWS and CR. H_3 was therefore rejected.

Hypothesis 4:   Hardiness has a mediating effect on the relationship between RWU and CR.
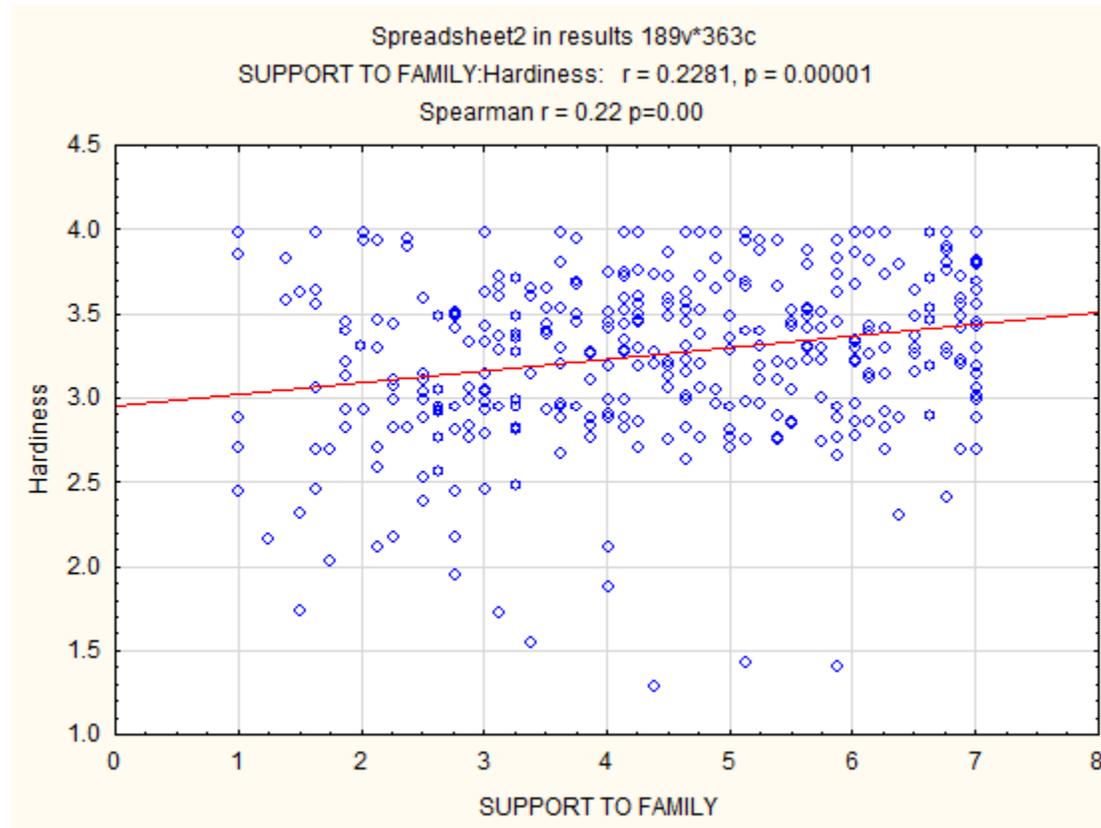
Figure 4.7.   **Scatterplot of Support to Family and Hardiness**

The results in Figure 4.7 show that the soldier's relationship with his/her unit (RWU) dimension: support to family and hardiness (r = 0.22; p<0.001) has a weak linear but significant positive correlation. This means that as the soldier's relationship with the unit increases, hardiness also increases in the same direction. Figure 4.5 reveals that there is a strong and significant positive correlation between support to the family and CR. On account of these results (see Fig. 4.5; Fig. 4.7) H$_4$ was partially accepted.

Further correlational analysis was performed to determine the relationship between hardiness and CR. The results in Figure 4.8 indicate that there is a weak linear but significant positive correlation between hardiness and CR (r = 0.29; p<0.001). This means as hardiness increases, CR also increases among SA military soldiers.
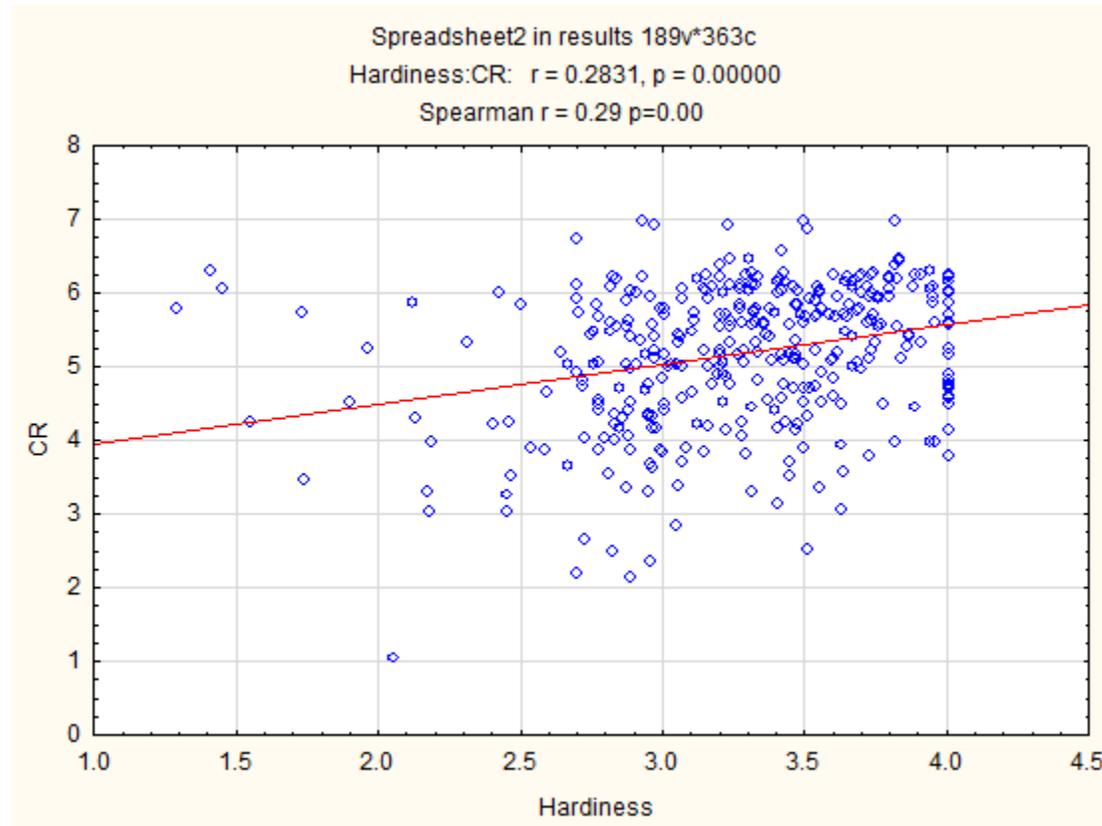
Figure 4.8   **Scatterplot of Hardiness and CR**

4.5   PARTIAL LEAST SQUARE ANALYSIS (PLS)

After completion of the descriptive, reliability and inferential analyses, further statistical techniques testing the relationships among the variables and the mediating effect of hardiness (as hypothesised in Figure 1.1 of the proposed model of CR) were used. The research model analysis was performed using PLS. The PLS analysis performed for this study followed two steps, (a) overview results of model reliability and validity (i.e. measurement model) and (b) structural model.

