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# **Vitality and Burnout of Employees in Christian Humanitarian Organisations:**

## **The Role of Need Satisfaction at Work and Religious Beliefs**

**A thesis presented in partial fulfilment of the requirements for the**

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## Abstract

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Humanitarian workers are at relatively high risk of developing a range of negative outcomes in response to stress. For individual employees, the organisations they represent, and the people they serve, it is important to examine workplace wellbeing. This research analysed vitality and burnout as constructs of wellbeing in employees of international, Christian humanitarian organisations based in Chennai, India. This wellbeing dichotomy was explored through two main factors: basic psychological need satisfaction at work, and religious beliefs. These two factors were examined through a Self-Determination Theory framework.

Data was collected via a questionnaire comprised of psychometrically established measures and six open-ended questions for supplementary qualitative data. There were 99 respondents.

The results demonstrated the importance of supporting autonomy, competence and relatedness (basic psychological needs) in employees of humanitarian organisations. Workplace support leading to basic need satisfaction was associated with increased vitality and decreased levels of burnout. Autonomous motivations for religious beliefs were positively associated with vitality, and non-autonomous motivations for religious beliefs were linked with decreased burnout. The use of religious coping was not as clearly linked with these wellbeing constructs except that the presence of negative religious coping was positively related to burnout.

The findings are pertinent for humanitarian organisations, particularly those with a Christian foundation, to understand and facilitate factors that increase vitality and decrease burnout in the workplace.



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## 1.0 Introduction

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One of the major challenges facing humanitarian organisations is the continued wellbeing of its workforce. The *raison d'être* for each humanitarian organisation is to alleviate human suffering in a target population. Yet, these noble primary aims should not be achieved without consideration for the personnel providing these services. There is nothing pejorative in saying that even the most heroic employees need to take care of themselves, thus leading to the focus of this research: investigating factors which facilitate optimal wellbeing of staff in these inherently stressful organisations.

The current study focuses on how two factors – one contextual and one personal – relate to burnout and vitality amongst humanitarian workers. The first is satisfaction of basic psychological needs (i.e., autonomy, competence, and relatedness) in the workplace. The second is an individual's personal religious faith (Pargament, Koenig, & Perez, 2000; Ryan, Rigby, & King, 1993). Given the prevalence of faith-based humanitarian organisations (Ferris, 2005), investigating the potential positive or negative impact of religious faith was considered useful.

The humanitarian workers in this study are Christian employees working in Christian humanitarian organisations in Chennai, India. The current study uses 'humanitarian' broadly and includes development as well as relief organisations. While there are certain reasons for maintaining a distinction between relief and development organisations (for a discussion on this refer to Rieff, 1995; Slim, 2000), both have employees who encounter a plethora of stressful or traumatic situations and will experience potential threats to their wellbeing.

This study is based on previous research relating to wellbeing of humanitarian workers, building on their concepts and findings. Research into divergent outcomes of stress and Tassell's (2009) more specific research examining wellbeing amongst humanitarian workers were of particular importance in shaping the current study. These are outlined in greater detail below.

Research shows stressful or traumatic situations can facilitate personal growth, renewed hope in humanity's resilience, closer relationships with others, and greater appreciation of life, peace, and pleasure (Lazarus, 1999; Prati & Pietrantonio, 2009; Taku, Cann, Calhoun, & Tedeschi, 2008; Tedeschi & Calhoun, 1996). On the other hand, continued exposure to distressing, unpleasant, or traumatic situations can lead to myriad negative outcomes for an individual's cognitive, affective, physical, and psychological wellbeing (Edwards & Cooper, 1988; Nelson & Simmons, 2003; Semmer, McGrah, & Beehr, 2005; Smith, 2002). These physical and



psychological sequelae undermine the employee's wellbeing and impair the employee's ability to work to their full potential (Antares Foundation, 2006; McFarlane, 2004).

Humanitarian workers are profoundly affected by their work (Antares Foundation, 2006; Fawcett, 2003; McFarlane, 2004). The focus on outcomes of stress is particularly relevant to the humanitarian sphere given the number of stressful factors commonly associated with relief and development humanitarian organisations. The work can be emotionally draining due to frequent or ongoing involvement with underprivileged, vulnerable, or traumatised people (Chaves & Tsitsos, 2001; Ehrenreich & Elliot, 2001; Flanigan, 2009). Additional stressors frequently include:

...excessive workload; long hours; unpleasant working conditions; lack of privacy and personal space; lack of adequate resources, personnel, time, logistical support, or skills to do the job expected of them; constant exposure to danger, chronic fear, chronic uncertainty; exposure to anger and apparent lack of gratitude from some among the beneficiary population; repeated exposure to tales of traumatisation and personal tragedy; guilt over access to food, shelter, and other resources the beneficiary population does not have; ethical or moral dilemmas; a sense of helplessness or futility in the face of overwhelming need (Ehrenreich & Elliot, 2001, pp. 53-54).

Beyond the general literature establishing disparate consequences of stress, Tassell (2009) investigated humanitarian worker burnout and vitality. The current study employed the same wellbeing dichotomy. The current study also replicates Tassell's (2009) use of Self-Determination Theory (SDT; Deci & Ryan, 1985a) as the framework for conceptualising the divergence of outcomes. Ryan and Deci (2000) sought to explain observed diametric results through a theory of motivation called Self-Determination Theory (SDT). SDT's Basic Needs Theory is foundational to this study's need satisfaction at work variable, and SDT's Organismic Integration Theory (i.e., internalisation of beliefs) is important in understanding how religious beliefs impact on vitality and burnout. These will be further explained in Chapter Two on Self-Determination Theory.

The variance of outcomes experienced by different individuals exposed to similar circumstances suggests that individual differences play a significant role in determining wellbeing (Cooper & Bright, 2001). These include genetic vulnerabilities to psychiatric illness (Sadock & Sadock, 2007), poor family or peer support (Sadock & Sadock, 2007), prior trauma / chronic stress (Arehart-Treichel, 2005; Ozer, Best, Lipsey, & Weiss, 2003), and expectations of

humanitarianism (Barron, 1999). Yet, Ryan and Deci (2000, p. 68) wrote “the fact that human nature, phenotypically expressed, can be either active or passive, constructive or indolent, suggests more than mere dispositional differences and is a function of more than just biological endowments”. SDT’s ‘organismic-dialectical meta-theory’ emphasises the importance of the interplay between environmental and individual factors in understanding a person’s engagement in activities and resulting outcomes (Deci & Ryan, 2000).

When humanitarian workers succumb to the potential negative impacts of stress, the impact at the individual level directly influences the effectiveness of the entire organisation (Antares Foundation, 2006). High employee wellbeing is associated with increased productivity, performance, and persistence in the workplace (Gagne & Deci, 2005), and conversely when staff wellbeing is impaired, all of these things decline. Exposure to traumatic and distressing circumstances generally increases work-related non optimal functioning, including employee withdrawal, increased absenteeism, and decreased productivity (Jones & Bright, 2001; Lazarus, 1966). Each employee who exhibits negative consequences of stress further magnifies the aggregate effect on the organisation. Work stress costs organisations billions of dollars every year in lost productivity, absenteeism and turnover (DeFrank & Ivanchevich, 1998; Eriksson, Vande Kemp, Gorsuch, Hoke, & Foy, 2001; Nelson & Simmons, 2003; Spector, Chen, & O’Connell, 2000). However, in the humanitarian sphere, the organisational impact of employee burnout results not only in loss of profits, but has a serious impact on livelihoods and lives due to mediocre client care (Cherniss, 1980; Shanafelt, Bradley, Wipf, & Back, 2002), and poorer client safety (Halbesleben, Wakefield, Wakefield, & Cooper, 2008; West, Huschka, Novotny, Sloan, Kolars, Habermann, et al., 2006).

Research into the wellbeing of humanitarian workers is merited from an organisational health perspective, which is of great worth because of the value provided by humanitarian services. Yet the wellbeing of individual employees provides another compelling justification for this research. Work motivation and its related phenomena (e.g., wellbeing) are most often studied for the benefit of the organisation, without sufficient emphasis on doing so for the benefit of the individual employee (Gillespie, 2009).

It is now widely accepted that humanitarian workers face psychological challenges (Smith, Agger, Danieli, & Weisaeth, 1996) and the focus has shifted to determining risk and resilience factors in order to encourage staff wellbeing strategies (Eriksson et al., 2001; Lopes-Cardozo & Salama, 2002). For the sake of the effectiveness of the organisation, their beneficiaries, and the

individual employees, it is important to gain a better understanding on how workplace basic need satisfaction and religious beliefs impact on vitality and burnout.

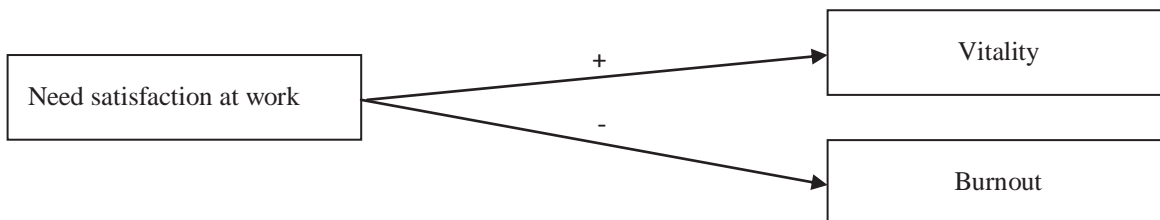
This exploration will highlight the roles of workplace support for psychological needs and personal religious faith in contributing either to exhaustion and calloused disillusionment in some humanitarian workers, while exciting passion and compassion in others.

This introductory chapter aims to outline the humanitarian landscape with its challenges and stressful situations, as well as common responses experienced by humanitarian workers. This research topic into wellbeing of humanitarian workers was prompted by the importance of humanitarian work and the potentially tenuous quality of life of those who pursue this vocation.

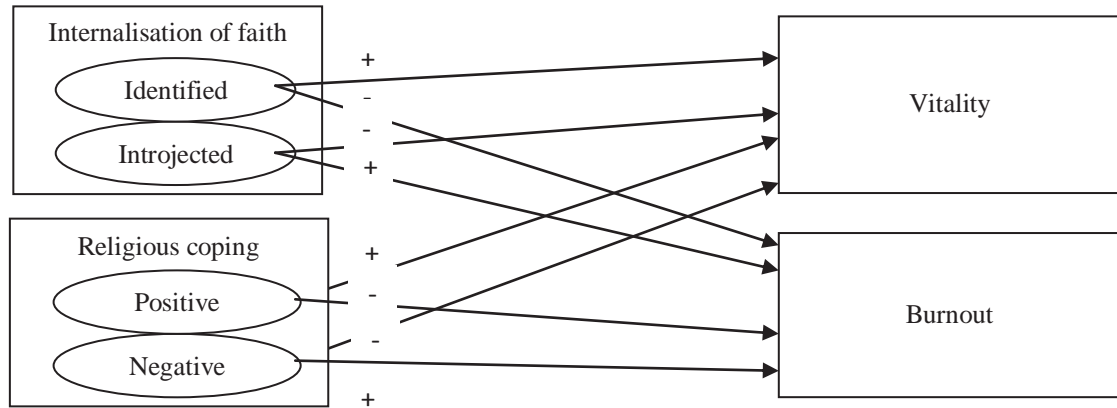
The second chapter explains Self-Determination Theory (SDT) concepts as the theoretical foundation of the research, upon which the third and fourth chapters are based. The third chapter is an application of SDT's need satisfaction within the work place, and the fourth chapter relies on internalisation and general causality orientation theories to understand the impact of religious beliefs on vitality and burnout.

The fifth chapter explains the two wellbeing indicators (vitality and burnout) that are used through the remainder of the research.

The sixth section states the hypotheses on how basic need satisfaction at work and religious beliefs will relate to vitality and burnout. The hypotheses are illustrated in the following two schematics:



*Figure 1.* Schematic representation of hypothesised relationships between basic need satisfaction at work, vitality and burnout.



*Figure 2.* Schematic representation of hypothesised relationships between internalisation of Christian religious beliefs, religious coping, vitality and burnout.

Chapter seven explains how these variables are measured and the methodology employed. The eighth chapter briefly justifies the statistical analyses used and the results discovered. The ninth and final chapter discusses these findings in context of theory, statistical considerations or limitations, as well as practical implications and suggestions for future research.

## **2.0 Self-Determination Theory**

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Self-Determination Theory (SDT; Deci & Ryan, 1985a) is a theory of motivation, relevant in organisational settings (Deci, Connell, & Ryan, 1989; Gagne & Deci, 2005; Ilardi, Leone, Kasser, & Ryan, 1993; Vansteenkiste, Neyrinck, Niemiec, Soenens, De Witte, & Van den Broeck, 2007), and applicable to religion (Neyrinck, Vansteenkiste, Lens, Duriez, & Hutsebaut, 2006; Ryan et al., 1993). Joiner, Sheldon, Williams, and Pettit (2003, p. 318) wrote “Self-determination theory has taken up the empirical challenge within mainstream research psychology, showing that motivational approaches grounded in humanistic theory yield good results...”

This chapter only sets out the elements of SDT relevant to the present research with a specific focus on need satisfaction (i.e., Basic Needs Theory) and the process of internalisation (i.e., Organismic Integration Theory). The following chapters will discuss the application of SDT to workplace support and personal faith to shed light on vitality and burnout.

### **2.1 Organismic-Dialectical Meta-Theory**

The individual is an active participant in their environment and their personal characteristics temper the influence of the contextual factors. This interplay serves as the basis for SDT’s predictions about an individual’s self-regulation and psychological wellbeing. The meta-theory assumes individuals have an inherent adaptive design to strive for growth, creativity and mastery (Deci & Ryan, 2000) but that its execution relies on a social environment conducive to growth. Environments facilitate optimal functioning through supporting basic psychological needs (i.e., autonomy, competence, and relatedness) or conversely, can thwart wellbeing by diminishing these experiences (Deci & Ryan, 2000; Ryan & Deci, 2000). For example, the limited resources in the humanitarian work context can either increase or decrease a sense of competence depending on whether the employee views it as a challenge to be innovative or a threat to their ability to do the job. The SDT organismic-dialectical meta-theory underlies the decision to investigate one personal factor and one environmental factor in this research into vitality and burnout.

### **2.2 Basic Needs Theory**

According to Basic Needs Theory, growth equates to optimal functioning and wellbeing and is fuelled by satisfaction of three basic psychological needs: autonomy, competence and relatedness (Deci & Ryan, 2000).

*Autonomy* is the psychological need for self-organisation and self-regulation in accordance with the integrated sense of self (Baard, Deci, & Ryan, 2004; Deci & Ryan, 2000). Autonomy reflects the interests, desires and values of the individual, and acting in accordance with these leads to increased wellbeing (Deci & Ryan, 2000). Autonomy refers to a volitional state of endorsing choices (Ryan & Deci, 2000; Ryff, 1989), regardless of the origin of the choice.

*Competence* refers to the need to feel effective and masterful viz-a-viz interacting with the environment (Deci & Ryan, 2000; Otis & Pelletier, 2005; Ryan & Deci, 2000), and capable of securing specific desired outcomes (Deci & Ryan, 2000; Sheldon & Niemiec, 2006; White, 1959). Studies found positive feedback, no feedback, and negative feedback have predictable influences on motivation levels for a certain activity (Gagne, Senecal, & Koestner, 1997). Negative feedback decreases intrinsic motivation, unless the person has a strong sense of competence despite the feedback (Boggiano & Ruble, 1979; Deci et al., 1989).