When performing the model's reliability and validity, two analyses were confirmed (i.e. composite reliability and average variance extracted (AVE). According to Hulland (1999) in PLS, when performing reliability analysis, a reliability value of 0.70 or higher is preferred, and for an exploratory research, 0.4 or higher is acceptable. For validity, Bagozzi and Yi (1988) suggest that the validity value should be 0.5 or higher. In PLS, the reliability analysis is calculated to report on the composite reliability.

When measuring internal consistency reliability, social science research often uses Cronbach's alphas as was used in this study. Wong (2013) posits that in partial least squares structural equation modelling (PLS-SEM), Cronbach's alphas serve as a conservative measurement. According to According to Werts, Linn and Jöreskog (as cited in Henseler et al., 2009, p. 299) "PLS prioritizes indicators according to their reliability, resulting in a more reliable composite … as Cronbach alphas tends to provide a severe underestimation of the internal consistency reliability of latent variables in PLS path models, it is more appropriate to apply a different measure, the composite reliability". Therefore, the use of composite reliability as a replacement in PLS-SEM is highly recommended (Hair, Sarstedt, Ringle & Mena, 2012). To determine validity (particularly convergent validity in PLS) the AVE's latent variables are evaluated. Henseler et al. (2009, p. 299) affirm, "convergent validity signifies that a set of indicators represents one and the same underlying construct, which can be demonstrated through their unidimensionality". The R-squared (or R-squared coefficient) explains the variance proportion explained by the PLS components (Sanchez, 2013). R-squared can range from 0 (0 per cent) to 1 (100 per cent), the greater the R-squared value the better the fit. R-squared indicates the amount of variance of the specified variable explained by the SEM model; hence, R-squares does not form part of the reliability analysis. Table 4.5 below provides the results computed using the PLS. A detailed discussion on the measurement model and structural model follows.

Table 4.5

Results overview of model

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Variables	R-squared	Composite Reliability	AVE
RWS		0.89	0.54
RWU		1.00	1.00
Hardiness	0.09	0.85	0.65
CR	0.45	0.89	0.59

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The R-squared results in Table 4.5 indicate that hardiness (r^2 = .09) only explains nine per cent of variance to the SEM model fit and CR (r^2 = .45) explains about 45 per cent of variance to the SEM model fit. From Table 4.5 it can be concluded that the composite reliability for all latent variables of the model ranging from .85 to .89 is above the preferred threshold of .70. (Field, 2009; Gerber & Finn, 2005; Gravetter & Wallnau, 2008). From Table 4.5, the results show that all of the AVE values are at the acceptable threshold of 0.5 (ranging from .54 to .59). Therefore, reliability and validity analysis were obtained for the model.

Following the overview of reliability and validity of the model, Table 4.6 below is a measurement model showing a descriptive composite of the variables' dimensions' reliability to determine the composite factor reliability coefficients of the constructs as summarised in Table 4.5 better. In order to understand the measurement model in Table 4.6, a discussion of measurement (or outer) model is important. According to Sanchez (2013, p. 37), "there are two main measurement options". This refers to either the reflective mode (when the manifest variables are reflecting the latent variable) or the formative mode (when the manifest variables are forming the latent variable).

Sanchez (2013) uses the phrase all for one and one for all when emphasising the idea behind a measurement model. In the case of reflective indicators, the idea is to determine whether reflective indicators are measuring the same underlying latent variable; therefore, they are reflections of the construct. When the indicators are reflective of the latent variable, unidimensionality is implied. Sanchez (2013, p. 56) provides an example stating, "If you have a bunch of variables that are supposed to be measuring some aspect of the same thing (the same latent variable) you would expect those variables to roughly point in the same direction". On the other hand, formative indicators are considered as causing a latent variable. They do not necessarily measure the same underlying construct, and are not supposed to be correlated (Sanchez, 2013). Furthermore, when measuring formative indicators, researchers compare the outer weights of each indicator in order to determine which indicators contribute most effectively to the construct. Sanchez also warns researchers to be cautious not to misinterpret small values of weights as poor contributions and that the elimination of an indicator is only recommended when high multicollinearity occurs.

In the current study, the PLS path model was of reflective constructs. In order to obtain information about the variability of the parameter estimates, the bootstrapping technique was used (Lowry & Gaskin, 2014). Bootstrapping is a non-parametric method for estimating PLS precision of the parameter estimates (Sanchez, 2013). The bootstrapping method helps improve model estimation in PLS (Lowry & Gaskin, 2014). The PLS bootstrap percentile confidence interval was set at 95% level of confidence as stated by Hulland (1999). All these measures were conducted to ensure that reliable and valid construct measures were used for assessing the nature of relationships in the overall model. As shown in Table 4.6, RWS consisted of seven dimensions and all dimensions had significant coefficient levels with estimate values ranging from .47 to .89. RWU had only one dimension; thus, reliability was not applicable. Hardiness was composed of three dimensions. These dimensions were used as manifest variables to measure the main latent variable in the model.

All manifest variables had significant coefficient levels and relatively high estimate values ranging from .64 to .92. CR consisted of seven dimensions. These dimensions were used as manifest variables to measure the main latent variable in the model. Only six dimensions were found to be significant with high estimate values ranging from .73 to .86. Unit discipline (CR- dimension) had no significance to CR with low and negative estimate value of .08.

Table 4.6

Measurement model

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Path	Estimate	Bootstrap Lower	Bootstrap Upper	Significant
RWS>Behaviour control	0.74	0.64	0.80	Yes
RWS>Affective responsibility	0.68	0.53	0.77	Yes
RWS>General family functioning	0.89	0.85	0.91	Yes
RWS>Problem solving	0.70	0.59	0.81	Yes
RWS>Communication	0.83	0.77	0.87	Yes
RWS>Roles	0.72	0.59	0.80	Yes
RWS>Affective involvement	0.47	0.27	0.61	Yes
Hardiness>Commitment	0.92	0.87	0.96	Yes
Hardiness>Challenge	0.64	0.48	0.78	Yes
Hardiness>Control	0.82	0.72	0.89	Yes
CR>Confidence self	0.73	0.66	0.78	Yes
CR>Confidence team	0.84	0.79	0.87	Yes
CR>Confidence leaders	0.83	0.80	0.87	Yes
CR>Morale	0.82	0.77	0.86	Yes
CR>Horizontal cohesion	0.86	0.83	0.90	Yes
CR>Vertical cohesion	0.86	0.83	0.89	Yes
CR>Unit discipline	-0.08	-0.22	0.03	No

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After completion of the reliability and validity of the constructs for the overall measurement model, PLS estimated structural model analysis was done to evaluate the structural model, the path coefficients' significance across latent variable, the estimate value and the PLS bootstrap percentile confidence interval was set at the 95% level of confidence. These measures were taken so as to test the significance of coefficients for the purpose of determining whether the proposed model for CR (depicted in Fig 1.1) was established and the mediating effect of hardiness. The path coefficient estimate values were used to determine the strength and direction of the relationship between the variables. The following results (see Table 4.7 and Fig. 4.9) were found.

Table 4.7

Structural model

Path	Estimate	Bootstrap Lower	Bootstrap Upper	Significant
RWS>Hardiness	0.12	-0.05	0.23	No
RWU>Hardiness	0.25	0.17	0.34	Yes
RWS>CR	0.18	0.10	0.26	Yes
RWU>CR	0.54	0.47	0.62	Yes
Hardiness>CR	0.19	.10	0.27	Yes

The results in Table 4.7 indicate various interactions or relationships between variables. First, as shown in Fig. 4.9 below, it was found that the path from both exogenous variables (RWS and RWU) had a direct and positive significant relationship to CR (i.e. variables have positive path coefficients-indicating a positive influence). This means RWS and RWU had a significant effect on CR without any mediation or mediating variable. Therefore H_1 ("there is a significant relationship between RWS and CR") and H_2 ("there is a significant relationship between RWU and CR") were established and accepted.

Second, the mediating effect of hardiness among the exogenous variable and endogenous variable (CR) as proposed in Figure 1.1 was tested. The results in Fig. 4.9 indicate that the path from RWS to hardiness had a positive but insignificant effect at an estimate of 0.12. Interestingly, the path from hardiness to CR was significant at an estimate 0.19. This means that hardiness had a significant effect on CR but did not have a mediating effect between RWS and CR. Thus H_3 ("hardiness has a mediating effect on the relationship RWS and CR") was rejected. Hence, there was no mediation on the path RWS>Hardiness>CR. Partial mediation was explained by the path coefficient of RWU>Hardiness>CR. A positive and significant relationship on the path from RWU to hardiness was established at an estimate of 0.25 and again a positive and significant relationship on the path from hardiness to CR was obtained at an estimate value of 0.19. The significant path coefficient from RWU to CR as stated nullifies the concept of full mediation. Thus, the results as presented by the mediating effect of hardiness between RWU and CR are those of partial mediation.

Therefore, H_4 ("hardiness has a mediating effect on the relationship RWU and CR") was established and accepted. There were no full mediation results from the latent variables. The empirical research objective of the current study ("to determine the mediating effect of hardiness on the relationship between RWU, RWS, and CR in a sample of SA military members") was also confirmed. Figure 4.9 illustrates the results as established in the PLS structural model (see Table 4.7).
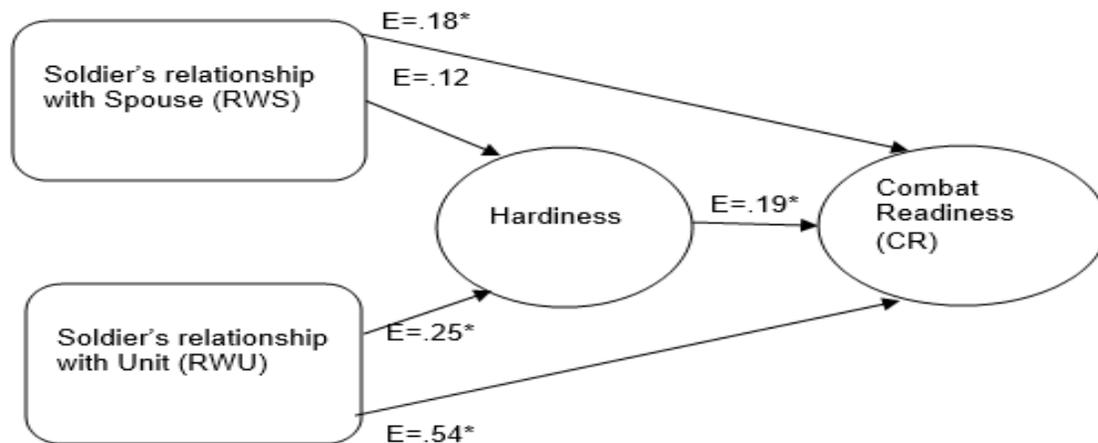

Figure 4.9 **Structural Model Results**

4.6 CHAPTER SUMMARY

The aim for this chapter was to report the results obtained for the study. In presenting the results, descriptive statistics of the sample and the results based on measures of central tendency for the four variables were presented. Hence, the empirical objectives of the study were established. A reliability analysis on the different scales and subscales used to measure the variables was done and presented accordingly. Correlational analysis, particularly the Spearman correlation coefficient, was computed for hypothesis testing, and significant results were found between RWS and CR, RWU and CR, hardiness and CR, and between RWU and hardiness. Insignificant results were found between RWS and hardiness.

PLS analysis was computed to test the relationship among variables of the study further and to test the properties of the proposed model for CR. An analysis was performed to determine the reliability of the model constructs. The reliability and validity results for the overall measurement model were above the preferred threshold for the composite reliability and AVE. Measurement model analysis determining the parameter estimates for the various dimensions of the scales used found significant results and a positive influence for the dimensions of RWS, RWU, and hardiness. The majority of CR dimensions were found to be significant with a positive influence; however, negative and insignificant results were obtained for the dimension (i.e. unit discipline). Again using PLS analysis, structural model analysis was done and the results showed that the path model (i.e. RWS>CR and RWU>CR) had positive and significant results. The path model (i.e. RWS>hardiness>CR and RWU>Hardiness>CR) had varying results. First, no full mediation results were found. Second, only partial mediation was obtained on the path RWU>Hardiness>CR, there was no mediating effect found for hardiness in the path RWS>Hardiness>CR, however a positive and significant influence was found for the path Hardiness>CR.

CHAPTER 5
DISCUSSION OF RESULTS

5.1   INTRODUCTION

This chapter is concerned with a discussion of the results that were presented in the previous chapter. Firstly, the results of the descriptive statistics in the form of means, standard deviations and the minimum as well as the maximum values will be discussed. This will be followed by a discussion of the inferential statistics in the form of correlation coefficient values as well as PLS analysis results.

5.2   DISCUSSION OF MEASURES OF CENTRAL TENDENCY RESULTS

The mean values (see Table 4.1) for perceptions of CR among the participants were 5.18, indicating a relatively high level of agreement regarding CR amongst the participants of the study. A very low standard deviation was observed associated with the perceptions of CR at 0.95. This indicates that there were slight disagreements amongst the participants regarding CR. This is further confirmed by the observations of both the minimum value of 1.07 (meaning that only one or two participants were in disagreement about the perception of high levels of CR) and the maximum value of 7.0 (meaning that the majority of participants experienced or had strong perceptions of being combat-ready). These results support previous research by Britt (1998) who found that rangers (i.e. soldiers of the special task force) scored high in perceptions of the extent to which their unit was prepared to go into battle and would be effective in combat. Soldiers also scored high on perceptions of horizontal and vertical cohesion, military commitment, job satisfaction, and perceptions of combat-readiness. Even though the sample used in the current study was preparing for a peacekeeping operation, their training included combat training as peacekeeping operations are unpredictable and far more complex (Agada, 2008; Driskell et al., 2006; Litz, 1996).

Participants were tested on various aspects of CR (see par. 3.5.1) and these results reflect the state of mind held by SANDF soldiers participating in peacekeeping operations at the time of the research. The battle of Bangui in the CAR also proved these perceptions of CR, when the South African soldiers 200 paratroopers and special forces troops faced off against 3 000 rebels advancing on a one-kilometre-wide front, which resulted in the death of only 13 South African soldiers, 27 wounded and one missing (Stupart, 2013). Mandrup (2008, p. 23) also highlights the SANDF's combat performance stating, "the SANDF has made an important difference during its deployments … and is highly praised, for instance, during the high-risk combat operations of previous years in DR. Congo, both in the Kivu province and in Ituri".

The observed mean value for soldiers' RWU (see Table 4.1) was at a relatively high level of 4.48. This implies that participants were generally in agreement that there is a good and positive relationship between the individual soldier and his/her unit. The standard deviation associated with the soldier's RWU was at a relatively low value of 1.62, indicating minimal disagreement amongst the participants regarding soldiers' RWU. This is further indicated by the minimum value of 1.0, meaning that at least one of the participants had never experienced a supportive relationship with the unit or disagreed to the notion of unit support, while the maximum value of 7.0 indicated that the majority of soldiers had experienced or had perceptions that a good relationship between the soldier and the unit existed. These results were also found in a study by Kirkland and Katz (1989) who found that soldiers who believed and experienced trust and respect – particularly from their leaders had strong morale, self-esteem and commitment to their units. Malone (1986) found that respect and trust across rank levels were the foundations of cohesion and high performance.