*Relatedness* refers to the strong need for humans to belong and have interpersonal relationships (Baumeister & Leary, 1995; Ryan & Deci, 2000). It encompasses socialising, communicating, acceptance, avoiding conflict and insecure feelings, and feeling understood and appreciated (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). People seek to fulfil relatedness needs on an interpersonal level and a group level (Andersen, Chen, & Carter, 2000; Smith, Murphy, & Coats, 1999). Myers and Diener (1995) explained there is a positive correlation between a person's satisfaction with their interpersonal connections and positive indicators of wellbeing (e.g., being healthier and happier). Relatedness is profoundly influential on cognition, affect and behaviour (Leary, Tambor, Terdal, & Downs, 1995; Markus & Kitayama, 1991; Smith et al., 1999). Working in the presence of another person increases autonomous motivation (Sansone & Smith, 2000).

Basic need satisfaction in this research refers to perceived need satisfaction, as measures have been designed for perceived autonomy, competence and relatedness (Guay, Ratelle, Senecal, Larose, & Deschenes, 2006). The perception of fulfilled needs is generally more important than an objective measure of needs (Carver & Scheier, 2000; Pyszczynski, Greenberg, & Solomon, 2000; Vallerand & Reid, 1984), although objective competence is sometimes required in order for an individual to engage in an activity in an enjoyable way (Sansone & Smith, 2000).

Autonomy, competence, and relatedness are considered irreducible and each one must be satisfied for optimal functioning (Deci & Ryan, 2000). SDT asserts these needs are universal; transcending cultures, socioeconomic states, individual characteristics, and life span (Deci &

Ryan, 2000; Robak & Nagda, 2011).

SDT asserts that optimal functioning results from these basic needs being fulfilled, and that non-optimal functioning (e.g., passivity, fear, anger, hostility, negative psychological outcomes) results from thwarted basic needs (Deci & Ryan, 2000). SDT introduces the idea that individuals may strive for substitute needs to try to compensate for when their basic needs are thwarted in order to compensate for those unfulfilled needs but that they ultimately do not lead to wellbeing (Deci & Ryan, 2000).

The current research investigates need satisfaction in the workplace as a factor in understanding burnout or vitality outcomes in the humanitarian workers. According to SDT, the satisfaction of these needs is predictive of wellbeing outcomes. Studies into the relationships between the basic psychological needs and their relationships with vitality and burnout in the workplace will be discussed in the next chapter (Chapter 3) on Basic Need Satisfaction at Work.

It is plausible that many Christian employees and Christian humanitarian organisations presume religious faith necessarily improves wellbeing, and so the researcher deemed it important to investigate these impressions. Previous studies show motivation for religion shapes positive or negative psychological outcomes (Bergin, 1991; Maehr & Karabenick, 2005; Ryan et al., 1993), and this current research aims to extend those findings to show motivation for religion can also influence vitality and burnout.

## **2.3 Motivation**

SDT views motivation from two perspectives (Ryan & Connell, 1989) which will be further explained in the next subsections. The first is a global or general level called the Causality Orientations Theory (Deci & Ryan 1985b), and the second is at a more specific level of regulation called the Organismic Integration Theory (OIT; Deci & Ryan, 1985a).

### **2.3.1 Causality Orientations Theory**

Causality Orientations Theory outlines three distinct tendencies governing an individual's interactions across a range of environments: autonomy-oriented, control-oriented, or impersonal-oriented (Deci & Ryan, 1985b). All three may be experienced to some extent but one predominates (Deci & Ryan, 2000; Deponte, 2004). The main orientation is shaped by the fulfilment or frustration of basic psychological needs, either proximally or developmentally (Deci & Ryan, 2000). For example, a more controlled motivational style is observed in people whose need for relatedness was thwarted in early relatedness (Andersen et al., 2000), and impersonal orientations generally results from all three needs being thwarted (Deci & Ryan,

2008b).

The autonomy-oriented person tends to be proactive, interacting with their environments in accordance with self-endorsed values, and takes initiative across different situations. Autonomous orientation has been associated positively with self-regulation, self-actualisation, higher self-esteem, and satisfying interpersonal relationships (Baard et al., 2004; Deci & Ryan, 1985b; Hodgins, Koestner, & Duncan, 1996; Koestner, Bernieri, & Zuckerman, 1992; Vallerand, 1997). A control-oriented person focuses on controls, directives or rewards for cues on how to act, and attributes locus of control outside of themselves (Deci & Ryan, 2000). Being control-oriented is positively associated with public self-consciousness, feelings of being pressured, and diminished wellbeing (Deci & Ryan, 2000; Deci & Ryan, 2008a). A person who is impersonal-oriented tends to be passive or amotivated in their environment rather than being intentional in their actions, and these people tend to be characterised by anxiety (Deci & Ryan, 2000; Neyrinck et al., 2006).

Since the orientation spans various life domains, it is possible that a person's motivation for religion will also reflect these tendencies. In situations where the individual is motivated by processes they are not consciously aware of, the general orientation may be especially pertinent to the outcome (Andersen et al., 2000; Bargh, Gollwitzer, Lee-Chai, Barndollar, & Troetschel, 2000). However, motivation for religion may be more specifically described using the process of internalisation outlined by the Organismic Integration Theory.

### **2.3.2 Organismic Integration Theory (OIT)**

Organismic Integration Theory (OIT; Deci & Ryan, 1985a) is a continuum used to understand specific motivations (e.g., for religion) and it is based on varying levels of autonomy. Autonomous motivation is evident when the individual engages in an activity which aligns with their interests, desires, and values (Baard et al., 2004; Deci & Ryan, 2000). Intrinsic motivators are clearly autonomous as they reflect the innate humanistic impetus towards growth, mastery and assimilation (Deci & Ryan, 1985a). Extrinsic factors can become autonomous through a process of internalisation whereby individuals adopt or assimilate previously external factors as part of their values and beliefs (Deci & Ryan, 1985a). An important part of internalisation is the discovery, whether deliberate or serendipitous, that a regulation or value fits with and is congruent with already held values or beliefs (Carver & Scheier, 2000). The OIT model is illustrated in Figure 3.



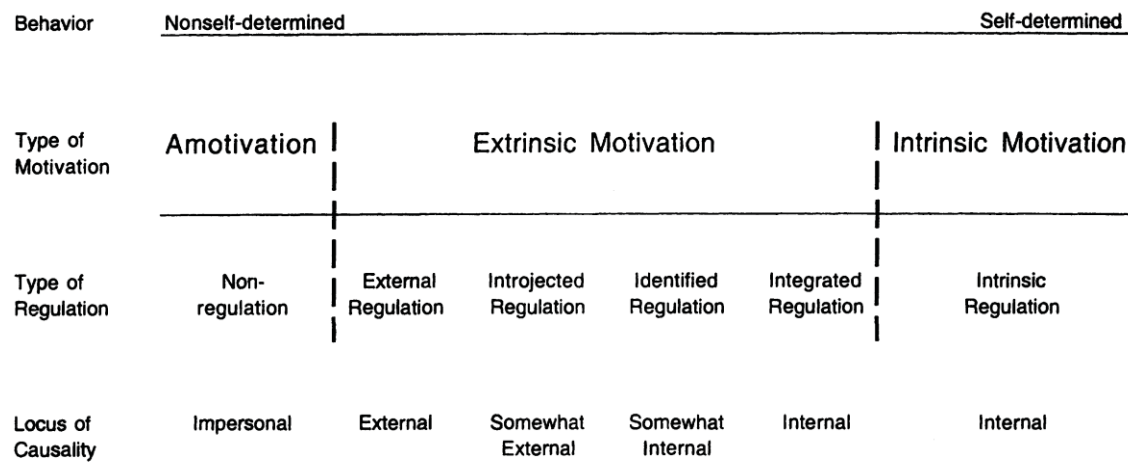


Figure 3. The self-determination continuum, showing the motivational, self-regulatory, and perceived locus of causality bases of behaviours that vary in the degree to which they are self-determined. Reprinted from “The what and why of goal pursuits: Human needs and the self-determination of behavior.” by Deci & Ryan, 2000, *Psychological Inquiry*, 11, 237.

Deci and Ryan (2000) explained the levels of internalisation. External regulation is where an individual engages in a particular behaviour to appease an external demand or to obtain an external reward (e.g., avoid punishment or gain recognition). Introjected regulation is involvement in an activity for the purpose of avoiding or achieving a more intrapersonal feeling, such as avoiding guilt or anxiety, or to feel pride. Identified regulation refers to a conscious accepting of a goal or value that is regarded as important. The most autonomous extrinsic motivation is integrated regulation, where the external value is fully embraced and assimilated, such that seems like the external factor is emanating from the self.

Different types of motivations even within the autonomous range have different consequences in terms of behavioural and affective outcomes, making it important to distinguish between them (Burton, Lydon, D'Alessandro, & Koestner, 2006; Koestner & Losier, 2002). Engagement in behaviours that are not autonomous have been associated with decreased cognitive flexibility (McGraw & McCullers, 1979), decreased performance on complex tasks (Erez, Gopher, & Arzi, 1990), less job satisfaction, less persistence and worse psychological assessment (Gagne & Deci, 2005; Ilardi et al., 1993). Autonomous extrinsic motivations are associated with keeping a person focused on or persisting with important activities, which are deemed to have value and require discipline and explicit effort (Burton et al., 2006; Koestner & Losier, 2002).

Internalisation is applicable to religion since religious beliefs originate extrinsically and are passed along through church tradition and religious texts rather than being intrinsically motivated (Ryan et al., 1993). The current research expects fluctuations in wellbeing amongst Christian humanitarian workers will be affected by their motivation for religious beliefs, and Chapter Four provides further details on the application of internalisation to religion.

## 2.4 Cross-Cultural Considerations

The current research is conducted in Chennai, India and as such the cross-cultural applicability of SDT must be considered. In principle, humanistic psychology is fully compatible with multicultural differences (Seligman & Csikszentmihalyi, 2000). Regarding Basic Needs Theory, some authors expressed concern especially over the cross-cultural applicability of ‘autonomy’ as a basic psychological need (Carver & Scheier, 2000; Markus & Kitayama, 2003). They argued autonomy is deemed important in individualistic societies, but is counter to collectivist cultures. A certain amount of confusion arises from the SDT construct of autonomy having narrower parameters than the regular lexicon (Carver & Scheier, 2000). Ryan and Deci (2000) said “we do not equate autonomy with independence or individualism” (p. 74), and La Guardia and Ryan (2007) ventured that autonomy is a valued part of collectivist cultures and mistakenly used to mean independence and individualism. Ryan and Deci (2000) accommodated cross-cultural elements by asserting universality of needs does not necessarily imply they are expressed in the same way nor that “their relative salience and their avenues for satisfaction are unchanging across the life span...” (p. 75). SDT proponents argue different behaviours exemplified in various settings are different expressions of the same underlying need, and not in fact manifestations of altogether different constructs. Given autonomy is about endorsing choices, behaviour can be experienced as autonomous even if the choice was initiated by another person. In support of this, Iyengar and Lepper (1999) used intrinsic motivation as a marker of autonomous motivation and found intrinsic interest was greater in Asian-American children who were engaging in an activity that a close and trusted adult selected, than when they chose for themselves. Basic psychological needs have pan-cultural utility (Chirkov, Ryan, Kim, & Kaplan, 2003; Sheldon, Elliot, Kim, & Kasser, 2001; Taylor & Lonsdale, 2010), and their association with positive outcomes has been noted even after controlling for a collectivist cultural orientation (Jang, Reeve, Ryan, & Kim, 2009).

Self-Determination Theory provides a framework for predicting wellbeing outcomes. Basic need satisfaction and the process of internalisation are two fundamental ways to understand and integrate domain-specific research into workplace support and religious beliefs in light of vitality and burnout.

### **3.0 Need Satisfaction at Work**

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Psychological research has applied SDT in the workplace (Deci et al., 1989; Gagne & Deci, 2005; Vansteenkiste et al., 2007) and its primary tenet is that need satisfaction is imperative to an employee's wellbeing (Deci & Ryan, 2000; Gagne & Deci, 2005). Relevant SDT concepts were outlined in the previous chapter and this chapter focuses on applying need satisfaction to the workplace and its relationships with subjective vitality and burnout.

#### **3.1 Basic need satisfaction in the workplace**

Insights gained from organisational psychology are increasingly seen as relevant to informing managerial practice in humanitarian organisations (Fyvie & Ager, 1999). Satisfaction of basic needs is allied with autonomous motivations. Baard and colleagues (2004) confirmed that autonomy support from the managers (i.e., conveyed through the interpersonal style of the manager) was significant in predicting the degree to which employees perceived their needs to be satisfied, and enhanced the employees' autonomous motivations. Social contexts (i.e., workplaces) that are supportive of basic psychological needs enhance both intrinsic motivation and extrinsic autonomous regulation (Deci & Ryan, 2000; Gagne & Deci, 2005). Autonomous motivations at work are associated with a range of positive psychological and behavioural outcomes including increased job satisfaction, better performance (Breugh, 1985; McGraw & McCullers, 1978), greater engagement and persistence (Deci, Ryan, Gagne, Leone, Usunov, & Kornazheva, 2001), and better psychological adjustment (Baard et al., 2004; Deci et al., 2001; Ilardi et al., 1993; Kasser, Davey, & Ryan, 1992).

Previous studies have found empirical support for the connection between basic need satisfaction and vitality or burnout. One study by Baard and colleagues (2004) found basic need satisfaction in banking corporation employees increases vitality. Van den Broeck, Vansteenkiste, De Witte, and Lens (2008) studied a heterogeneous sample of employees in Belgium and found basic need satisfaction mediates the relationships that job resources and job demands have with vigour and exhaustion. Vigour (i.e., high levels of mental energy) alludes to having available energy to facilitate engagement in activities (Van den Broeck et al., 2008) similar to vitality and exhaustion is a large component of burnout (Maslach & Jackson, 1984). Van den Broeck and colleagues (2008) found employees with job resources experience a general feeling of psychological freedom (i.e., autonomy), interpersonal connectedness (i.e., relatedness), and effectiveness (i.e., competence). Job demands like workload, emotional demands, and physical demands are associated with burnout (Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Bakker, 2004; Schaufeli & Enzmann, 1998). Job resources are associated

with need satisfaction and minimise the impact of daily hassles and so are protective against the negative effects of job demands, namely burnout (Van den Broeck et al., 2008). Job demands works partially (but not fully) through thwarting basic psychological needs of the employees (Van den Broeck et al., 2008), suggesting there are other factors which also influence the burnout outcomes. It is unclear whether need satisfaction works directly such that daily hassles are not experienced as much, or whether it functions more indirectly by creating a buffer against the negative effects of daily hassles even if they are still experienced.

Various other research findings lend support to the argument that basic need satisfaction is positively associated with vitality and negatively associated with burnout in the workplace. A diminished sense of personal accomplishment is an element of burnout and has been associated with work environments with few job resources (Kalliath, O'Driscoll, Gillespie, & Bluedorn, 2000; Lee & Ashforth, 1996). Need satisfaction lowers reports of daily hassles at work amongst police officers (Otis & Pelletier, 2005). Need satisfaction was also associated with lower burnout rates among elite athletes (Lonsdale, Hodge, & Rose, 2009).

The studies into vitality and burnout in banking corporation employees (Baard et al., 2004), athletes (Lonsdale et al., 2009), or police officers (Otis & Pelletier, 2005) show that basic need satisfaction is associated with increased vitality and is instrumental in lowering daily hassles leading to reduced exhaustion and burnout. The current research expects to demonstrate this same pattern of findings in humanitarian workers because the universality of basic psychological needs means that one can expect relationships between need satisfaction and vitality or burnout to be similar regardless of the particular target population. Tassell (2009) suggested “It would be interesting for future research to determine the effect of need satisfaction, if any, on burnout in the humanitarian context” (p.179), and the current research can contribute to knowledge of humanitarian worker wellbeing through investigating this.

Research findings relating specifically to autonomy, competence, and relatedness in the workplace are outlined below.

### **3.1.1 Autonomy at work**

Autonomy support by one's employer significantly predicts autonomous motivations (Senecal, Vallerand, & Guay, 2001), and promotes an internal perceived locus of causality (deCharms, 1968) which yields a higher degree of autonomy in behaviour. Autonomy support is evident when an authority figure takes an employee's perspective, promotes choices and encourages

decision making to foster personal autonomy (Deci et al., 1989). An employee's ability to contribute to decisions at work and the freedom to be creative are associated with improved general health (Niedhammer, Chastang, & David, 2008).

The importance of perceived job control (autonomy) was emphasised in a study with female white-collar workers (Hatinen, Kinnunen, Pekkonen, & Kalimo, 2007). That study revealed increased job control is the mechanism responsible for decreasing exhaustion and cynicism (both elements of the burnout construct). The sensitivity of wellbeing to autonomy was noted in research by Csikszentmihalyi and Figurski (1982) who found wellbeing outcomes fluctuate noticeably even in a simple response to whether an everyday activity is felt to be voluntary. This wellbeing fluctuation in accordance with basic need satisfaction was also noted by Reis and colleagues (2000). Csikszentmihalyi and Figurski (1982) and Reis and colleagues (2000) did not use an established measure for vitality or burnout. Instead, the data was collected at random intervals every day over a period of week and at the prompt, the participant would record the activity currently engaged in and the accompanying thoughts and feelings. The results clearly showed better affect and engagement in the activity when it is felt to be autonomous. Autonomy support also facilitates satisfaction of competence and relatedness (Baard et al., 2004).

### **3.1.2 Competence at work**

Otis and Pelletier (2005) investigated the impact that autonomy support and competence support each have on self-determined motivation, future work intentions, daily hassles, and physical symptoms amongst police officers. Competence support refers to the ability of a supervisor to communicate information regularly to employees to guide their performance and build self-confidence. Competence support does not necessarily increase self-determined motivation (autonomy construct), but it is associated with lower reported daily hassles and fewer poor health symptoms (Otis & Pelletier, 2005; Spector, 1986). In practice, competence support means that positive feedback must be genuine in order to bolster an employee's confidence (Gagne & Deci, 2005), and when performance is subpar, that a balanced critique is given with the positive discussed as well as suggestions for how to improve performance (Otis & Pelletier, 2005). Gagne and colleagues (1997) found positive feedback from supervisors and co-workers significantly predicted intrinsic motivation for work and vitality. The opportunity to develop professional skills is another manifestation of competence fulfilment and has been associated with improved general health and decreased emotional exhaustion in a longitudinal study with a heterogeneous group of employees (Janssen & Nijhuis, 2004; Niedhammer et al., 2008). These empirical observations indicate fulfilment of an individual's competence need is linked with subjective vitality and burnout.

### 3.1.3 Relatedness at work

For humanitarian workers, relatedness fulfilment through social support at work will be important to maintain vitality and protect against burnout. Research shows employees working with traumatised people especially need to rely on social support (Conrad & Kellar-Guenther, 2006; Harrison & Westwood, 2009; Killion, 2008). Etzion (1984) found significant positive effects of social support on stress and strain, and people who are supported with social, psychological and material resources fare better than those with fewer supportive contacts. Social support moderates the relationship between stress and negative outcomes (Thoits, 1986) such that the impact of stress is minimised for people who have good social support.

Social support has been negatively associated with burnout (Baruch-Feldman, Brondolo, Ben-Dayana, & Schwartz, 2002; Brown, Prashantham, & Abbott, 2003). Reis and colleagues (2000) conducted research with undergraduates using established measures on questionnaires and daily diaries to update their model of wellbeing to include relatedness as a fundamental need, along with competence and autonomy. They found relatedness was significantly predictive of the two positive outcomes (positive affect and vitality) but not the two negative outcomes (negative affect and symptoms). However, a longitudinal study by Janssen and Nijhuis (2004) across a variety of organisations and employees found that social support, particularly from the supervisor, was associated with less fatigue and emotional exhaustion. It is a clear example of how social support as a way of fulfilling relatedness can lessen the likelihood of burnout. Social support at work was also positively correlated with personal accomplishment (Eriksson et al., 2009). Eriksson and colleagues (2009) conducted research into the relationships social support and organisational support have with burnout in humanitarian workers working for a faith-based international agency. They found social support (not restricted to work) and organisational support (practical and social) were associated with personal accomplishment and negatively correlated with emotional exhaustion and depersonalisation.

The focus of this research is on need satisfaction at work; however, it may be particularly important that a participant have relatedness support at work if they do not have social support outside of work. Humanitarian workers often experience acculturative stress and when away from their families and friends, they do not necessarily have their natural support systems with them (Salama, 1999). The current research is not focused on emergency relief but on organisations working in and around Chennai, India where many employees are local to the area but with some expatriate staff. One of the demographic questions in the study asks how long that person has been in Chennai to give an indication of whether or not the participant is likely



to have an established social support network.

Beyond social support, another important way for relatedness to function in the workplace is as a mechanism for cohesion. An affiliation with a group at work increases commitment to a shared goal and to increase cohesiveness (Heath & Bryant, 2000). The amount and quality of shared values and mutual trust within organisations, called social capital, influences better health outcomes (Oksanen et al., 2008), and reduces burnout (Kowalski et al., 2010). Workplaces which encourage interdependence among employees are positively associated with internalisation of autonomous motivation and positive work-related outcomes (van Knippenberg & van Schie, 2000). This links with person-environment fit described below.

### **3.2 Person-environment fit and need satisfaction**

Organisational psychology research shows employees who fit well with their environments have greater wellbeing (Morley, 2007; Sekiguchi, 2007; Taormina, 2009) in addition to a tendency to stay longer in their jobs and better performance (Green, 2005). This person-environment (P-E) fit is “a comprehensive notion that necessarily includes one’s compatibility with multiple systems in the work environment” (Kristof-Brown, Jansen, & Colbert, 2002, p. 985). It includes fit with the job, the other people, and the organisation’s values (Morley, 2007). The recruitment and selection process is important for this purpose and candidate’s likely fit is assessed by their knowledge and skills as well as their personality, values and beliefs (Ostroff, Shin, & Kinicki, 2005). There has been confusion over how to conceptualise ‘fit’, compounded by cultural settings and diverse groups (Van Hoof, Born, Taris, & Van der Flier, 2006; Yaniv & Farkas, 2005). Although goal congruence is still used (Bretz & Judge, 1994), value congruence is particularly important (Schneider, 2001) and has become “widely accepted as the defining operationalisation of person-organisation fit” (Kristof-Brown, Zimmerman, & Johnson, 2005, p. 285). Value incongruence is related to job stress (Meiri & Melamed, 1986) whereas where there is good value congruence, the employee identifies more easily with the group at work which leads to better wellbeing and more autonomous internalisation of the organisation’s values and goals (Ellemers, de Gilder, & Haslam, 2004).

Need satisfaction may partially explain how the congruence between the employee and work environment is important in achieving the wellbeing associated with person-environment fit. Greguras and Diefendorff (2009) found similar goals and values between employee and organisation facilitates basic need satisfaction, leading to better individual and corporate wellbeing at work (Greguras & Diefendorff, 2009; Greguras & Diefendorff, 2010; Meiri & Melamed, 1986; Schneider, 2001). Goal and value congruence means the goals and values the organisation holds are experienced by the employee as self-determined, fulfilling autonomy

needs.

PE fit includes good fit for skills and knowledge (Morley, 2007; Ostroff et al., 2005) which works by allowing work within the parameters of their skill, such that employees are able to accomplish their tasks and obtain feedback which fulfil the competence need. Csikszentmihalyi and LeFevre (1989) found employees who work within their skill sets report better wellbeing, which can be seen as protecting competence satisfaction. Good P-E fit also includes a good fit with other people in the organisation and this relatedness with other employees is associated with positive outcomes (van Knippenberg & van Schie, 2000). Furthermore, relatedness plays a vital role in facilitating social cohesion and the transmission of values, beliefs, or regulations making it a useful instrument in increasing autonomous extrinsic motivation (Baumeister & Leary, 1995; Reis et al., 2007; Vallerand, 2000; Weinstein & Ryan, 2010).

In the current research, the relevant shared values are the Christian religious beliefs. These beliefs may be particularly pertinent to people involved in humanitarian work because of the overlap Christian beliefs have with humanitarian values. There is a Biblical call to justice and mercy which echoes the prosocial imperatives of humanitarian work, and so religious beliefs can facilitate internalisation of values that support humanitarian work.

### **3.3 Humanitarian work and need satisfaction**

Basic psychological needs are often undermined in stressful situations and by job demands (Deci & Ryan, 2000; Van den Broeck et al., 2008). Humanitarian work includes a range of stressful situations (Ehrenreich & Elliot, 2001) all of which can undermine need fulfilment. Situations which challenge a person's sense of control over how to do the work and its outcomes (i.e., autonomy) frequently arise. Competence can be undermined through language difficulties, sickness, different laws or equipment and few resources, such that the employee cannot do the job to their normal standards. Weinstein and Ryan (2010) claimed "Helping is inherently interpersonal" (p. 224) bringing it into the realm of having a direct impact on an employee's relatedness satisfaction. Relatedness can be undermined by hostile or ungrateful beneficiaries and linguistic or cultural differences which alienate the employee.

Since the nature of the work lends itself towards undermining psychological needs, the organisations have to be intentional in providing support and opportunity for basic need fulfilment. SDT acknowledges that variability in need strength may have some effect on outcomes but that has not been the focus (Deci & Ryan, 2000). This means that it is not clear if



greater deprivation of need requires a commensurately greater amount of support for that particular need. Regardless the literature is clear on the importance of need satisfaction at work, and humanitarian work is likely to undermine need satisfaction. Therefore, humanitarian organisations should be particularly intentional in supporting basic psychological needs in their employees, and research into the effects of need satisfaction on subjective vitality and burnout in humanitarian environments is merited.

## **4.0 Christian Religious Beliefs**

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### **4.1 Justification for Studying Christian Religious Beliefs**

Krishnakumar and Neck (2002) noted a burgeoning of research relating to spirituality in the workplace, although there remains debate over how to define spirituality (Guillory, 2000). The breadth of the term ‘spirituality’ means it cannot be easily measured and renders it prohibitive for use in this research topic. Therefore, this research will focus on Christian religious beliefs. One reason to narrow down ‘spirituality’ or ‘religion’ is the need to have clear interpretation and applicability of findings. If the research was multi-faith, it would mean people are answering the questionnaire based on different parameters or understandings of what is being asked, leading to inconsistency and uncertainty of results. A second rationale is based on sampling - it would be near impossible to get participants to constitute a representative sample of every religion.

One may wonder why focus on research into Christian religious beliefs in India where Hinduism predominates the religious landscape? First, there are numerous Christian humanitarian organisations in India, particularly in South India (Ferris, 2005). Secondly, the research aims to be of some benefit to these humanitarian workers and organisations, and in turn, a benefit to the people they seek to help. Following a Christian faith does not undermine the principles of impartiality and neutrality in providing assistance to all beneficiaries of the organisation, regardless of what religion or beliefs the beneficiary holds (Mlay, 2004). The Code of Conduct for the International Red Cross and Red Crescent Movement and Non-Governmental Organisations in Disaster Relief speaks clearly to the question of religious humanitarianism. Principle 3 allows for humanitarian NGOs to ‘espouse particular political or religious opinions’ as long as the assistance provided is not contingent on the beneficiaries embracing the same opinions (International Federation of Red Cross and Red Crescent Societies and the ICRC, 1995).

The Bible articulates the humanitarian imperative codified in the ICRC/NGO Code. Jesus taught to “Love your neighbour as yourself” (Mark 12:31 New International Version) and other sections of the Bible say “...And what does the Lord require of you? To act justly and to love mercy...” (Micah 6:8). Humanitarian values are included in many religions so humanitarianism can be a common ground on which to unite (Mlay, 2004) rather a source of contention over the particular beliefs of the person providing the services.

### **4.2 Faith and Wellbeing**

This current research explores how religious beliefs are related to vitality and burnout among

Christian humanitarian workers in Chennai, India. In considering the literature on connections between religious beliefs and wellbeing, two variables of interest were selected for the current study. Internalisation was used as a general, dispositional construct because it is very helpful in predicting religious wellbeing outcomes (Ryan et al., 1993). In addition to a broad construct, Ano and Vasconcelles (2005) recommended introducing a narrower variable to answer more specific questions. Internalisation on its own does not provide the specificity required to understand in-depth religion's role in dealing with the stress associated with humanitarian work so a second religious variable was included: religious coping. These two components of religious beliefs (e.g., internalisation and religious coping) will be described in greater detail below and hypotheses formulated in Chapter Six.

### 4.3 Internalisation of Faith

Religion has been implicated in the recovery from mental health problems and stressful life events (Bergin, 1991; Connors, Tonigan, & Miller, 1996; Smith, McCullough, & Poll, 2003), although other research shows religion does not necessarily lead to good psychological health (Bergin, 1991; Maehr & Karabenick, 2005). Self-Determination Theory's process of internalisation provides a way to understand divergent wellbeing outcomes in the context of religion. People who profess to be Christians could do so for a range of reasons which fit onto SDT's internalisation spectrum. A person may claim Christian beliefs because of a compelling message and a love for God and His values (i.e., identified or integration regulation). Alternatively, people may have non-autonomous motivations like attempting to ease intrapsychic distress, fear of hell, guilt, or shame (i.e., introjected regulation), or to appease social or familial pressures (i.e., external regulation). An adult claiming to be Christian and self-selecting into this research makes it unlikely that this sample will include a person who is amotivated with regards to religion.

Identified regulation for religion is positively correlated with positive outcome measures and negatively correlated with negative outcome measures. Introjected regulation shows the opposite pattern (Neyrinck et al., 2006; O'Connor & Vallerand, 1990; Ryan et al., 1993). Those studies measured wellbeing with indicators of general health (e.g., depression, anxiety, somatisation), self esteem, and self-actualisation (Neyrinck et al., 2006; O'Connor & Vallerand, 1990; Ryan et al., 1993).

Kovacs and Kezdy (2008) conducted research into the relationships between religion and burnout in a study of hospital nurses in both religious institutions and state-owned hospitals. They did not use the process of internalisation, but a construct called 'subjective importance of religiosity' which has some theoretical overlap with internalisation of religious beliefs (high

scores on importance of religiosity align reflect aspects of identification and low scores on religiosity are similar in some respects to introjection). Kovacs and Kezdy (2008) found ‘importance of religiosity’ had a significant negative relationship with burnout on all three subscales, establishing a subjective importance of religiosity as protective against burnout. That particular study was with nurses, but the ‘working with people’ similarities across human services and humanitarian workers make it plausible to predict similar outcomes in the current study (identification will be negatively associated with burnout and introjection will be positively associated with burnout). There is an abundance of research into religion and burnout, but there is not much research into an empirical connection between the two, making it an area ripe for future research (Kovacs & Kezdy, 2008). This research will also investigate the relationships to vitality since it is a positive energy-driven indicator.

The wellbeing outcomes correspond to need satisfaction underlying the internalisation process. Introjected reasons for Christianity mean it has only been partially assimilated and as such is not experienced as emanating from the self, and internal conflict tends to lead to negative psychological outcomes (Neyrinck et al., 2006; Ryan et al., 1993). Individuals who experience Christian values, attitudes and behaviours as self-determined will experience the associated wellbeing of acting in accordance with their selves. This clearly increases autonomy satisfaction, but there is also an increased satisfaction of relatedness and competence (Neyrinck et al., 2006; Ryan et al., 1993). The autonomous internalisation of Christian faith is likely to increase relatedness in terms of feeling a connection to God, or connection with like-minded people who share similar beliefs and a feeling of not being alone due to thinking God is with you, or simply the social support experienced among people of similar faith. It could strengthen competence by feeling like God will provide strength and guidance through difficult times.