The third highest mean value observed for the study was 3.26 for hardiness (see Table 4.1). This could be interpreted to imply that most participants had a high sense of control, challenge and commitment. They were mentally prepared to take on the operation. This was also observed by the low standard deviation value of 0.49.

The minimum of 1.29 and the maximum of 4.0 indicate that at least one participant was uncertain of his/her ability whilst the majority of participants had high perceptions of hardiness. Bartone's extensive research on hardiness and its influence in the military environment provides insight to military psychology studies. With the three important hardiness dimensions (challenge, commitment, and control), hardy individuals can "set goals, make decisions and continue with other coping behaviour despite experiencing stressful life events" (Bartone, as cited by De Beer & Van Heerden, 2014, p. 3). Individuals who score high on hardiness are generally resilient, have good health, can perform well in stressful conditions, are committed and actively engaged in their work and life, they are often motivated and have a sense of purpose. The participants' responses and results indicate that SANDF soldiers in this study held high perceptions of being hardy with all aforementioned qualities (see Table 4.1). An assumption can be made that these participants would stand a chance in coping with the inherent challenges of peacekeeping operations.

The moderately high mean value for soldiers' RWS at 2.96 with a low standard deviation of 0.33 (see Table 4.1) indicated a considerably high level of agreement among the participants regarding general family functioning. This was confirmed by both the minimum value of 2.00 and the maximum value of 3.79. This means that at least one or more of the participants did not experience good general family functioning. Research has proved that when a soldier and spouse are informed of an up-coming deployment, the family (i.e. soldier and spouse) experience emotional turmoil and distress as a result of the anticipation of the separation, which inevitable creates a number of other challenges for both the soldier and his/her spouse (Crumley, 1973; Pincus et al., 2007). The manner in which the challenges are negotiated and dealt with by the couple has a significant effect on both the family and the soldier's well-being and ability to cope throughout the deployment cycle (Pincus et al., 2007). Kirkland and Katz (1989) emphasise the importance of integrating the soldier's family into the unit, concluding that who are families well informed of the unit goals and the soldier's contribution were more understanding and supportive than those who were not informed.

However, family functioning is an important aspect, as stable families are built on trust and communication whereas the opposite is true of unstable families (Bentovin & Kinston, 1991; Kirkland & Katz, 1989; Palmer, Freeman & Zabriskie, 2007; Schaneveldt & Young, 1992). The results of the current research show that participants did not experience dysfunctional (unstable or unhealthy) relationships with their spouses. These results may have contributed to the positive perceptions of soldiers' CR as found by (Kirkland & Katz, 1989).

Generally, the observed psychological state of mind of the soldiers in the current study presented relatively high and positive attitudes towards all four study variables. This could be explained by organisational efforts towards preparing South African soldiers for the specific operation and the soldiers' willingness to participate both mentally and physically. When a South African military unit is informed of their participation in the next rotation, it often begins its mission-specific training and preparations four to six months prior to deployment (Ross, 2008). The training and preparation involve combat drills, physical agility and health assessments, including social and psychological assessments. Further preparations put in place by the SANDF include securing and maintaining adequate financial, personnel, material, support and sustainment resources (Mgwebi, 2011).

5.3   DISCUSSION OF CORRELATION RESULTS

The aim of the current study was to explore the relationship between the study variables. In an attempt to explore the various relationships, a model for CR was proposed in order to reflect the potential significant relationships (see Fig. 1.1). Hence, the aim of the study was to explore the relationship between soldiers' RWS and RWU, and hardiness as a possible mediator variable to CR. Hypotheses were formulated to show the possible relationships (see par. 3.2). Correlational analysis (i.e. Spearman correlations) showed that not all hypothesised relationships were accepted, and this provided some insight and sparked an investigation for further in-depth understanding of the factors involved in CR and their role in influencing CR.

5.3.1 Soldier's relationship with spouse and combat-readiness

Hypothesis 1, stating that there is a significant relationship between RWS and CR, was accepted. The results showed a weak but significant positive correlation (r = 0.18, p<0.001) (see Fig. 4.4), and was acceptable in accordance with the criteria stipulated by (Field, 2009; Gravetter & Forzano, 2009). These results are in agreement with some of the previous research and theories emphasising the vital importance and positive influence of the spouse/family on the soldier's perceptions of CR. In a study conducted by Kirkland and Katz (1989) investigating 'combat-readiness and the army family, the authors found that families contributed to readiness and combat effectiveness, particularly "the partnership between soldier and spouse in which each supported the other and each believed in the soldier's calling assured that the soldier almost invariably reported for duty … the symbolic presence of the family helped soldiers to endure hardships and to do their best" (Kalamdien, 2008; Kirkland & Katz, 1989, p. 66; The U. S. Army Study of the Human Dimension in the Future 2015-2024, 2008).

These findings and previous research show that soldiers' RWS plays an imperative role in influencing CR. Not only do the findings hold potential benefits for the SANDF at large; they also provide an opportunity for the SANDF to put in place programmes. These programmes should be designed to facilitate supportive mechanisms that would help a soldier and his/her spouse cope with the demands of being in the military, such as participation in peacekeeping operations resulting in long periods of separation between the soldier and his/her spouse. The use of MPTs (see par. 2.3) by the SANDF would invariably aid in reducing stress stimuli for both soldier and spouse pre-deployment, during and post-deployment. The detachment of MPTs to provide support for families of deployed soldiers could encourage spouses to believe in themselves and that they can cope during the separation from the loved one (Moelker & Cloin, 1997). This sense of encouragement and confidence experienced by the spouse could also free the soldier's mind to focus on the mission instead of dwelling on negative and demoralising thoughts due to concerns about the well-being of the family back home.

Kirkland and Katz (1989) found that knowledge that the soldier's family was able to manage its affairs liberated the soldier to focus on his/her duty rather than worry about the family. They further established that soldiers cared more about their family's well-being in their absence than about their own safety in the combat zone. Although peacekeeping operations may not necessarily be deemed a combat zone, it is however more complex and unpredictable (Litz, 1996). The circumstances most likely faced by the soldiers in foreign countries necessitate that the SANDF emphasise on ensuring that its forces are CR, both physically and mentally. Physical training encompassing military drill and manoeuvres in operational grounds satisfies the physical component of CR. The SANDF should ensure that all their forces participating in an operation are well trained. It is important to note that all participants in the current study had successfully completed the physical component of CR as proved by the Field Training Exercise (FTX) conducted during the mobilisation phase. Kellett (1990) notes that the soldier's physical preparation for an operation must be accompanied by psychological preparation.

The psychological components of CR are more complex than the physical components and thus cannot be established by examining a single facet. Soldiers' RWS was identified as one of the factors influencing CR, particularly the psychological component. As established by Kirkland and Katz (1989), soldiers in stable families are more focused, more confident and ready and willing to deploy. Such soldiers' state of mind frees them to concentrate on their training and overall mission; hence, they are CR as defined in the study. The opposite is also true. Although the study results of hypothesis 1 were accepted, it is important to note the instrument used to examine the soldiers' RWS (i.e. the FAD) and its effect in the overall correlational results of the hypothesis. The instrument's reliability results were quite interesting and insightful. All seven dimensions of the FAD were item-analysed (see par. 4.3). The Cronbach's alphas indicating the consistency of responses (Gerber & Finn, 2005), particularly for the study sample showed, thought-provoking results.