In addition to motivation for religion, religious beliefs are expected to influence wellbeing outcomes of Christian humanitarian workers through their impact on stress and coping (Cooper, Bruce, Harman, & Boccaccini, 2009; Harris, Erbes, Engdahl, Tedeschi, Olson, Winskowski, & McMahon, 2010; Newton & McIntosh, 2010; Pargament, 1997; Ross, Handal, Clark, & Vander Wal, 2009).

#### **4.4 Religious Coping**

##### **4.4.1 Suffering raises spiritual issues**

Christian religious beliefs are connected to wellbeing via an interface with stress and suffering (Schaufeli & Enzmann, 1998; Shirom, 2005; Taris, 2005 & Schreurs, 2005). In times of

difficulty, many people turn to religion to restore a sense of wellbeing (Pargament et al., 2000). When facing struggles of life, many people start existential questioning to make sense of questions about life, meaning, and relationships with the sacred (Bateson, 1976; Burris, Jackson, Tarpley, & Smith, 1996). Walsh (1999, p. 3) stated spiritual beliefs “influence ways of coping with adversity, the experience of pain and suffering... Suffering, and often the injustice or senselessness of it, are ultimately spiritual issues”. Working with traumatised people takes a toll on those providing services due to absorption of human suffering (Figley, 1995; Killion, 2008). Killion’s (2008) qualitative research with therapists found spirituality was important to them in staying healthy in their various stressful workplaces. McKay (2010, p.3) wrote “For better or worse, it may be impossible to go into humanitarian work and walk away unchanged on a core spiritual level”.

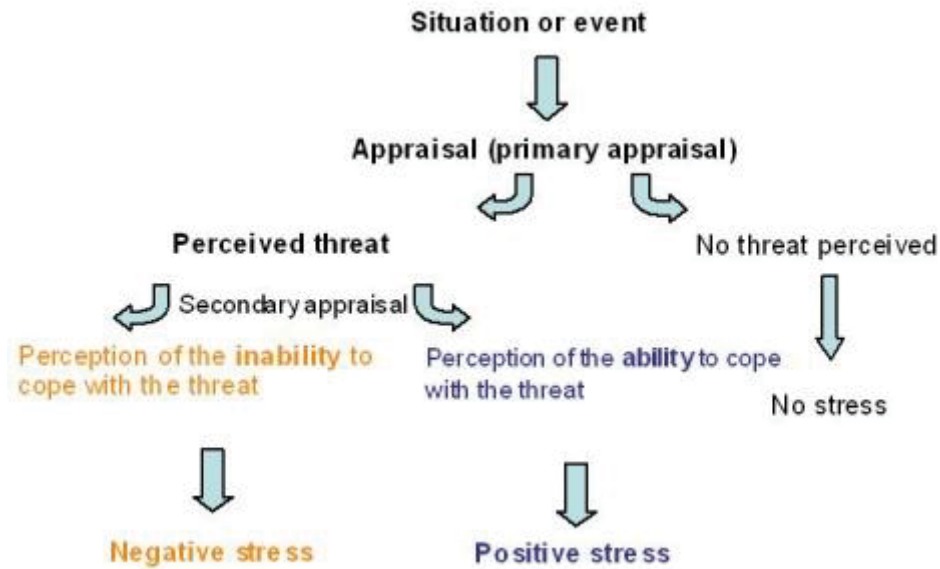
While Christianity is one of many different religions and one form of spirituality, it is the chosen belief system for this research population.

#### **4.4.2 Importance of coping**

Coping influences whether stress will lead to positive or negative wellbeing outcomes (Gerdes & Ping, 1994; Lam & Palsane, 1997). Folkman and Moskowitz (2004) found coping strategies have an impact on burnout outcomes. The ability to cope with both critical incidents and daily hassles can lower an employee’s vulnerability to burnout (Van den Broeck et al., 2008). Tedeschi and Calhoun (1996) found effective coping can foster positive outcomes (posttraumatic growth) in response to adversity. The current research proposes vitality will be another positive outcome associated with effective coping strategies, since energy is important as a resilience factor in dealing with stressors (Selye, 1973).

‘Coping’ is too broad for this research paper to explore in-depth, but a brief discussion is relevant as far as it provides a framework, namely the Transactional Model (Lazarus & Folkman, 1984), within which to understand religious coping.

The Transactional Model – shown below (Figure 4) – explains at the time of a potentially stressful event, there is a primary appraisal which classifies a situation as either irrelevant, benign-positive, or stressful (Lazarus, 1984). The ‘stressful’ situation is further categorised as harm/loss, threat, or challenge (Lazarus, 1984). The individual then completes a secondary appraisal to select a response or coping plan to determine how to address the encountered stressor or its consequences (Dewe, Cox, & Ferguson, 1993). Both of these appraisal stages ultimately impact on an individual’s wellbeing consequent to the stressful situation (Lazarus & Folkman, 1984; Roesch, Weiner, & Vaughn, 2002).



*Figure 4.* The transactional model of stress and coping. Reprinted from “Stress, Appraisal and Coping” by Lazarus & Folkman, 1984.

The appraisals are largely subjective (Carver, Scheier, & Weintraub, 1989; Edwards & Cooper, 1988) because they are based on a combination of environmental factors (e.g., circumstances, resources) and individual factors (e.g., personality traits, experiences, beliefs) (Epstein, 1992; Lazarus & Folkman, 1984; Nakamura & Orth, 2005).

Cognitive schemas play a central role in shaping appraisal processes of interpreting and responding to stress (Dewe & Trenberth, 2004; Lazarus & Folkman, 1984), and Newton and McIntosh (Newton) specifically noted the importance of religious beliefs in this regard. Day (2005, p. 116) wrote:

Religious individuals often assert that religion provides them with one of their most effective coping mechanisms, both for extreme situations and daily stressors... These relationships between religiosity and enhancing coping may mean that ... they may be able to deal better with daily stressors and long term ambiguities (p. 116).

Bjorck and Thurman (Bjorck) found religious coping was useful in dealing with the cumulative nature of everyday stressors as well as in critical incidents. Belavich and Pargament (2002) observed religious coping explains unique variance in wellbeing outcomes from stress and predicts outcomes beyond secular coping. Schottenbauer, Klimes-Dougan, Rodriguez, Arnkoff,

Glass, and LaSalle (2006) confirmed religious coping is not just a parallel process to other methods of coping but makes an independent contribution to psychological wellbeing.

Accordingly, the effect of religious coping will be investigated as a potentially important factor in contributing to vitality or burnout in Christian humanitarian workers.

#### **4.4.3 Positive and Negative Religious Coping**

Research into ‘religious coping’ has produced a lot of variance in wellbeing outcomes (Bergin, 1983). Pargament, Smith, Koenig, and Perez (1998) surmised the term ‘religious coping’ was too broad and they found differentiating positive religious coping from negative religious coping produces more consistent findings. ‘Positive’ religious coping includes feeling closer to God, one’s faith community, and one’s significant others, and ‘negative’ spiritual coping is deemed to include experiencing questions, confusion or anger toward God (Pargament et al., 1998).

Improved psychological outcomes were related both with positive religious coping strategies as well as non-spiritual coping strategies, although to a lesser extent (Meisenhelder & Marcum, 2009; Pargament et al., 1998). Koenig, McCullough, and Larson (2001) summarised 1,200 studies and 400 research reviews to conclude that, in general, an active religious life including positive religious coping is associated with better health, improved coping with medical concerns, and reduced mortality rates.

Positive religious coping has been positively associated with a range of positive psychological outcomes in reaction to stress, including happiness, hope, optimism, purpose in life, resilience, posttraumatic growth and mental wellbeing (Ano & Vasconcelles, 2005; Meisenhelder & Marcum, 2009; Pargament et al., 1998; Prati & Pietrantonio, 2009). Ano and Vasconcelles (2005) also found in their meta-analysis that positive religious coping is negatively associated with negative psychological adjustment indicators, including anxiety, distress, negative affect, social dysfunction, anger, and post-traumatic stress disorder symptoms.

Research findings about negative religious coping are inconsistent. Negative religious coping has been associated with higher depression and poorer psychological and physical health (Meisenhelder & Marcum, 2009; Pargament, Koenig, Tarakeshwar, & Hahn, 2001). Other research has shown there can be a positive association between negative spiritual coping and higher outcomes of posttraumatic growth (Calhoun, Cann, Tedeschi, & McMillian, 2000; Pargament, Desai, & McConnell, 2006). Ano and Vasconcelles’ (2005) meta-analysis found negative religious coping is negatively associated with positive adjustment, but their hypothesis that negative religious coping is positively associated with negative adjustment was

unsupported.

The current research hopes to extend the findings about how positive and negative religious coping related to wellbeing through examining the relationships they have with vitality and burnout.

#### **4.5 The Present Research**

Religious beliefs affect wellbeing outcomes both through internalisation of those beliefs (Ryan et al., 1993; Neyrinck et al., 2006) and through the impact of those beliefs on coping in the face of difficult circumstances (Newton & McIntosh, 2010; Pargament et al., 1998). This research proposes these factors also impact vitality and burnout outcomes.

Much of the literature on religion and coping stems from a Western perspective (Pargament et al., 1998; Ross et al., 2009). Aldwin (1994) noted the profound impact of culture on the experience of stress and selection of coping responses. Sinha and Watson (2007) underscored the importance of studying how these factors impact wellbeing through cross-cultural studies. Ross and colleagues (2009) recommended future research investigate religion and religious coping from different geographical regions. The hypotheses for this research are outlined in the Chapter Six but there is also a qualitative aspect of this research gathered through open-ended questions relating to how a person views their faith in times of stress to gain deeper insights into religious coping in this context in Chennai, India.



## 5.0 Wellbeing Outcomes: Subjective Vitality and Burnout

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'Wellbeing' is a conglomeration of numerous constructs each with merit as indicators of wellbeing, with distinct origins and structures (Ryan, Huta, & Deci, 2008; Steel & Koenig, 2006). It is a highly person-specific and situation-specific concept, varying across and within individuals (Kernis, Paradise, Whitaker, Wheatman, & Goldman, 2000; LaGuardia & Ryan, 2007; Sheldon, Ryan, & Reis, 1996). Due to the breadth of the term, this research will narrow the focus to two indicators of wellbeing: subjective vitality and burnout.

Vitality and burnout were specifically selected because they are energy-related constructs (Maslach & Jackson, 1984; Ryan & Frederick, 1997). According to SDT, individuals experience optimal functioning when growth-oriented tendencies are fulfilled (Ryan & Deci, 2000), and energy is essential for this growth (Cain, 2010; Ryan & Frederick, 1997). These indicators are useful for investigating positive and negative psychological outcomes amongst humanitarian workers because energy-related constructs are associated with both work-related phenomena and individual psychological wellbeing (Alexander & Hegarty, 2000; Gagne & Deci, 2005; Milyavskaya et al., 2009; van Knippenberg & van Schie, 2000).

Ryan and Frederick (1997) wrote vitality is "...this spontaneous, inherent, active tendency to assimilate and integrate is thus a central or essential feature of individual life" (p. 534), and the detrimental consequences of depleted energy are documented in burnout research. Burnout includes emotional and physical exhaustion which affects many areas of life including the ability to perform well at work (Schaufeli & Enzmann, 1998). Burnout is one of the common negative consequences of exposure to stressful situations, and is a burgeoning problem among helping professions including humanitarian organisations (Jawahar, Stone, & Kisamore, 2007; Jenaro, Flores, & Arias, 2007; Leiter & Laschinger, 2006; Schaufeli & Enzmann, 1998).

A wellbeing dichotomy was employed rather than just a single measure because negative and positive psychological indicators are separate phenomena each contributing independently to wellbeing and do not necessarily lie on the same continuum (Reis et al., 2000; Ryan & Frederick, 1997). Reis and colleagues (2000) found workplace support for relatedness predicted two positive outcome measures (including subjective vitality), but was unrelated to the negative outcomes they measured. In another study, Tassell (2009) found variables like internalisation of work had an impact on burnout, but not on subjective vitality. The predictor variables in this research (i.e., basic need satisfaction at work and religious beliefs) may impact employee wellbeing through increasing vitality or decreasing burnout, but not necessarily both. Only studying one measure would mean valuable information about energy-related wellbeing in

humanitarian workers would be neglected.

## 5.1 Subjective Vitality

Vitality captures the feeling of being “alive”; a spirit of enthusiasm, energy and activation (Bostic, Rubio, & Hood, 2000; Nix, Ryan, Manly, & Deci, 1999). Being the culmination of physical and psychological energy, it is depleted in times of hunger, pain, fatigue and illness (real or perceived) (Ryan & Frederick, 1997; Stewart, Hays, & Ware, 1992). These physical conditions occur frequently amongst humanitarian workers due to long work hours, increased risk of accidents, and exposure to untreated infectious diseases (Peytremann, Baduraux, O'Donovan, & Loutan, 2001; Simmonds, Gilbert-Miguet, Siem, Carballo, & Zeric, 1998). Vitality fluctuates according to psychological factors like having a mission and being effective (Ryan & Frederick, 1997), being in contact with nature (Killian, 2008), or being in love (Reis et al., 2000).

Activation and energy distinguish vitality from other positive wellbeing constructs like happiness (Nix et al., 1999; Purcell, 1982). Vitality is positively associated with positive affect measures like self-actualisation and self-esteem (Ryan & Frederick, 1997). By contrast, vitality is negatively correlated with indices of ill psychological health or intrapsychic distress (Ryan & Frederick, 1997).

The availability of energy plays an important role in vitality, but is not sufficient to predict vitality. In addition to having energy available, vitality is contingent on the energy being autonomous and felt to emanate from the self, rather than being generated by an external source beyond one's control. Ryan and Frederick (1997) described it as “...the experience of having positive energy, available to and within the regulatory control of one's self” (p. 530). Ryan and Frederick (1997) provide an example to illustrate this saying a person with mania has a lot of energy but it is felt to be beyond their control and is therefore not associated with the positive outcomes associated with vitality. Across a range of studies, students or employees who report autonomous regulation also report higher vitality (Milyavskaya et al., 2009; Nix et al., 1999; Reis et al., 2000).

The connection between autonomous regulation and vitality can be also observed in the studies showing people who are intrinsically motivated report greater vitality than those who strongly aspire to extrinsic outcomes like money, fame, and attractiveness (Brown & Ryan, 2003; Ryan & Frederick, 1997; Sheldon et al., 1996). Vansteenkiste and colleagues (2007) conducted a

study with Belgian employees covering a range of educational backgrounds and current employment. They discovered people with extrinsic work motivations had poorer psychological outcomes (including less vitality and more emotional exhaustion) than those with intrinsic work motivations, possibly because the focus on external indicators of worth like social approval or wealth means a neglect of personal wants and needs (Vansteenkiste et al., 2007).

In addition to autonomy, satisfaction of other basic psychological needs (relatedness and competence), has been shown to co-vary with vitality (Ryan & Frederick, 1997). A study using daily reports and diary entries (Reis et al., 2000) found a sense of relatedness to other people also increases vitality. They found a sense of relatedness fulfilled through social activity increased vitality compared with those who did not have the relatedness satisfied. Sheldon and colleagues (1996) studied competence (and autonomy) amongst students using questionnaires, group testing sessions, and diary entries. They found people who reported high trait competence tended to have better days (including more vitality) on average than people low on these traits, and when trait differences were controlled for, competence (and autonomy) had significant effects on a person's wellbeing state in the moment. Their results showed vitality can be diminished by blocking autonomy and competence (relatedness was not included in their study).

Vitality is an appropriate indicator of wellbeing in this cross-cultural research. When vitality is used in cross-cultural research, it seems its use is simply accepted as appropriate measure and the purpose of the research is to explore how predictor variables relate to vitality differently across cultures. For example, LaGuardia and Ryan (2007) studied vitality in students from the United States, Russia, and China but with a focus on how autonomy support and personality traits affect wellbeing. In another study, Taylor and Lonsdale (2010) compared relationships between autonomy support, need satisfaction and wellbeing across students from the United Kingdom and Hong Kong, China, using vitality as a wellbeing indicator. There are two clear benefits of vitality as “a highly accessible, phenomenologically based variable that is content free with respect to external criteria of wellbeing...” (Ryan & Frederick, 1997, p. 530). One benefit is it by-passes the difficult task of defining happiness and success as an objective measure, and secondly, it allows research across cultures which are unlikely to have the same objective measures of wellbeing.

## 5.2 Burnout

The burnout construct complements the vitality construct, well as it is a metaphor for the spark of vitality being extinguished. The etiology of burnout is the depletion of energy caused by too much energy output and too little energy input (Schaufeli & Enzmann, 1998). Burnout consists of three theoretical components derived through factorial analysis (Maslach & Jackson, 1984).

The first component, emotional exhaustion, is a feeling of being physically and emotionally drained. The second component, depersonalisation, is expressed as an insensitive and indifferent response to people who are usually the recipients of social services and care. Depersonalisation is typified by the emotional and cognitive changes that lead to a dehumanising view of the clients, and is characterised by pessimism, lessened empathy, and stereotyping that has a negative impact on interpersonal interactions. The third element, diminished sense of personal accomplishment, refers to a reduced feeling of competence in the execution of one's work, even a sense of lack of capacity to perform (Maslach & Jackson, 1981; Maslach & Jackson, 1984). Research shows burnout to be a relatively stable construct and chronic in nature (Shirom, 2005; Taris et al., 2005) regardless of sample, cultural context, and length of time of the follow-up survey.

In addition to the toll it takes on the individual, burnout decreases productivity, performance, and persistence in the workplace (Alexander & Hegarty, 2000; Lawson & O'Brien, 1994). Humanitarian organisations frequently face turnover of staff (Eriksson et al., 2001), which could be decreased with less employee burnout.

A better understanding of the antecedents of burnout will allow steps to be taken to mitigate the risk of burnout for the sake of individual employees and their organisations (Jawahar et al., 2007). Significant contributors to burnout include an employee's workload (Cohen, Village, Ostry, Ratner, Cvitkovich, & Yassi, 2004; Stuart, Jarvis, & Daniel, 2008), demands of work, and lack of sufficient resources (Maslach, Schaufeli, & Leiter, 2001; Williams, Konrad, Scheckler, Pathman, Linzer, McMurray et al., 2001). Prosser, Johnson, Kuipers, Szmukler, Bebbington, and Thornicroft (1997) conducted research into wellbeing of community and hospital mental health workers and they identified five sources of stress which accounted for approximately 70% of the total variance in their data: the role, poor support, clients, the future, and work overload. Prosser and colleagues (1997) found a relationship between "role" stress and increased emotional exhaustion, and "client" stress increased depersonalisation, while satisfaction of working with people was correlated with burnout's personal accomplishment.

One major finding relating to burnout is it results from an accumulation of chronic daily stresses or hassles (Lazarus, Cohen, Folkman, Kanner, & Schaefer, 1980; Otis & Pelletier, 2005). Furthermore, burnout is more than just organisational and administrative frustrations or overwork; it is an interpersonal phenomenon resulting from chronic prolonged exposure to interpersonal stress (Maslach et al., 2001; Schaufeli & Enzmann, 1998).

Research establishes individual factors are implicated with burnout, including coping mechanisms (Folkman & Moskowitz, 2004) and religious beliefs (Kovacs & Kezdy, 2008; van Dierendonck, Garssen, & Visser, 2005). Personal growth and spirituality are positively associated with reduced burnout (van Dierendonck et al., 2005). Kovacs and Kezdy (2008) found importance of religiosity is negatively associated with all three components of burnout, but they recommended further research into the connection between religion and burnout which has so far been the focus of relatively little research. The current research aims to contribute to this knowledge by exploring the relationships between Christian religious beliefs (i.e., internalisation of religious beliefs and religious coping) and burnout as outlined in Chapter Six.

Beyond the influence of personal factors, burnout is an occupational problem and “possible antecedents of the syndrome are...likely to be situational...” (Hatinen et al., 2007, p. 230). The workplace is the most pertinent social context to study for an employee population and this research draws on SDT’s Basic Needs Theory (Deci & Ryan, 2000) to explore basic need satisfaction in the workplace. Previous research establishes the importance of basic need satisfaction to employee wellbeing, including burnout (Baard et al., 2004; Deci et al., 2001; Ilardi et al., 1993; Kasser et al., 1992). Kasser and colleagues (1992) found burnout is lessened by basic need satisfaction in employees of a psychiatric rehabilitation centre. Ilardi and colleagues (1993) investigated the relationship of basic need satisfaction to burnout amongst factor workers. The research clearly shows the importance of basic need satisfaction at work for minimising burnout.

### **5.3 The Relevance of Stress to Wellbeing**

Humanitarian workers face a range of stressful situations (Antares Foundation, 2006; Chaves & Tsitsos, 2001; Flanigan, 2009), and they may face a tension between an altruistic calling and a self-preservative caution of not investing beyond a personal threshold of capacity. Antares Foundation (2006) warned of potential adverse consequences for humanitarian workers including disillusionment and disengagement from the work, interpersonal conflict with family or co-workers, and burnout. Given that burnout develops in an environment of daily stress or hassles (Lazarus et al., 1980; Otis & Pelletier, 2005), a brief foray into understandings of stress and coping is necessary at this juncture. While stress research tends to be correlational, the connection between exposure to stress and a range of negative outcomes is sufficiently strong to justify trying to prevent, reduce or minimise the occurrence and impact of stress (Levi, 2005).

This research aims to extend coping research by illustrating its usefulness in dealing with the accumulation of daily hassles rather than only critical events. Coping literature has traditionally

focused on critical incident events which clearly require intentional coping efforts, rather than on daily hassles and stressors (Carver et al., 1989; Green, 1996; Lazarus & Folkman, 1984). Meisenhelder and Marcum (2009) proposed the reason for this is critical incidents or traumatic events have a higher urgency and intensity with regard to potential harm, thus triggering a greater perceived threat leading to engagement of coping mechanisms to restore a sense of wellbeing. Yet the consequences of a gradual accumulation of daily stresses can be noxious and significant (Edwards & Cooper, 1988; Maslach & Jackson, 1984; Nelson & Simmons, 2003), making it important to develop a larger body of literature on coping with daily hassles. Van den Broeck and colleagues (2008) found the ability to cope with daily hassles and job demands can lower the employee's vulnerability to negative outcomes such as burnout. The current research investigates the importance of coping with daily stressors in Christian humanitarian workers, focusing on religious coping.

#### **5.4 The Present Research**

Burnout is just one possible negative effect of stress. Exposure to stress may also result in Post-Traumatic Stress Disorder (PTSD) (Sadock & Sadock, 2007), Vicarious Trauma (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995), or Compassion Fatigue (Figley, 1995). The humanitarian sphere could benefit from future research into each of these potential adverse effects, but burnout was selected for several reasons. First, PTSD is associated with traumatic events (Sadock & Sadock, 2007), and while these can happen to humanitarian workers, the most common experience of stress stems from smaller daily hardships such as long and irregular hours, intra-team conflict, and separation from family (Antares Foundation, 2006; McFarlane, 2004). A second reason is the difference in the vicarious trauma and burnout constructs which are both insidious adverse effects developed gradually. Vicarious trauma is a “negative...transformation in the inner experience of the therapist that comes about as a result of empathic engagement with clients' trauma material” (Pearlman & Saakvitne, 1995, p. 31) and would be expected among staff who are working directly with clients. Burnout is linked with chronic daily stresses and can include, but is not limited to, exposure to trauma in a client's life (Lazarus et al., 1980; Otis & Pelletier, 2005). In the current study, questionnaires were given to any employee of an organisation rather than being specifically targeted to only those with client contact, and burnout has broader applicability. If vicarious trauma had been surveyed and respondents who are not working directly with clients filled it out, it would most likely lead to an underestimation of the problem amongst those who do have client contact. In order to investigate vicarious trauma, different sample parameters would have to be used. A third reason

for selecting the burnout construct is its good theoretical fit with the vitality construct to form a wellbeing dichotomy, as both are energy-related constructs (Maslach & Jackson, 1984; Ryan & Frederick, 1997). The other negative outcomes of stress – PTSD, vicarious trauma and compassion fatigue – are more closely associated with fear and anxiety than energy (Killion, 2008; McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995) and not as easily juxtaposed with vitality.

This research aims to support theoretical predictions about the relationships that workplace support and religious faith have with subjective vitality and burnout through empirical research with the humanitarian worker population. The hypotheses are presented in the next chapter (Six) and are derived from the literature outlined in the previous chapters on SDT, basic need satisfaction at work, and religious beliefs.



## 6.0 Hypotheses

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The overall aim of the current research is to develop a better understanding of well-being among humanitarian workers, specifically those working in Christian humanitarian organisations. Some humanitarian workers become over-extended and exhausted, distant from their work and despairing of their ability to effect any change while others thrive and experience hope, compassion and renewed strength (Antares Foundation, 2006; Suh, Diener, & Fujita, 1996).

The split outcomes in this research are measured by vitality and burnout and the process leading to the divergent outcomes can be explained by Self-Determination Theory. SDT anticipates the influence of both environmental factors and personal factors in wellbeing outcomes. This research focuses on need satisfaction at work as a pertinent environmental factor and religious beliefs as a relevant personal factor in creating vitality or burnout amongst Christian humanitarian workers.

The purpose of this research is to contribute further knowledge about wellbeing of Christian humanitarian employees for the benefit of the staff themselves and the organisations they represent. The findings should help to theoretically understand and practically implement facilitation of these factors in Christian-based humanitarian organisations. It is clear from the literature that need satisfaction and religion impact wellbeing, and this research proposes it applies to vitality and burnout in humanitarian workers, thus the following research questions and hypotheses.

### 6.1 Environmental Factor: Basic Need Satisfaction at Work

One of SDT's most central tenets is need satisfaction is crucial to an individual's innate tendency for growth and other optimal functioning, including wellbeing outcomes (Deci & Ryan, 2000). This research investigates the applicability of this in the humanitarian work sphere.

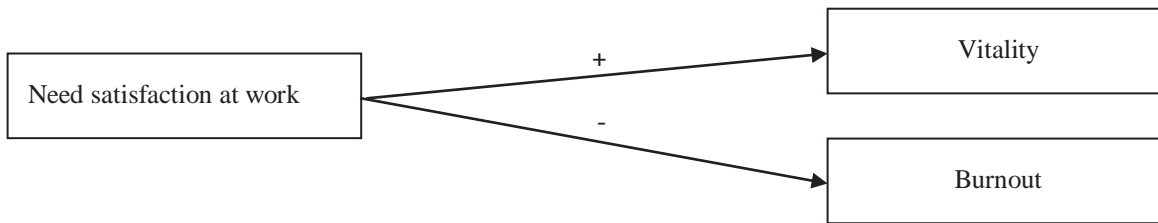
Research Question 1: Does basic psychological need satisfaction (i.e., autonomy, competence, and relatedness) at work influence the wellbeing of these employees?

*Hypothesis 1a:* Basic need satisfaction at work will be positively correlated with vitality.

*Hypothesis 1b:* Basic need satisfaction at work will be negatively correlated with burnout.



The hypothesised relationships are depicted in the diagram below.



*Figure 1.* Schematic representation of hypothesised relationships between basic need satisfaction at work, vitality and burnout.

## 6.2 Individual Factors: Religious Beliefs

There are numerous Christian faith-based humanitarian organisations representing a large number of employees who claim Christian religious beliefs for their own. This research is interested in how internalisation of those religious beliefs and the use of religious coping to confront stressful situations play a role in resulting vitality or burnout.

### 6.2.1 Internalisation of religious beliefs

Internalisation of Christian beliefs refers to the process determining self-regulation for religion, which has an impact on motivation and wellbeing (Ryan et al., 1993; Neyrinck et al., 2006). SDT also explains that general causality orientations have certain expected patterns of motivation and wellbeing (Deci & Ryan, 2000). The hypotheses are focused on the relationships internalisation has with vitality and burnout, while also accounting for general causality orientations will need to be accounted for which is why it is measured and used in statistical analyses. However, general causality orientation is an auxiliary variable rather than the focus of this research.

The expected associations of the internalisation and subjective vitality and burnout are set out below. Tassell (2009) found internalisation of work (in general) had opposite findings to those predicted when it was applied to the humanitarian context. Contrary to expectations, Tassell found identified regulation was positively associated with burnout and introjected motivations were negatively associated with burnout. However, this study is investigating internalisation of faith (not work) and so the predictions are in line with the preponderance of SDT literature.

Research Question 2: Does the motivation for religious beliefs and behaviours affect vitality and burnout outcomes?

*Hypothesis 2a:* Identified regulation for religion will be positively associated with vitality.

*Hypothesis 2b:* Identified regulation for religion will be negatively associated with burnout.

*Hypothesis 3a:* Introjected regulation for religion will be negatively associated with vitality.

*Hypothesis 3b:* Introjected regulation for religion will be positively associated with burnout.

These hypotheses are depicted in Figure 2 below.

### **6.2.2 Religious coping**

In the humanitarian workforce there are a number of casualties of stress, making the topic of stress and coping relevant to wellbeing amongst humanitarian workers. This current research is with Christian humanitarian workers and personal religious beliefs are expected to have an impact on vitality and burnout via religious coping. Ano and Vasconcelles (2005) investigated the relationships of negative and positive religious coping with ‘positive adjustment’ and ‘negative adjustment’ measured with a range of positive and negative wellbeing tools. However, vitality and burnout were not included so the present research seeks to establish the relationships between religious coping and these wellbeing outcomes. Positive religious coping is associated with a variety of positive outcomes (Meisenhelder & Marcum, 2009; Pargament et al., 1998), while the literature on negative religious coping produces more mixed results with some positive like post-traumatic growth (Calhoun et al., 2000; Pargament et al., 2006), but mostly negative outcomes (Meisenhelder & Marcum, 2009; Pargament et al., 2001). The inconsistent results make it more difficult to predict the relationship between negative religious coping and wellbeing, but there are some indications negative religious coping will be positively associated with burnout (Day, 2005; Kovacs & Kezdy, 2008).

Research Question 3: Does the use of religious coping play a part in determining whether a Christian humanitarian worker experiences vitality or burnout?

*Hypothesis 4a:* Positive religious coping will be positively associated with vitality.

*Hypothesis 4b:* Positive religious coping will be negatively associated with burnout.

*Hypothesis 5a:* Negative religious coping will be negatively associated with vitality.

*Hypothesis 5b:* Negative religious coping will be positively associated with burnout.

As well as the main relationships based on these variables, a relationship between internalisation and religious coping is predicted. The individual is most likely to be autonomous in selecting their coping plan such that it aligns with their true self. As such, it is expected

positive religious coping will be positively associated with identified religious beliefs and negative religious coping will be positively associated with introjected religious beliefs.