It is necessary to mention that the instrument (FAD) was developed and first used on an American sample (Epstein et al., 1983), showing acceptable alphas for all seven dimensions (see par. 3.5). In the current study (using a South African sample of varied race groups and cultural backgrounds) the alphas were more varied than those of the other quantitative studies previously conducted outside South Africa. Hally and Haywood (2007) highlight some of the instrument's weaknesses and areas of improvement, stating that one of the instrument's pitfalls is the fact that it has historically only been used with samples of mostly Caucasian (white) and middle-class families. Although the instrument is available in 14 different languages, reliability and validity of translated versions have not yet been established (Hally & Haywood, 2007). Lastly, because the instrument includes six different dimensions plus an overall dimension (i.e. general family functioning), providing a comprehensive interpretation of family functioning, the six separate dimensions are interdependent and correlated (Hally & Haywood, 2007). Miller, Ryan, Keitner, Bishop and Epstein (2000) note that, due to this interdependence, if a problem exists in one domain, it will probably exist in other domains as well.

Although the FAD statements (items) are clear and concise and may be administered to different types of families (Miller et al., 2000), no test is free from bias. Taking these stated facts and the characteristics of the sample into consideration, poor correlation results for a number of items in the dimensions (roles, affective involvement, behaviour control and affective responsibility) had low correlation to the overall dimension. Although all items were kept, the dimension "affective responsibility" had the lowest Cronbach's alpha of .25 in the current study. These results could explain the results in hypothesis 1 "a weak but significant positive correlation"' between RWS and CR. Affective responsibility (FAD - dimension) considers both welfare and emergency emotions (Rado, as cited by Epstein et al., 1983), and focuses on determining the family's ability to respond to a range of stimuli with the appropriate quality and quantity of feelings. This factor plays a crucial role in influencing a soldier's CR and effectiveness.

Kirkland and Katz (1989) found that soldiers who were affective (able to unload emotionally and share their feelings with their spouses) were better prepared and CR. Kalamdien (2008) theorised the importance of the soldier's relationship with his/her spouse/family in enhancing the soldier's effectiveness and ability to perform military tasks successfully. Even though affective responsibility was the only dimension with a low Cronbach's alpha, one should bear in mind that these results have an effect on the overall score of general family functioning, which inevitably affect the soldier's perception of CR. A number of factors are thought to have influenced the low scores to the dimension. In previous studies, as mentioned by (Hally & Haywood, 2007), the FAD instrument was administered mostly to Caucasian families, whereas in the current study, the majority of the sample group were African (black) at 93 per cent while only one per cent of the sample group were white. This sample characteristic could explain the drastic difference in Cronbach's alphas from .82 (obtained in previous studies) to .25 (obtained in the current study). One factor that may have effected these results could be attributed to the different prevalent cultures and genders in interpreting and responding to the items of affective responsiveness. Matsumoto and Juang (2008) affirm that males find it more difficult to admit and discuss how they feel than females. Matjeke (2014) is also of the opinion that African men struggle to express their emotions.

Another factor that could explain the poor ratings for the dimension is attributed to language. An English version of the instrument was administered, whereas most of the participants were Sepedi-speaking at 23 per cent and Zulu-speaking at 20 per cent. Only two per cent of the sample group were English-speaking. Although the statements of the instruments were said to be easy to understand, the generalised nature of the statements could have been interpreted as abstract and/or misinterpreted based on the language used by the sample group. The last factor perceived to have influenced the responses is the fact that the sample was selected from the military environment. Soldiers are perceived as physically strong and emotionally more hardy than an average civilian due to the nature of their military careers (De Beer & Van Heerden, 2014).

Although the affective responsibility dimension may have influenced the total score for the instrument, the overall general family functioning results were α = .79. The total score for the FAD used to determine the soldiers' RWS was α = .86. These results show that there are no problems with the instrument. Perhaps the different context and sample to which it was administered required adjusting the items to the standard of the specific population. This would have eliminated bias that meant that only European nations could utilise the instrument successfully. Other dimensions of the FAD such as problem solving, communication, roles, affective involvement and behavioural control contributed moderately acceptable alphas (see Table 4.2).

Because soldiers belong to their families and the military unit, both entities demand the soldier's energy, undivided attention and emotional commitment. Both entities are therefore instrumental to one another if they are to flourish in their endeavours. As shown by the results in hypothesis 1 (see Table 4.4), Kirkland and Katz (1989) concluded that families strengthen the soldier's war-fighting potential and improved CR. Black (1993) theorised that affective responsiveness, involvement and communication between the family and the soldier were important for the psychological well-being of both the soldier and his/her family and the soldier's mental state in general prior to the operation. Proper planning as well as shared concerns, expectations and emotions from both parties were found to contribute as good indicators of a stable family with the ability to resolve problems, thus maintaining effective family functioning (Black, 1993; Kirkland & Katz, 1989; Van Brenda, 1999). It is worth mentioning that prior to mobilisation, the SANDF, through the utilisation of a MPT, places high value on resilience for soldiers earmarked for deployment. The resilience process determines that necessary measures and support to both the family and the soldier are in place. This also relieves the soldier and assures the soldier that his/her family would be able to cope during the separation. Therefore, the soldier devotes his/her energy to the operation. The correlational results of hypothesis 1 (see Table 4.4) (weak but significant positive correlation between RWS and CR) provide an opportunity for the SANDF to put more emphasis on screening their forces (particularly those who are married and those with life partners) to determine general family functioning prior to deployment.

The low correlation results between RWS and CR although significant may be explained by the characteristics of the sample. The sample comprised of 31 per cent married soldiers and those with life partners (see Fig. 4.1). The fact that the majority of the participants were aged 21–30 years old followed by a majority of those 41–50 years old could give insight into the low results. Generally, military operations have a negative effect on couples' romantic relationship (James, as cited in Jackson, Theommes, Jinkmann, Lüdtke & Trautewin, 2012). Research shows that young married couples in the military have a high probability of divorcing. Skillman (2013) supports this assumption stating that couples who marry between the ages 15 and 19 stand a better chance of divorce within 10 years of marriage. Goodwin, Mosher and Chandra (2010) highlight the importance of maturity, stating that individuals who first married at age 26 or older stood a better chance of having their marriage last more than 10 years.

Although the scope of this thesis did not extend to determine soldiers' maturity, an assumption can be made that the age factor in the study sample had an influence on how participants evaluated their marital (relationship with spouse) status and the effect of deployment in terms of their perceptions of CR. Pincus et al. (2007) support this assumption, elaborating that it is common that just before deployment, the soldier and his/her spouse may have a significant argument. For couples with a long history, this argument is not taken too seriously; however, for younger couples, particularly experiencing separation for the first time, such an argument can take on catastrophic proportions, leading to the soldier's inability to focus on important military readiness training (Pincus et al., 2007). Teachman (as cited in Skillman, 2013, p. 12) concludes that "it is not surprising that young age at first marriage has been found to predict a higher rate of divorce in the military population, especially among young enlisted soldiers".

5.3.2 Soldier's relationship with unit and combat-readiness

Strong correlations were found for the soldier's RWU and CR ($r = 0.62$; $p<0.001$) (see Table 4.4). Hypothesis 2, stating that there is a significant relationship between RWU and CR was accepted. This correlation presented the strongest relationship for the study. It is important to mention that soldiers' RWU was tested using the support to family dimension. This dimension focused on determining established family supportive measures (i.e. administrative, financial, communicative etc.) put in place by the SANDF to assist families during deployment. The correlational results are supported by previous research. Kirkland and Katz (1989) found that the unit climate characterised by trust, mutual respect and support to soldiers' families yielded beneficial results for the unit's overall effectiveness and CR. Families who felt valued by the unit were supportive and reinforced the soldier's commitment and improved the soldier's combat performance. Respect and trust in the unit influence the soldier's perception of effectiveness and worth.