The following diagram sets out the hypotheses in respect of religious beliefs:

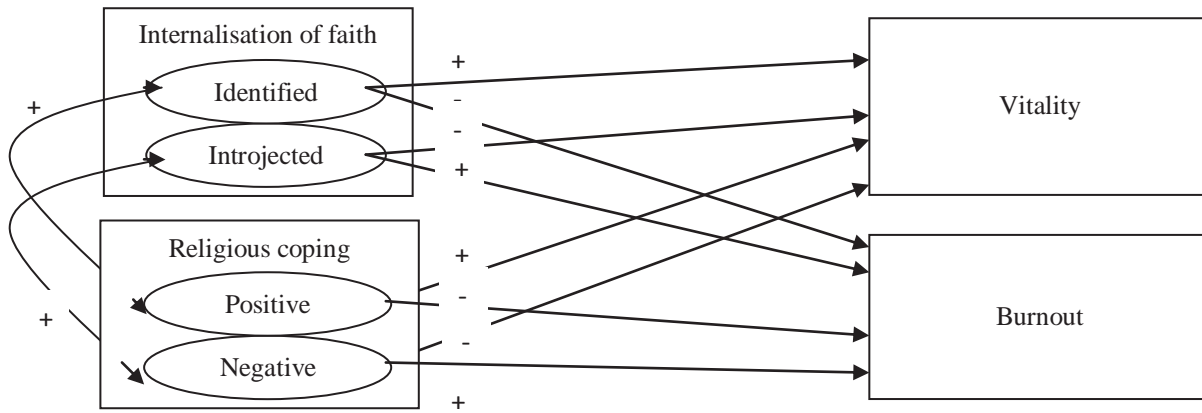


Figure 2. Schematic representation of hypothesised relationships between internalisation of Christian religious beliefs, religious coping, vitality and burnout.

### 6.3 Relative Contributions of Basic Need Satisfaction and Religious Beliefs

It is expected both need satisfaction at work and religious beliefs will influence subjective vitality and burnout. In addition to identifying the relationships between each of the explanatory variables and vitality and burnout separately, this research will examine their relative and cumulative effects on subjective vitality and burnout.

## **7.0 Methods and Materials**

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### **7.1 Research Approach**

The current research was predominantly quantitative, but supplemented by open-ended questions focused on the experience of stress at work, coping, and faith in times of stress. These questions were utilised to gain data beyond the measures which were created from a Western perspective (Pargament et al., 1998; Ross et al., 2009). This was deemed important in a study conducted in India given that stress, religion and coping are culturally shaped (Aldwin, 1994).

### **7.2 Sample**

#### **7.2.1 Criteria for inclusion**

There were three main inclusion criteria. First, the elements of this research project meant participants would have to identify themselves as Christians. Secondly, the measures used were created in English and there has been no authenticated translation into Tamil, the language of Tamil Nadu where Chennai is situated. This meant participants had to be competent in written English. Thirdly, participants had to be working within the broader Chennai area for Christian faith-based humanitarian organisations either for relief or development to alleviate human suffering.

#### **7.2.2 Sampling Frame**

International Christian-based humanitarian organisations in the Chennai area were targeted for participant recruitment. In South India there is a Christian heritage with many para-church organisations working on different levels in a still stratified society. If the sampling frame was 'Christian-based humanitarian organisations' in Chennai, a concern was there would be large numbers of very small, independent and largely unknown organisations and grassroots groups that would fit within that description. There is no network connecting them and so it would have been impossible to identify the number of potential organisations and who they are within the sampling frame. The larger the discrepancy between the sample data and the sampling frame, the greater the potential for coverage error thus undermining the representativeness of the results (Johnson, Beaton, Murphy, & Pike, 2000). The second practical reason for restricting the sampling frame to international organisations is they are most likely to have employees who are proficient in written English which is required for completing the questionnaires. Distributing questionnaires to organisations where only a small proportion could respond would introduce an unusual sampling problem, where the response rate would be random and not particularly

representative of their organisation.

### 7.2.3 Final Sample

The participants were employees from three international Christian-based organisations working in the Chennai region. Any individual employed during September to December 2010 when the questionnaires were distributed were invited to participate. One of the organisations allowing questionnaire distribution was where the researcher worked, thus making the anonymity of questionnaires especially important.

Approximately 270 questionnaires were distributed and 99 (36.6%) were returned. There were 37 female participants, 59 male participants and two participants who failed to answer the question. The age range of the sample was 18-50+ years, with the majority of the participants between the ages of 18-39 years, as shown in Table 1 (Section 8.1). The majority of participants (96) worked fulltime.

The length of time working in a Christian humanitarian organisation (although not necessarily the same organisation) varied from less than one year to 25 years; with the majority of the participants working up to nine years (see Table 1, Section 8.1).

The organisations sampled tend to have volunteers for approximately one year as well as staff who live in Chennai. The lack of social support outside of work is one of the major issues facing humanitarian workers (Salama, 1999), so length of time in Chennai is a potential indicator of whether a strong social support network has been established. This data is split into those who have been in Chennai one year or less, and those who have been in Chennai longer than a year. Acculturation is a gradual process which takes time and differs across people (Berry, 2005). However, the one year mark was selected since this allows sufficient time for people to get to know others even without being fully acculturated.

## 7.3 Procedure

Ethical Approval was granted by the Massey University Human Ethics Committee: Southern B, Application 10/27. Given the cultural context in which data collection took place, cultural advice was sought from an appropriate consultant who revealed there were no specific requirements for conducting research of this kind in Chennai, nor were there cultural practices to be accommodated in this topic with international humanitarian organisations. Initial contact was made via email and phone with five Christian-based international humanitarian organisations located in Chennai. Face-to-face meetings were conducted with four organisations, and three agreed to participate in the research. Each organisation's representative

was provided with an Information Sheet (see Appendix A) outlining the research and a Consent Form (see Appendix B) to sign if they agreed to their staff being recruited as potential participants. The organisation that declined access to their staff did so on the grounds that one of their employees recently conducted a research project into staff care, and they deemed a second study would burden their staff. The three participating organisations requested they not be named in the research. Hardcopies of the Information Sheets for individual participants (see Appendix C) and the questionnaires (see Appendix D) were left for the relevant organisations to distribute amongst staff. Prepaid envelopes were also distributed so questionnaires could be returned at no cost to the individual or the organisation. Participants were self-selected and anonymous. Wenemark, Frisman, Svensson, and Kristenson (2010) explored some of the positive experiences of survey participants, especially in circumstances where they are confident about the anonymity and confidentiality of their responses.

## 7.4 Measures

The questionnaire is a compilation of various established measures, tapping into numerous theoretical domains.

### 7.4.1 Wellbeing

Two energy-related constructs were employed to assess wellbeing: vitality and burnout.

**Vitality.** Subjective vitality was measured by the individual difference version of the Subjective Vitality Scale (Ryan & Frederick, 1997). It was created with seven items but a validation study by Bostic and colleagues (2000) revealed it was more effective with one of the items removed. The six-item version was used in this study, measuring energy. For example, one item states “I feel alive and vital” and another “I feel energised”. Each item was assessed on a 7-point Likert scale from 1 (not at all) to 7 (very true) and the total score calculated by adding up the total and averaging across the six items. The experience of subjective vitality is associated with higher scores. This measure has yielded Cronbach’s alpha scores of 0.80, 0.84, 0.86 and 0.89 (Bostic et al., 2000; Nix et al., 1999; Ryan & Frederick, 1997).

**Burnout.** The Maslach Burnout Inventory-Human Services Survey (MBI-HSS; Maslach & Jackson, 1981) has 22 items and three sub-scales. The emotional exhaustion (EE) component has nine items, the depersonalisation (D) component has five items and the perceived personal accomplishment (PA) subscale has eight items (Rohland et al., 2004). These respective subscales are measured by items like “I feel emotionally drained from my work”,

“I’ve become more callous towards people since I took this job”, and “I have accomplished many worthwhile things in this job”. Responses were made on a 7-point Likert scale ranging from 1 (never) to 7 (daily) and subscale scores were tallied and averaged. Higher scores on EE and D combined with lower scores on PA are indicative of burnout. The MBI-HSS is the most widely used burnout scale across various cultures because of its established validity and reliability (Rohland, Kruse, & Rohrer, 2004; Schaufeli & Enzmann, 1998; Yaman & Soler, 2002), and as such is appropriate for this research in India. Internal consistency coefficients for EE, D and PA have been reported as 0.89, 0.77 and 0.74 respectively and the test-retest coefficients proved significant with a range from 0.53 to 0.82 (Maslach & Jackson, 1981). Convergent validity with behavioural ratings, job characteristics (e.g., task significance, feedback, meaningfulness) and other outcomes theorised to relate to burnout (e.g., growth satisfaction) provided substantial evidence of validity (Maslach & Jackson, 1981).

The current research uses Likert scale measures with anchors attached to numbers on the scale which mostly can be seen as the same distance apart. However, the MBI frequency anchors are not clearly equidistant from each other. Nevertheless, previous studies on burnout have treated the MBI like an interval scale (Jawahar et al., 2007; Jenaro et al., 2007) and this research will do likewise in order to have comparative data. In the current research, all the measures will be treated as interval data and so subject to parametric data analyses (Clegg, 1998; Jamieson, 2004; Kuzon, Urbanchek, & McCabe, 1996; Pett, 1997; Stine, 1989).

#### **7.4.2 Basic Need Satisfaction at Work**

The Basic Psychological Need Satisfaction at Work Scale (BNS-W; Deci et al., 2001) has 21 items and assessed three components: autonomy (7 items), competence (6 items) and relatedness (8 items). Examples of these items include “I feel like I can make a lot of inputs to deciding how my job gets done”, “People at work tell me I am good at what I do”, and “I get along with people at work”. It was based on the Work Motivation Form-Employee (Kasser et al., 1992) measure with appropriate construct validity and internal consistencies (Ilardi et al., 1993). This BNS-W measure is a 7-point Likert scale ranging from 1(not at all true) to 7 (very true). It was designed with nine items whose scores needed to be reverse coded before the scores could be added up and then divided by 21 to get an average score. Internal consistency coefficients for each component are reported as 0.73 for competence, 0.79 for autonomy and 0.84 for relatedness (Deci et al., 2001; Vansteenkiste et al., 2007). The cross-cultural applicability of this measure was investigated and discovered that the internal consistency was 0.83 for the Bulgarian sample and 0.89 for the American sample.

#### **7.4.3 Religion**

This research investigated two factors of religion that impact wellbeing: the internalisation of the Christian religion and the use of religious coping to deal with stressful situations.

**Internalisation of Christian religious beliefs.** The Religion Self-Regulation Questionnaire (SRQ-R) also known as the Christian Religious Internalisation Scale (CRIS) was created and validated by Ryan and colleagues (1993). It was developed over several pilot studies for fact and internal consistency analysis. Ryan and colleagues discovered a 12-item version was as psychometrically sound as the longer 36 item version, so the 12 item measure was used here. It assessed two internalisation types: ‘introjection’ to represent controlled motivation and ‘identification’ to represent autonomous motivations. These motivations are exemplified by the responses to “A reason I think praying by myself is important is” with the introjected response “Because if I don’t, God will disapprove of me” and the identified response as “Because I find prayer satisfying”. These are scored on a 7-point Likert scale, with 1 representing not at all, and 7 representing very true. The two subscales were totalled separately and averaged to show whether identified or introjected faith is greater in an individual. The different samples varied in their internal consistency coefficients, ranging from 0.64 to 0.82.

**Religious Coping.** Beyond measuring religious beliefs, many researchers should investigate the functional element of religion and whether it helps people cope with stress (Egbert, Mickley, & Coeling, 2004). The Brief RCOPE (Pargament et al., 1998) is a 14-item measure adapted from the RCOPE (Pargament, Koenig, & Perez, 2000), which has 63 items.

When length of the RCOPE survey makes administration awkward, the Brief RCOPE may be used (Pargament et al., 1998). This instrument addresses positive religious coping (spiritual connection, seeking spiritual support, religious forgiving, collaborative religious coping, benevolent religious reappraisal, religious purification and religious focus) and negative religious coping (spiritual discontent, punishing God reappraisal, interpersonal religious discontent, demonic reappraisal and reappraisal of God’s powers) (Pargament et al., 2000). There are 7 items relating to the positive religious coping and 7 items relating to negative religious coping. Each item is scored on a 4-point Likert scale ranging from 0 “not at all,” “somewhat,” “quite a bit,” and through to 3 “a great deal.” This means each subscale has a potential score ranging from 0-21. Reliability for the Brief RCOPE ranges from 0.81 to 0.91 for positive religious coping, and 0.54 to 0.70 for negative religious coping (Egbert et al., 2004). Pargament and colleagues (1998) wrote this scale has high internal consistency ( $\alpha=0.81$  to 0.90) and good discriminant validity.



#### **7.4.4 General Causality Orientation**

The General Causality Orientation Scale (GCOS) (Deci & Ryan, 1985b) is a measure of general causality orientation, and has three subscales: autonomy-oriented, control-oriented and impersonal-oriented. The first version (12 vignettes, 36 items) was used. Each vignette establishes a different scenario, there are three items (autonomy, controlled, impersonal) and the participant responds to all three items by rating themselves on a 7-point Likert scale from 1 (very unlikely) to 7 (very likely). Each subscale is added up to give relative totals of the three orientations in each participant.

One example is a vignette and the three associated items is: “You have been offered a new position in a company where you have worked for some time. The first question that is likely to come to mind is: 1) What if I can’t live up to the new responsibility? 2) Will I make more at this position? and 3) I wonder if the new work will be interesting”. All three subscales have demonstrated good internal reliability with Cronbach alpha scores ranging from 0.75-0.90 and test-retest reliability over a period of two months ranging from 0.75 to 0.85 (Blustein, 1988; Deci & Ryan, 1985b; Vallerand, Blais, LaCouture, & Deci, 1987).

#### **7.4.5 Demographic Information**

The demographic section of the questionnaire sought information about each participant’s gender, age range, part-time or fulltime work, length of time working in a Christian humanitarian organisation and also if the person has moved to Chennai, the length of time living in there.

### **7.5 Qualitative Data**

Qualitative data was gathered via open-ended questions on the same questionnaire. However, the rate of response to qualitative questions was lower than for quantitative data. There were a total of 99 surveys returned but only 80 survey respondents included an answer to one of the four questions relating to stress in the workplace. Only 70 respondents answered at least one of the two questions about how they view their faith in times of stress. There were two sets of questions. The first set were four questions relating to stress and coping in the workplace, and the second set were specifically focused on how the respondent views their faith in times of stress (refer to Appendix E for the questions).

#### **7.5.1 Stress in the workplace questions**

The questions on stress and coping were deemed necessary because an individual’s perception of stress and coping is profoundly influenced by culture (Aldwin, 1994; Sinha, 2007). It will be

interesting to compare the sources of stress that are revealed in the results against the research into antecedents of burnout as well as through the lens of how many of the sources of stress relate to thwarted need satisfaction. Another rationale for including a general question about coping was to see if and how many people identified religious coping as their coping strategy without it a specific prompt asking about being this.

Given the importance of perceived workplace support in the literature for increasing staff wellbeing and minimising negative effects of stress, a question on workplace support was included. Deci and Ryan (2000) wrote basic psychological needs may be manifested differently across cultures implying that what an employee perceives to be supportive of their autonomy, competence and relatedness may differ across cultures.

### **7.5.2 Faith in times of stress questions**

Two questions relating to perceptions of faith in times of stress, and these were used to gain information beyond the bounds of the Likert scales (Pargament et al., 1998; Ryan et al., 1993). As far as the researcher is aware, there are no equivalent measures designed for India. Due to this limitation in an area that can be as culturally diverse as the understanding of God and importance of religion as well as approaches to stress and the use of religion to cope, the supplementary qualitative data may help to explain the quantitative data, or produce interesting leads for future research.

Qualitative approaches tend to encourage viewing the target phenomena within their social, historical and cultural contexts (Gergen, 1985), and seek information about the “experiences, meanings and reality of participants” (Braun & Clarke, 2006, p. 81). The qualitative aspect of this research is not expected to produce a satiated understanding of the research concepts since survey questions do not allow for prompts or clarifying questions to delve deeper into the data. It is hoped this qualitative data may help to explain the quantitative data, or produce interesting leads for future research to follow up.

The thematic analysis six phase procedure outlined by Braun and Clarke (2006) was used to analyse the qualitative data:

- 1) Familiarisation with the data, reading, re-reading and noting down initial ideas.
- 2) Generation of initial code, coding interesting features of the data and allocating data to codes.
- 3) Searching for themes, collating codes into potential themes.

- 4) Reviewing themes, checking viability of themes and creation of a thematic map.
- 5) Defining and naming themes, ongoing refinement of themes, generating clear definitions and names of each theme.
- 6) Producing the report.

## 8.0 Results

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The current research had a primary focus on quantitative data and those results are presented in section 8.1. Section 8.2 outlines results pertaining to the qualitative part of this research.

### 8.1 Quantitative Analysis

The Statistical Package for Social Sciences (SPSS) Version 18 software was used to conduct all analyses.

#### 8.1.1 Demographic Information

Of the 99 participants, 37 were female, 59 were male, and three failed to respond to that question. The amount of time working in Christian humanitarian organisations ranged from three months to 25 years ( $M = 5.2$  years). This information has been collapsed into categories of five years working in Christian humanitarian organisations, and the length of time living in Chennai has been dichotomised into those new to the city with a line drawn at one year. Table 1 provides the demographic information from this study. Further detail is provided in section 7.2.3 relating to the sample description and demographic information.

Table 1

*Demographic Information on Sample*

Demographics		Percent (%) of sample
<b>Age range</b>	18-29	40
	30-39	40
	40-49	9
	50+	5
<b>Work arrangements</b>	Fulltime	96
	Part-time	0
<b>Time in Christian humanitarian organisation</b>	0-4 years	44
	5-9 years	40
	10-14 years	10
	15-19 years	2
	20-25 years	2
<b>Time in Chennai</b>	Up to 1 year	12
	More than 1 year	82

#### 8.1.2 Exploratory Data Analysis

The quality of data analysis relies on a well-conceived and carefully executed research project (Austin, Boyle, Lualhati, 1998; Murphy, 2002) as well as data hygiene and data preparation (DiLalla & Dollinger, 2006). Exploratory data analyses were conducted assessing for missing data, outliers and violations of the following statistical assumptions: normality, linearity,

homoscedasticity and independence of observations (Ott & Longnecker, 2008; Tabachnick & Fidell, 2007; Yin, 2008). The results of these analyses and the necessary data transformations in response to those tests are reported in Appendix F.

All subsequent analyses were undertaken on log transformed variables, except for the descriptive statistics where the original scores (i.e., not recoded or transformed) were used to report means, standard deviations and reliability scores in order to assist in interpretation and allow comparisons with other studies.

### 8.1.3 Descriptive Statistics

The means, standard deviations and Cronbach's alpha reliability coefficients for all original (i.e., not transformed) research variables are presented in Table 2.

Table 2

*Score ranges, Means, Standard Deviations, and Cronbach's Alpha reliability coefficients for all research variables*

Variable	Scale (min-max range)	Mean	SD	$\alpha$
<b>Wellbeing</b>				
<i>Vitality</i>	Subjective Vitality (1-7)	<b>5.38</b>	<b>1.37</b>	<b>0.77</b>
<i>Burnout</i>	Across burnout subscales (1-7)	<b>3.51</b>	<b>1.75</b>	<b>0.74</b>
	Emotional Exhaustion (1-7)	3.00	1.83	0.85
	Depersonalisation (1-7)	2.46	1.70	0.77
	Diminished Personal Accomplishment (1-7)	5.09	1.73	0.61
<b>Need Support at Work</b>				
<i>Basic Need Satisfaction at Work</i>	Across all subscales (1-7)	<b>5.08</b>	<b>1.59</b>	<b>0.87</b>
	Autonomy (1-7)	4.83	1.67	0.75
	Competence (1-7)	5.22	1.58	0.62
	Relatedness (1-7)	5.19	1.52	0.71
<b>Religious Beliefs</b>				
<i>Internalisation Scale</i>	Identified regulation (1-7)	6.09	1.21	0.71
	Introjected regulation (1-7)	3.02	1.94	0.67
<i>Religious Coping Scale</i>	Positive coping (0-3 → 0-21)	17.37	2.80	0.53
	Negative coping (0-3 → 0-21)	7.02	5.14	0.82
<b>General Causality Orientation</b>				
<i>General Causality Orientation Scale</i>	Autonomous orientation (1-7 → 12-84)	65.66	8.39	0.73
	Controlled orientation (1-7 → 12-84)	48.75	9.37	0.68
	Impersonal orientation (1-7 → 12-84)	39.60	12.02	0.83

The descriptive information for each individual item is provided in Appendix G. The variables are from established measures with acceptable psychometric qualities of reliability and validity, as outlined in the section on Methods and Materials (Chapter 7). An overview of means and standard deviations on each of the variables from previous research samples is provided in

Appendix H, although no samples have been identified in this context of Christian humanitarian workers.

Vitality was similar to other sample populations (Calarco, 2011; Tassell, 2009; Taylor & Lonsdale, 2010). The emotional exhaustion and depersonalisation burnout scores were similar but slightly higher (unhealthier) than comparison samples (Leiter & Laschinger, 2006; Rupert & Kent, 2007; Tassell, 2009), although there were larger standard deviations suggesting greater variation. The personal accomplishment scores were similar to most of the comparison samples, and there was only one sample with a notably lower sense of accomplishment. The Basic Need Satisfaction scores were comparable across studies (Edmunds, Ntoumanis, & Duda, 2006; Greguras & Diefendorff, 2009; Greguras & Diefendorff, 2010; Sørensen, Halvåsen, Gulliksen, & Kristiansen, 2009) as were the general causality orientations (Kiener, 2006; Ryan & Deci, 1985b; Vallerand et al., 1987). The religious beliefs, particularly religious coping, had the greatest variation of the variables of interest across samples (Hills, Paice, Cameron, & Shott, 2005; Phelps et al., 2009; Tamas, Aniko, & Katalin, 2011; Van Dyke et al., 2009; Yi et al., 2006) making it difficult to determine whether the current scores were ‘similar’ to other samples. Only one of the comparison samples (Tassell, 2009) examined vitality and burnout in humanitarian workers, but with different predictor variables. Tassell (2009) cautioned against drawing too many inferences from comparisons with results from different samples. Of all the comparisons, the Basic Need Satisfaction scores may be the most useful for comparison across samples since these are considered universal needs and so will need to be fulfilled regardless of whether the target population is students, teachers, athletes or humanitarian workers.

Variables in social sciences are notoriously difficult to measure so the items within a scale should be assessed for internal consistency or reliability to eliminate errors caused by unreliable measurement (Brace, Kemp, & Snelgar, 2009). George and Mallery (2003) wrote that alpha scores above 0.90 are excellent, above 0.80 are good, above 0.70 are acceptable, above 0.60 are questionable, above 0.50 are poor and below 0.50 are unacceptable. There is no definitive standard for reliability (Pedhazur & Schmelkin, 1991) yet many researchers follow Nunnally’s (Nunnally) recommendation that Cronbach’s alpha coefficient scores should be 0.70, although 0.60 is acceptable. The majority of the current data yielded alpha scores above 0.70 but there is one low score of 0.53 for the subscale ‘positive religious coping’. The Brief RCOPE has been validated with the requisite standard of reliability (Pargament et al., 1998), and other studies have produced a range of reliability scores (Arnette, Mascaro, Santana, Davis, & Kaslow, 2007; Bjorck & Kim, 2009; Van Dyke, Glenwick, Cecero, & Kim, 2009). There has not been a study

into religious coping done with comparative sample (as far as the researcher is aware) and it may be that the use of the Brief RCOPE with Christians in a Christian humanitarian organisation would lead to these results.

## **8.2 Relationships Between Demographic and Psychological Variables**

### **8.2.1 Statistical Tests**

Differences in psychological variables depending on demographic variables were explored using *t*-tests and analyses of variance (ANOVA) as appropriate. Wilkinson (1999) advised researchers to incorporate the use of multiple sources of statistical information; to report effect sizes as well as significance tests. since the use of null hypothesis testing has been criticised (Schmidt & Hunter, 2002) and even abused (Frick, 1996). Therefore, Pearson's correlations were also reported where relevant to produce robust statistical findings. The effect sizes given by Pearson's *r* may detect relationships that are small or moderate even if the associations are non-significant. Cohen (1992) identified the strength of effect sizes and determined that  $r = 0.10$  to  $0.29$  is a small effect size,  $r = 0.30$  to  $0.49$  is a medium effect size and  $r = 0.50$  to  $1.0$  is a large effect size.

The question about part-time or full-time work was discarded as a variable because 96 responded fulltime, three did not respond and nobody responded part-time. Therefore, there will be no useful insights gained into differences based on work hours.

The length of time spent working in Christian humanitarian organisations and the length of time spent living in Chennai questions gathered continuous data allowing Pearson's correlations to be performed. Even though certain statisticians warn against degrading precision of data by converting continuous variables into categories, others choose to categorise the data to get a different perspective on the data (Altman & Royston, 2006; Edgington, 1995). In this research, it is likely people living in Chennai for less than a year could have different social support than those who have lived there for longer creating a natural cut off point. The variable about length of time working in a Christian humanitarian organisation was simply split more equitemporally, except for the categories of 15-20 years and 21-25 years which were combined due to particularly low numbers of respondents and to make more balanced group sizes. In some cases, unbalanced group sizes can undermine statistical power or threaten validity of results (Kline, 2004) although that is most applicable to experimental designs. For groups based on demographic distinctions (e.g., age or gender) unequal group sizes are acceptable as they may be accurate reflections and forcing equal groups can introduce bias (Kline, 2004).

### 8.2.2 Significant Demographic Findings

Each psychological variable is separately discussed in terms of relationships to demographic variables. The correlations between demographic and psychological variables are presented in Table 3 (below).

**Vitality.** There was a statistically significant difference in vitality based on length of time working in Christian humanitarian organisations ( $F(3, 95) = 3.859, p < 0.05$ ). The mean for 0-4 years was higher than 5-9 years, which was higher than 10-15 years (0-4 years:  $N = 44, M = 0.4347$ ; 5-9 years:  $N = 40, M = 0.3692$ ; 10-14 years:  $N = 10, M = 0.2626$ ; 15-25 years:  $N = 4, M = 0.3537$ ). However, the 15-25 year bracket was approximately the same as the 5-9 year bracket, indicating some people can maintain their wellbeing long term. However, Pearson's correlations did not yield statistically significant findings.

**Burnout.** Burnout and each subscale, was tested against the demographic variables. The only detected difference was found on the depersonalisation subscale ( $t = 2.427, df = 95, p = 0.017, 2 \text{ tailed}$ ). Males reported more depersonalisation ( $M = 1.072, N = 60$ ) than females ( $M = .97, N = 37$ ).

**Basic Need Satisfaction at Work.** Gender differences were detected in the Basic Need Satisfaction scores ( $t = 1.955, df = 95, p = 0.054, 2 \text{ tailed}$ ). Males scored higher on average ( $M = 0.4640, N = 60$ ) than females ( $M = 0.4081, N = 37$ ), indicating they experience a lower level of basic psychological need satisfaction than women.

Significant relationships were evidenced for length of time spent in Chennai, on the relatedness subscale ( $t = -2.129, df = 97, p = 0.036, 2 \text{ tailed}$ ), for those who had been there less than a year ( $N = 12, M = 0.3402$ ) and those longer than a year ( $N = 87, M = 0.4376$ ). This was unexpected as it was anticipated people living in Chennai for a shorter amount of time would have lower relatedness scores, due to less social networks. Pearson's correlations were non-significant.

**CRIS.** One unexpected finding was the difference to identified motivation of religion based on the length of time working in a Christian humanitarian organisation ( $F(3, 95) = 2.699, p = 0.05$ ). Those working in Christian humanitarian organisations for 0-4 years ( $N = 44, M = .2914$ ) had higher scores than those working for 5-9 years ( $N = 40, M = .2299$ ), who had higher scores than those working for 10-14 years ( $N = 11, M = .1763$ ), who had higher scores than those working for 15-25 years ( $N = 4, M = .1152$ ). The lower scores indicate higher identified motivation (i.e., better internalisation) for religious beliefs and behaviours (given identification



was recoded for statistical analyses). Pearson's correlations indicated a significantly negative relationship between identified motivation and time spent working in a Christian humanitarian organisation.

**Religious Coping.** Religious coping was only related to one demographic variable. Negative religious coping was found to be different depending on the amount of time living in Chennai ( $t = -2.792$   $df = 87$ ,  $p = 0.006$ , 2 tailed), with people who have lived in Chennai using less negative religious coping ( $N = 12$ ,  $M = .5273$ ) than those who have lived there for longer than one year ( $N = 77$ ,  $M = .8100$ ). Pearson's correlations were non-significant.

**General Causality Orientations Scale.** There were significant gender differences in the GCOS autonomous orientation subscale ( $t = 1.971$ ,  $df = 95$ ,  $p = 0.050$ ). Males reported higher scores on the autonomous orientation subscale ( $N = 60$ ,  $M = 1.4690$ ) than females ( $N = 37$ ,  $M = 1.4095$ ) indicating lower averages of autonomous orientations (since the autonomous orientation subscale was recoded for statistical analyses).

Another demographic difference was noted between the length of time working in Christian humanitarian organisations and controlled orientation ( $F(3,84) = 5.199$ ,  $df = 95$ ,  $p < 0.005$ ), although these were not consistent – those working 0-4 years, 10-14 years or 15-25 years had similar reported but with those at 5-9 years reporting higher levels of controlled orientation. People working in Christian humanitarian organisations for 0-4 years ( $N=42$ ,  $M = 1.6605$ ), 5-9 years ( $N=32$ ,  $M=1.7236$ ), 10-14 years ( $N=10$ ,  $M=1.6376$ ) and 15-25 years ( $N=4$ ,  $M=1.6350$ ). Pearson's correlational analyses showed no statistically significant effect size between these variables.

Table 3

*Pearson's correlations (r) between demographic and psychological variables*

Variable		Time working in Christian humanitarian organisations	Length of time living in Chennai
<b>Subjective Vitality</b>		-0.186	-0.116
<b>Burnout (MBI)</b>	As a whole construct	0.027	0.141
	Emotional Exhaustion	0.166	0.212
	Depersonalisation	0.026	0.139
	Personal accomplishment	-0.139	-0.051
<b>BNS-W</b>	As a whole construct	0.74	0.082
	Autonomy	0.042	0.150
	Competence	0.009	-0.060
	Relatedness	0.146	0.108
<b>CRIS</b>	Identified	-0.332*	-0.253
	Introjected	0.050	0.083
<b>Brief RCOPE</b>	Positive Coping	-0.137	-0.105
	Negative coping	0.135	0.267
<b>GCOS</b>	Autonomous	-0.083	-0.018
	Controlled	0.005	0.207
	Impersonal	-0.02	-0.002

\*  $p < 0.01$  level (2 tailed)

### 8.3 Primary Analyses: Relationships among Psychological Variables

This research explores the relationships basic need satisfaction at work and personal religious beliefs have with subjective vitality and burnout. These factors may be referred to as explanatory or predictor variables although these names do not imply causality. The results of the analyses among psychological variables are presented in two sections below. The first section (8.3.1) concerns the correlation analyses and interaction effects for the predictor variables and the second section (8.3.2) is based on regression analyses and the respective contribution of these variables to vitality and burnout.

The reverse-coding and data transformations are particularly important to keep in mind for interpretation of test results (Sokal & Rohlf, 1995; Tabachnick & Fidell, 2007) to avoid mistaken conclusions. For example, Hypothesis 1b states basic need satisfaction will be negatively correlated with burnout. While this hypothesis is confirmed in terms of the meaning between the constructs, statistically, the results show a positive correlation due to the data preparation of the raw scores (Refer to Appendix F for exploratory data analysis).