Family support programmes rendered by the unit encouraged spousal support to unit efforts (Kalamdien, 2008). Stable families, who are well prepared and informed, proved to be invaluable in developing combat-ready soldiers (US Army Research Institute, 2001). On the other hand, unstable families crippled soldier's combat readiness efforts. Kirkland and Katz (1989) found that families who experience support from the unit were understanding of soldiers' occupational demands. This enabled the soldier to focus on the necessary training aimed at improving his/her level of preparedness for the operation. It is important to mention that all participants for the current study had completed a health assessment provided by the SANDF's health services which included an assessment of the soldier's family status (whether stable or unstable) within the six-month period leading up to deployment. This assessment helps identify soldiers who might struggle to cope or participate successfully in the operation. The assessment assists in ensuring that only those soldiers who are successful are selected to participate in the operation while those who show potential challenges are assisted through family supportive programmes involving the utilisation of MPTs. The strong significant correlation results of the study sample are therefore justified and accepted.

5.3.3 Hardiness, soldier's relationship with spouse and combat-readiness

Hypothesis 3, stating that hardiness has a mediating effect on the relationship between RWS and CR, was rejected. The results showed a weak and insignificant correlation between RWS and hardiness ($r = 0.13$; $p<0.02$) (see Table 4.4). Even though the premise that hardiness has a mediating influence on the soldier's relationship with his/her spouse and the achievement of CR was rejected, the soldier's RWS and CR were directly correlated (see par. 5.3.1). These results though not hypothesised could be explained by a number of theories and findings of previous literature. Kirkland and Katz (1989) theorised and concluded that healthy (stable) families are instrumental in enhancing the soldier's effectiveness and overall CR. Stable families boost soldiers' sense of self-esteem and confidence. Furthermore stable families who are well integrated into the unit are supportive and understanding of unit demands on the soldier. Families who are well integrated into the unit in turn enable the soldier to focus on training and preparations leading to deployment. Hence, with a supportive and a stable family, the soldier could attain the required level of CR.

Kalamdien (2008) also emphasises that military efforts to support the soldier's family are instrumental in enhancing the soldier's commitment to military goals, particularly deployment. It is acknowledged that soldiers who belong in a unit that valued and is supportive to the soldier's family, receive more encouragement from their families to fulfil their military duties. Such soldiers can concentrate on military efforts (training, unit cohesion, and discipline) for enhancing successful combat performance, which in turn assures the soldier's perception CR. The significant correlations between the soldier's RWS and CR and RWU and CR support (Kirkland & Katz, 1989) findings. Hardiness is described as a resistance resource (protective factor) that enables an individual to withstand hardship emanating either from personal aspects of life or occupational (Dolan & Adler, 2006; Kardum et al., 2012; Kobasa, 1979). It can be argued that, based on the sample's results indicating congruent agreeableness among the participants on perceptions of high levels of CR and family functioning (RWS), and a positive relationship with the unit (RWU) (see Table 4.1), there were no circumstances necessitating a mediating role of hardiness.

This could explain the insignificant correlations found for hypothesis 3. Although the hypothesis was rejected on the basis that hardiness had no mediating effect on the relationship between the soldier's RWS and CR, it was however interesting to find that hardiness showed a low but significant and positive correlation to CR ($r = 0.29$; $p<0.001$) (see Table 4.4). These results are supported by literature characterising hardy and CR individuals (Bartone et al 2012; Landry, 2007). Hardy individuals tend to embrace positive attitudes, are often confident and committed, they embrace challenge and they have a sense of self efficacy and control (Bartone et al., 2012; Maddi, 1999; Seligman, 2000). On the other hand, CR was described as the soldier's degree of commitment (Kirkland & Katz, 1989) and persistence in effecting a certain course of action (Bester & Stanz, 2007). A study by Britt et al. (2001) determining the effects of hardiness on soldiers participating in peacekeeping operations found that hardy soldiers were more committed, found meaning in the activities and had the ability to cope despite the complex nature of peacekeeping operations. Dolan and Adler (2006) conclude that hardiness has been found to moderate the effects of military occupational stressors.

5.3.4 Hardiness, soldier's relationship with unit and combat-readiness

Hypothesis 4 stating that hardiness has a mediating effect on the relationship between RWU and CR was accepted. Results showed a low but significant positive correlation between soldiers' RWU and hardiness ($r = 0.22$; $p<0.001$) (see Table 4.4). Although strong significant correlation results were found for soldiers' RWU and CR (see par. 5.3.2), hardiness was found to have a significant correlation between soldiers' RWU and CR. A significant correlation between soldiers' RWU and hardiness ($r = 0.22$; $p<0.001$), and hardiness and CR ($r = 0.29$; $p<0.001$) (see Table 4.4), confirmed the influence of hardiness between the relationship RWU and CR.

Literature delineating that hardiness enables individuals to cope and strive in most the difficult situations such a peacekeeping operations (Britt et al., 2001) by equipping them with personality (resistance) resources (Kardum et al., 2012). This reinforces their confidence and self-esteem (Bartone et al., 2012; Seligman, 2000) thus optimising their ability to withstand challenges arising in both personal and occupational aspects (Dolan & Adler, 2006; Kardum et al., 2012; Kobasa, 1979) support these findings. Hardiness enables the soldier to cope with challenges inherent in the relationship with his/her unit and to endure the physical and emotional strain embedded in the military activities to reach the required standards of CR.

5.4   DISCUSSION OF PARTIAL LEAST SQUARE ANALYSIS RESULTS

PLS analysis was performed to determine the proposed CR model. In an endeavour to test the relationship among variables as proposed in the model (see Fig. 1.1), both the measurement model and the structural model were evaluated simultaneously. A discussion of the measurement model and structural model results is provided below followed by a discussion of the overall model results.

Measurement model analysis - The quality of the measurement model was tested by setting estimate parameters using the bootstrapping technique (Hulland, 1999; Lowry & Gaskin, 2014) with intervals set at the 95 per cent level. Felsenstein (1985) highly recommends using the bootstrap method in order to test and estimate path coefficient significance levels. Measures used in the measurement model ensured that reliable and valid constructs were determined for the overall model (Sanchez, 2013). Positive and significant results were obtained for the dimensions of the different constructs. Soldiers' RWS consisting of seven dimensions produced significant coefficient levels with estimate values ranging from .47 to .89 (see Table 4.6). These results confirm that each dimension (i.e. indicator) had positively and significantly acceptable reliability and validity in measuring the underlying latent variable used in the model (i.e. RWS).

Reliability coefficient and validity calculations for soldiers' RWU were not applicable as the construct had only one dimension measuring and reflective of the latent variable (i.e. RWU). Positive and significant coefficient levels and relatively high estimate values (ranging from .64 to .92) (see Table 4.6) were obtained for all dimensions measuring hardiness. Thus, the reliability and validity were confirmed and accepted for the construct. CR consisting of seven dimensions used as manifest variables reflective of the latent variable (i.e. CR) showed varied results. Only six dimensions had positive and significant results with high estimate values ranging from .73 to .86. (see Table 4.6).Results showed acceptable reliability coefficients and validity levels for the six dimensions measuring CR. Although these dimensions had acceptable estimate values, the seventh dimension "unit discipline" had no significance to the latent variable (i.e. CR) and moreover showed a low and negative estimate value of .08. These results support the results found in previous research by Nkewu (2013).

A study by Bester and Stanz (2007) aimed at conceptualising CR and constructing a normative measurement instrument for use within the context of peace-support operations, found significant reliability coefficients of .79 for discipline (i.e. unit discipline) dimension. Although previous research may be contradictory of the results found for unit discipline subscale in the current study (see par. 4.3). It is important to mention that the mobilisation period normally takes only one month; however, due to administrative and planning processes, the period of mobilisation was extended by an additional two months for the participants of the current study. This prolonged period could have influenced soldiers' discipline negatively. Thus, the participants' responses to the unit discipline dimension may have been a reflection of the negatively held perception of discipline influenced by the prolonged period during mobilisation. The scheduling of mobilisation goes hand-in-hand with a specific programme, that is neither too long nor too short and which is engaging enough. However, when mobilisation is prolonged to the point where soldiers are left to themselves and the programme is formulated on a'keep-them-busy' basis, misconduct (ill-discipline) behaviours become the consequence of boredom.

Stokes (n.d.) maintains that boredom, tension and frustration often experienced in operations can result in various types of misconduct when unit cohesion and mission focus stray. Common misconduct behaviour is substance abuse aimed at relieving boredom (Stokes, n.d.). The easy access to abusable substances, such as alcohol does not remedy this factor. Previous accounts of SANDF behaviour in operations, particularly when off- duty, were mainly discrediting reports. Mandrup (2008, p. 23) reports that in the past, "the behaviour of South African troops, especially off duty in both Burundi and the DRC, has been a problem to South Africa and has given the force a bad reputation".

Structural model – The interaction between the variables was tested using the structural model analysis. The path coefficient results confirmed that soldiers' RWS and RWU have a direct non-mediated effect on CR. This confirms previous findings and theories of spousal/family and positive relationships between the soldier and the influence of the unit on the soldier's CR (Gal & Syna, 1988; Griffith, 2002; Kalamdien, 2008; Kirkland & Katz, 1989; The U. S. Army Study of the Human Dimension in the Future 2015-2024, 2008). The mediating effect of hardiness between the variables was also determined (see Table 4.7). There were no full mediation results because soldiers' RWS and RWU had a significant path coefficient to CR. Interestingly, significant partial mediation of hardiness was determined between the path of soldiers' RWU and CR.

No mediating effect of hardiness was found between the path of soldiers' RWS and CR. In this study, hardiness was proposed to enable soldiers to cope with any challenges either from the soldier's family and/or from the unit, which may pose a threat to the soldier's ability to reach acceptable standards of CR. This theory (hardiness enabling soldiers participating in peacekeeping operations to cope with challenges) was affirmed by (Britt et al., 2001). The results in Table 4.1 (measures of central tendency) show that participants did not experience an unhealthy (i.e. unstable) family relationship, and perceived their unit as supportive. This could explain the non-mediating effect of hardiness.

Kirkland and Katz (1989) found that stable families who were well- integrated into the unit were supportive of the unit goals, and this significantly contributed to the soldiers' effective performance, confidence in their combat ability, and overall perception of CR. Even though the sample in the current study tested high on hardiness, there was no mediating effect of hardiness to the path of soldiers' RWS and CR.

Proposed model results – by computing PLS analysis, the current study found that hardiness ($r^2 = .09$) and CR ($r^2 = .45$) (see Table 4.5) had practical value in the model, with hardiness explaining nine per cent and CR explaining 45 per cent of variance of model fit. Composite reliability of both models (at .85 to .89) and AVE (at .54 to .59) were within and above the acceptable threshold and were thus confirmed and accepted. Based on the path coefficients determining the hypothesised interaction between variables, H_3 was rejected and H_1, H_2, and H_4 were accepted.

5.5   CHAPTER SUMMARY

Focusing on descriptive, inferential statistics and PLS analysis results, this chapter discussed all empirical results as found in Chapter 4. High positive perceptions for all study variables were found and were in support of previous research studies. Of the four hypotheses of the study, three hypotheses – H_1, H_2, and H_4 were established and accepted. Significant correlations were found for soldiers' RWS, soldiers' RWU and CR. The mediating effect of hardiness between the independent variable and the dependent variable was confirmed. The mediating effect of hardiness between the soldiers' RWU and CR was confirmed. Hardiness had no mediating effect between soldiers' RWS and CR. Only one component of the proposed CR model was not established namely the mediating effect of hardiness between soldiers' RWS and CR. Significant positive correlations for all factors hypothesised to have an influence on CR, were found. These results show that the SANDF's soldiers are well equipped and psychologically ready to partake in peacekeeping operations in Africa.

CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

6.1   CONCLUSIONS

In the past years, the SANDF has become increasingly involved and committed to international peacekeeping operations in Africa (particularly the DRC, Sudan, the CAR and Mozambique). Given the complex nature of the operations and SANDF yearly reviews of lessons learned, the SANDF's continued contributions in effectively fulfilling its role on the operational ground have raised significant questions (see Chapter 1). Researchers have embarked on a quest to determine the extent to which militaries are prepared to accomplish pledged objectives successfully and to fulfil the agreed MOU of the UN. Some of the studies have probed the often-raised question of CR and have highlighted a number of factors that contribute the notion of CR (see Chapter 2). The researcher exploited the prevalent research gap of the phenomena of CR in the SANDF and set to ascertain whether other factors could explain and have an influence on the phenomena.

The aim of the current research was to explore the relationship between soldiers' RWS and RWU and hardiness as a possible mediator variable to CR. Apart from realisation of the stated aim, the limited research on specific factors of the study (i.e. soldiers' RWS and RWU as individual factors effecting CR) is acknowledged. A number of research questions were raised such as (a) is there a theoretical relationship between soldier's RWU and CR? (b) is there a theoretical relationship between soldier's RWS and CR? (c) does a positive relationship between RWU and RWS have an effect on CR? (d) is there a relationship between hardiness and CR? and (e) is there a mediating role of hardiness between levels of RWS, RWU, and CR?

Even though studies (e.g. Bester & Stanz, 2007; Blankmeyer, 1998; Kellet, 1990; Kirkland & Katz, 1989; Landry, 1997) have explored the concept of CR, the researcher saw relevant need to explore these gaps. The main objective of the current study was to conduct research and to explore factors involved in CR empirically by studying soldiers' RWS and RWU and their effect on CR possibly mediated by hardiness among soldiers in the SANDF. The study was guided by the following specific empirical objectives:

a.   To determine the level of RWU in a sample of South African (SA) military members.

b.   To determine the level of RWS in a sample of SA military members.

c.   To determine the level of hardiness in a sample of SA military members.

d.   To determine the level of CR in a sample of SA military members.

e.   To determine the relationship between RWU, RWS and CR in a sample of SA military members.

Using previously developed questionnaires to determine the study variables, data was obtained from the SANDF sample of 363 members of the infantry battalion group who were busy with mobilisation in preparation for deployment to Sudan. The results show that participants had high levels of RWU, RWS, hardiness and overall CR (see Table 4.1). Therefore empirical objectives (i.e. a, b, c, and d) were established. Spearman correlation coefficient was calculated to determine the relationship between RWU, RWS and CR. The study found a significant positive relationship between soldiers' RWS and CR. These results had been theorised previously. High perceptions of family functioning (soldier's RWS) empirically proved to have a significant correlation with perceptions of CR. Significant positive relationships between soldiers' RWU and CR were also found. These results had the strongest correlation of all tested relationships. Insignificant positive correlations were found between the soldiers' RWS and hardiness.

Even though the sample results showed high levels of hardiness and the fact that hardiness was proposed to be a mediating variable between soldiers' RWS and CR. The insignificant results were therefore justified by the high scores on general family functioning and CR for the study sample. This means that respondents did not experience any challenges in their families that would have necessitated a mediating role of hardiness. Interestingly, hardiness was found to have a low but significant positive correlation with CR. Lastly, a significant positive correlation was found between soldiers' RWU and hardiness. Based on the statistical evidence, the study concluded that the variables of the study soldiers' RWS, RWU and hardiness showed a significant correlation with CR. The mediating effect of hardiness was also determined and only a partial mediation effect of hardiness was found.

In addition to determining the research main and empirical objectives, PLS analysis were conducted to determine the proposed model for CR based on the hypotheses. PLS analysis results revealed that there were no full mediation results found. This was due to the fact that both soldier's RWS and RWU had significantly correlated with CR and their path coefficient was determined and accepted. Only partial mediation was obtained for the path RWU>Hardiness>CR. There was no mediating effect found for hardiness in the path RWS>Hardiness>CR; however, a positive and significant influence was found for the path from Hardiness>CR. Thus, only one component of the model was not established.

Given these results, it is proposed that the model should be adjusted and tested to facilitate practical application of the model specifically to deploying members of the SANDF and to determine generalisability in the military environment.

6.2   LIMITATIONS

Presenting the limitations entrenched in this study is imperative, as it provides guidance in understanding the research findings. Limitations indirectly highlight areas of improvement and serve as a gateway for future research centred on the specific variables. The results of the study should be read in conjunction with these limitations:

- **The sample group**

The sample consisted of 23 per cent reserve force (i.e. part-time members of the SANDF). This had an influence on perceptions of CR in terms of responses on the dimensions of discipline and cohesion as some members of the reserve force joined the deploying group at a later stage during mobilisation. This limits generalisability of the results to just the regular force members of the SANDF participating in peacekeeping operations. A replica of this study focusing on only regular force members would enhance the accuracy of the tested dimensions of CR (such as discipline and cohesion) and overall generalisability of this type of study.

The sample also consisted of 26 per cent of members with 'single' marital status. Again, this had an influence on the responses regarding family functioning as members with a 'single' marital status could not relate to some of the items on the scale. Selecting only members with a 'married' and those with 'life partners' marital status would improve the accuracy of the results for RWS.

The sample group consisted of infantry battalion members (i.e. SA Army service) only; thus, the study was limited to only military service personnel. An extension of this study to include other SA military services (such as the SAMHS and the SA Air Force) could improve the future research and provide a broader view of the SANDF level of CR.

- **Nature of the research**

An exploratory research design was chosen and this type of study limited the researcher from making any causality conclusions. Hence, it cannot be concluded that the study's independent variables directly influenced the dependent variable, as there may have been unknown extraneous variables that may have affected the results but which were not observed in this study.

- **Research instruments**

The FAD instrument was previously administered mostly to Caucasian families, whereas in this study, the majority of the sample group were African (black) at 93 per cent while only one per cent of the sample group were white. This fact might have drastically influenced the Cronbach's alphas of the instrument for this study. For instance, low Cronbach's alphas were obtained on the affective responsibility dimension, whilst previous results on studies where the instrument was administered to Caucasian families showed high and acceptable Cronbach's alphas. Furthermore, the instrument's generalised items may have influenced the sample responses. Given the relevance of the instrument, an enacted study focusing on the conceptualisation and measurement of the FAD in terms of a South African population could improve the reliability and validity of the instrument's use in case of an African population. Self-report measurement instruments were used to collect data; hence, response biases from respondents where they created more favourable impressions of themselves could not be avoided. This might have only inflated the results.

6.3   RECOMMENDATIONS

Recommendations for future research, ways in which the results of this study may be used and recommended intervention strategies are discussed.

The study presents evidence compelling the researcher to provide the following recommendations to the SANDF senior leaders who have the means to improve the current CR status of the SANDF.

a. Utilisation of MPTs and military leaders

During the planning phase of training, a team of multi-professionals should be included in the training programme. This will ensure that time schedules of commanders and MPTs are well established prior to the actual training and a smooth working partnership will result. During training, whilst the military commander focuses on the physical aspects of CR, the MPT should attend to the psychological component of CR.

This will ensure a good relationship between the commanders and the MPT, which can have a positive spill-over effect to the soldier's perception (by removing the currently negative stigma) of the need to involve health professionals throughout the deployment cycle. Training requires that the soldier give all his/her energy, emotions and undistracted commitment. However, the soldier is also a member of a family who also expects the soldier's undivided attention. A capable soldier could struggle to reach desirable levels of combat-readiness due to an inability to fulfil the competing demands.

The presence of the MPTs will assist in identifying soldiers vulnerable to stress. Throughout the different phases MPTs will be able to help the soldiers cope with the emotions, stress and inherent challenges of deployment. By encouraging soldiers to verbalise their day-to-day challenges in a supportive atmosphere, soldiers working side by side with the MPTs will be able to identify and utilise better coping strategies.

The MPT will assist in improving and maintaining the soldier's psychological readiness, and the commanders will be satisfied to work with effective soldiers who are not distracted or unable to reach standardised levels of CR.

b. Cohesion

Given the strict nature of the military, some soldier's may find it difficult to consult their commanders on matters concerning their personal issues. Provision should be made to have social events in which the atmosphere is relaxed and accommodating in such a way that it creates a sense of belonging. This will allow for horizontal and vertical cohesion in which members can get to know one another in a respectable and professional manner. Such interaction will also help to improve trust among the deploying members, which will help commanders establish loyalty among their members. Trust and loyalty will ensure commands are executed timeously and without doubt, especially during critical situations in the mission (e.g. an ambush). When soldiers trust and believe in their leaders, they are supportive of the commander's decisions irrespective of whether they (soldiers) will benefit from the decisions.

c. Organisational support

The soldier on the ground is as good as his/her equipment. For instance, highly motivated and effective soldiers can become demoralised and may feel ineffective in the mission area when their essential material (e.g. weapons, vehicles) is unserviceable. It is crucial that the SANDF ensures the sustainment and maintenance of its equipment serviceability as agreed in the MOU.

d. Psycho-social programmes

A number of health programmes are utilised to help soldiers cope better with deployment challenges (such as resilience).

There is a need for other relevant programmes, which in the past had been presented as a reaction to an event. The psycho-social programme should encompass a holistic perspective.

This should include lectures on suicide behaviour, peacekeeping stressors and strategies for dealing with operational stress, problem-solving strategies, emotional intelligence, and psychological well-being. The SANDF should also provide training on hostage negotiation strategies, and hardiness.

Recommendations for future research:

For future research similar to this study, it is highly recommended that a selective sampling method be used so as to ensure that only participants with specific characteristics be selected. It is also recommended that future research should focus on a causality research design (see Morgan, 2013) to allow for definitive results and generalisation. It is highly recommended that the FAD instrument be pilot tested first, be conceptualised and measured using military personnel (preferably from the SANDF) of different races to determine reliability and validity of the instrument for the specific population. It is recommended that this type of research be conducted on a periodic basis (during mobilisation, then again during the deployment phase and lastly post-deployment). This will help identify other factors contributing to CR that may have not been identified in this study.

The aim of the current research was to explore the factors involved in CR with hardiness as a mediator variable. Specific variables were identified (i.e. soldiers' RWS and soldiers' RWU). In an endeavour to determine the hypothesised relationships among the variables, a model for CR was proposed. It is recommended that future research focus only on developing a CR model and determining model parameters as proposed in this study to be used by the SANDF and even other African countries.

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