#### 8.3.1 Correlational Analyses

##### 8.3.1.1 Introduction: Wellbeing Measures.

Vitality and burnout measures elicit information about the wellbeing of employees working in Christian humanitarian organisations. These constructs are theoretically distinct yet overlap due to their energy-driven natures. Pearson's correlations (see Table 4 below) justify the use of both indicators since there is a medium significant positive correlation between good vitality scores and good burnout scores ( $r = 0.464$ ,  $N = 99$ ,  $p < 0.005$ , two-tailed) but this relationship is not so strong as to render either one of the measures redundant.

Table 4

*Pearson's correlations ( $r$ ) between vitality and burnout*

	Burnout	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
Vitality	0.464**	0.277**	0.284**	0.493**

\*\* Correlation is significant at 0.01 level

##### 8.3.1.2 Basic Need Satisfaction at Work.

- *Hypothesis 1a: Supported - Basic need satisfaction at work will be positively correlated with vitality.*
- *Hypothesis 1b: Supported - Basic need satisfaction at work will be negatively correlated with burnout.*

There is a statistically significant positive relationship between basic need satisfaction at work (BNS-W) and vitality scores ( $r = 0.504$ ,  $N = 99$ ,  $p < 0.001$ , two-tailed). This borders on a large effect size and substantiates the hypothesis that fulfilment of basic needs in the workplace is associated with reported high vitality. There is an even larger effect in the correlation between basic need satisfaction at work and burnout scores ( $r = 0.692$ ,  $N = 99$ ,  $p < 0.001$ , two-tailed), meaning need fulfilment is associated with lower levels of burnout, and thwarted needs are associated with higher burnout rates. Satisfaction of each basic need is associated with healthier levels on all three burnout subscales, but this research focuses on the constructs as a whole. Pearson's correlations are displayed in Table 5 below.

Table 5

*Pearson's correlations ( $r$ ) between basic need satisfaction at work and wellbeing*

	Subjective Vitality	Burnout	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
BNS at Work	0.504**	0.692**	0.565**	0.518**	0.457**
BNS - Autonomy	0.464**	0.638**	0.522**	0.501**	0.420**
BNS - Competence	0.387**	0.642**	0.469**	0.491**	0.413**
BNS - Relatedness	0.469**	0.544**	0.484**	0.377**	0.370**

\*\* Correlation is significant at 0.01 level

### 8.3.1.3 Christian religious beliefs.

This section presents the current research findings on the impact of internalisation of religious beliefs and religious coping on subjective vitality and burnout.

#### 8.3.1.3.1 Internalisation of religious beliefs.

- *Hypothesis 2a: Supported – Identified religious beliefs will be positively associated with vitality.*
- *Hypothesis 2b: Not supported - Identified religious beliefs will be negatively associated with burnout.*
- *Hypothesis 3a: Not supported - Introjected religious beliefs will be negatively associated with vitality.*

- *Hypothesis 3b: Supported - Introjected religious beliefs will be positively associated with burnout.*

Pearson's correlation analyses were undertaken between internalisation of religious beliefs and both vitality and burnout to examine the strength and direction of these relationships (see Table 6 below). As hypothesised, there is a moderate positive correlation between identified motivation and subjective vitality ( $r = 0.419$ ,  $N = 99$ ,  $p < 0.001$ , two-tailed). However, the results showed no statistically significant relationship between identified motivation and burnout.

Introjected motivation for religion showed the opposite pattern: there is a small but significant relationship with burnout ( $r = 0.268$ ,  $N = 99$ ,  $p < 0.01$ , two-tailed) but no significant positive or negative relationship to subjective vitality.

Table 6

*Pearson's correlations (r) between internalisation of religious beliefs and wellbeing*

	Subjective Vitality	Burnout	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
Identified motivation	0.419**	0.188	0.095	0.133	0.245*
Introjected motivation	-0.023	0.268**	0.220*	0.371**	0.108

\* Correlation is significant at 0.05 level (2 tailed) \*\*Correlation is significant at the 0.01 level (2 tailed).

*General Causality Orientation Scale.* The results pertaining to the General Causality Orientation Scale are included here because they are essential steps in being able to determine whether the findings above about internalisation of religion will hold after controlling for general causality orientations. This rationale is explained in more detail in the discussion chapter.

Pearson's correlations between internalisation of religious beliefs and general causality orientations are displayed in Table 7. There was a statistically significant albeit small effect size showing a positive correlation between identified (i.e., autonomous) motivation for religion and autonomous generalised orientation ( $r = 0.273$ ,  $N = 88$ ,  $p < 0.01$ , two-tailed). A medium or moderate effect was demonstrated in the positive associations introjected motivation for religious beliefs has with both controlled orientation ( $r = 0.454$ ,  $N = 88$ ,  $p < 0.01$ ) and impersonal orientation ( $r = 0.323$ ,  $N = 88$ ,  $p < 0.01$ ). A person with an autonomous approach to life is associated more often with identified religion than people with controlled or impersonal orientations. Introjected religion (i.e., not autonomous) is associated with controlled or impersonal than with autonomous general orientations.

Pearson's correlations were undertaken to assess the relationships between GCOS and both vitality and burnout (see Table 7). Vitality has a positive correlation with autonomous orientation ( $r = 0.273$ ,  $N=88$ ,  $p < 0.01$ , two-tailed) which is a small effect. There is also a moderate effect in the positive correlation between controlled orientation and burnout ( $r = 0.327$ ,  $N=88$ ,  $p < 0.01$ , two-tailed), and a small effect in the positive relationship between with impersonal orientation and burnout ( $r = 0.294$ ,  $N=88$ ,  $p < 0.01$ , two-tailed). As expected by SDT, there is a connection between internalisation for religious beliefs and motivation at a general level (GCOS), but the strength of the relationship indicates internalisation of faith plays a role, independent of general orientation, to wellbeing.

Table 7

*Pearson's correlations ( $r$ ) that vitality, burnout and internalisation of religious beliefs have with GCOS*

	GCOS – Autonomous	GCOS – Controlled	GCOS – Impersonal
Vitality	0.273**	-0.093	0.150
Burnout	0.142	0.327**	0.294**
Identified motivation	0.273**	-0.107	0.007
Introjected motivation	0.001	0.454**	0.323**

\* Correlation is significant at 0.05 level (2 tailed) \*\* Correlation is significant at the 0.01 level (2 tailed).

A multiple regression (MR) was conducted for both vitality and burnout and to determine if the presence or absence of GCOS significantly changes the relationships that identification and introjection of religious beliefs have with wellbeing. Table 8 below compares the difference in the models. GCOS in the MR models does not produce significant changes to the predictor value of internalisation, thus allowing the wellbeing outcomes to be attributed to internalisation of religion.

Table 8

*Identification and introjection beta coefficients in a comparison of vitality and burnout multiple regression models with and without GCOS*

		Beta from MR with all psychological variables including GCOS	Beta from MR without GCOS
Vitality	Identification	0.277*	0.271*
	Introjection	-0.069	0.006
Burnout	Identification	-0.048	-0.070
	Introjection	0.080	0.042

### 8.3.1.3.2 Religious Coping

- *Hypothesis 4a: Not supported - Positive religious coping will be positively associated with vitality.*
- *Hypothesis 4b: Not supported - Positive religious coping will be negatively associated with burnout.*
- *Hypothesis 5a: Not supported - Negative religious coping will be negatively associated with vitality.*
- *Hypothesis 5b: Supported - Negative religious coping will be positively associated with burnout.*

Subjective vitality was not significantly correlated with either positive religious coping or negative religious coping. Burnout was not significantly correlated with positive religious coping but there was a positive relationship between negative religious coping scores and scores indicative of likely burnout ( $r = 0.377$ ,  $N = 89$ ,  $p < 0.001$ ). This moderate effect size substantiates that low levels of negative religious coping are associated with healthier levels of burnout, while greater use of negative religious coping was associated with worse burnout indicators.

Table 9

*Pearson's correlations ( $r$ ) between religious coping and wellbeing*

		Subjective Vitality	Burnout	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
<b>Positive coping</b>	<b>religious</b>	0.191	0.194	0.131	0.123	0.149
<b>Negative coping</b>	<b>religious</b>	0.103	0.377**	0.394**	0.429**	0.040

\* Correlation is significant at 0.05 level (2 tailed) \*\*Correlation is significant at the 0.01 level (2 tailed).

### 8.3.1.3.3 Interaction between internalisation and religious coping

There is a possible theoretical connection between internalisation of religious beliefs (i.e., CRIS) and religious coping (i.e., Brief RCOPE). For example, internalisation of religion can be expected to shape the selection and effectiveness of religious coping strategies (Lazarus & Folkman, 1984; Newton & McIntosh, 2010). Due to the potential for interaction effects between the CRIS and Brief RCOPE variables, the relationships were tested and confirmed certain relationships between the two constructs (Pearson's correlations in Table 10). There is a positive relationship between identified motivation for religion and positive religious coping ( $r$

= 0.385,  $N=81$ ,  $p < 0.01$ ), which is a medium effect but there is no relationship to negative religious coping. The converse is true for introjection which has a small effect and positive correlation with negative religious coping ( $r = 0.288$ ,  $N=89$ ,  $p < 0.01$ ) but no significant relationship to positive religious coping.

Table 10

*Pearson's correlations ( $r$ ) between religious coping and internalisation of religious beliefs*

	Identified motivation	Introjected motivation
<b>Positive religious coping</b>	0.385**	-.122 (.279)
<b>Negative religious coping</b>	0.086	.288** (0.006)

\*\*Correlation is significant at the 0.01 level (2 tailed).

The correlation findings on religious beliefs showed identified regulation is associated with vitality and positive religious coping has a relationship in the same direction albeit not statistically significant, and introjected regulation and negative religious coping are both positively associated with burnout. Therefore, the current research investigated possible moderating effects such that the combinations of identification and positive religious coping and introjection and negative religious coping augment the previously noted relationships.

Abelson (1995) noted there is rarely only one correct choice or rule for which statistical procedure to follow but this study uses hierarchical multiple regression to investigate potential moderation interactions (Saunders, 1956; Tabachnick & Fidell, 2007).

*Moderation.* Baron and Kenny (1986) outlined the process for testing for moderation using a regression model. The relevant variables in this case are internalisation of religious beliefs and religious coping so these were centred to minimise problems with collinearity. The dependent variable was regressed onto the predictor and moderator variables, followed by a second step where the analysis was conducted with these variables and the interaction between them. Moderation is present if the interaction term is statistically significant predictor (Fuhrman & Holmbeck, 1995).

In the current study, there are two dependent variables so one MR analysis was conducted for vitality and a second for burnout to investigate whether internalisation's impact on wellbeing is moderated by religious coping. The main effects should still be included in the model even if they are non-significant (Cohen, Cohen, West, & Aiken, 2003).

Table 11

*Moderation analysis of interaction between internalised religious beliefs and religious coping*

DV	IV	B	$\beta$	R	R <sup>2</sup>	Adj. R <sup>2</sup>	F
<b>Vitality</b>	Model 1			0.422	0.178	0.132	3.841**
	Identified	0.378	0.393**				
	Introjected	0.039	0.046				
	Positive religious coping	0.031	0.056				
	Negative religious coping	0.033	0.068				
	Model 2			0.551	0.304	0.221	3.654***
	Identified	0.491	0.510***				
	Introjected	0.022	0.026				
	Positive religious coping	-0.019	-0.035				
	Negative religious coping	0.018	0.037				
<b>Burnout</b>	Identified x positive religious coping	-0.632	-0.202				
	Identified x negative religious coping	-0.402	-0.141				
	Introjected x positive religious coping	-0.146	-0.051				
	Introjected x negative religious coping	-1.099	-0.365**				
	Model 1			0.498	0.248	0.206	5.851***
	Identified	0.433	0.122				
	Introjected	0.164	0.228*				
	Positive religious coping	0.104	0.225				
	Negative religious coping	0.134	0.327**				
	Model 2			0.547	0.299	0.215	3.575**
	Identified	0.138	0.170				
	Introjected	0.198	0.276*				
	Positive religious coping	0.095	0.206				
	Negative religious coping	0.135	0.329**				
	Identified x positive religious coping	-0.609	-0.232*				
	Identified x negative religious coping	0.239	0.100				
	Introjected x positive religious coping	-0.049	-0.020				
	Introjected x negative religious coping	-0.045	-0.018				

P values: \*p &lt; 0.05, \*\*p &lt; 0.01, \*\*\*p &lt; 0.001

Regarding vitality, an interaction between introjection and negative religious coping signifies religious coping does function as a moderator, such that this combination decreases vitality when neither introjection nor negative religious coping were significant in this model on their



own. With burnout, the interaction between identification and positive religious coping was a significant negative predictor, indicating when a person has both identified religious beliefs and uses positive religious coping, they are more greatly protected against burnout.

### **8.3.2 Relative contributions of explanatory variables to outcome variables: Regression analysis.**

#### **8.3.2.1 Statistical assumptions**

Multiple regression (MR) was used to examine the relative contribution of the psychological variables to vitality and burnout. MR is the simplest of multivariate analyses but with only one dependent variable, it does not have as many multivariate assumptions as most analyses (Brace et al., 2009; Tabachnick & Fidell, 2007). The data was checked for multicollinearity, the presence of outliers, normality, linearity, homoscedasticity, along with sample size (Brace et al., 2009; Pallant, 2007). Multicollinearity is a problem that can occur in regression analysis when there is an extreme overlap of one explanatory variable with another, and singularity is when the variables are perfectly correlated. Highly correlated variables reduce degrees of freedom for error and weaken an analysis. No variables in this analysis reached Field's (2005) suggested threshold for violating the multicollinearity assumption of 0.90 or higher. An assessment using Mahalanobis distance discovered there were no multivariate outliers. Giles (2002) advised screening for multivariate outliers can also be an indirect indicator of possible non-normality. Multivariate normality is difficult to assess so Brace and colleagues (2009) recommended checking univariate normality, as this often reflects multivariate normality. In this case, there were no multivariate outliers and univariate data was transformed to improve normality. Linearity and homoscedasticity were assessed by scatterplots (Brace et al., 2009).

The ratio of cases or observations (N) to independent variables is important in multiple regression and fewer cases than recommended results in a reduction in statistical power (Brace et al., 2009; Tabachnick & Fidell, 2007). In this research, the total number of participants was 99 but not all variables had this many observations due to missing values. Tabachnick and Fidell (2007) suggested that N should be equal to either the number of variables times 8 plus 50, or the number of predictors plus 104. These equal to 114 or 112 cases which is not much greater than the number of participants in the current study. Howell (2007) is more liberal, suggesting there be at least 10 cases for each variable and definitely no lower than a ratio of 5:1.

#### **8.3.2.2 Results**

The simultaneous or standard method of multiple regression was conducted as it is generally the safest method to adopt (Brace et al., 2009; Howell, 2007; Tabachnick & Fidell, 2007). The

multiple regression model includes basic need satisfaction, internalisation of religious beliefs, and the use of religious coping as the primary factors, but general causality orientation factors were included as well. The MR models for vitality and for burnout are both included in Table 12 below.

Table 12

*Standard multiple regression models for vitality and burnout showing standardised regression coefficients, R, R<sup>2</sup> and Adjusted R<sup>2</sup> for all participants*

Variables	Vitality		Burnout	
	B	$\beta$	B	$\beta$
<b>Basic Need Satisfaction at Work</b>	0.587	0.499***	0.583	0.590***
<b>Identified motivation for religious beliefs</b>	0.261	0.271*	-0.057	-0.070
<b>Introjected motivation for religious beliefs</b>	0.005	0.006	0.030	0.042
<b>Positive religious coping</b>	-0.017	-0.031	0.084	0.182
<b>Negative religious coping</b>	-0.029	-0.059	0.050	0.122
<b>General orientation - Autonomous</b>	-0.080	-0.072	0.121	0.130
<b>General orientation - Controlled</b>	-0.658	-0.348*	0.350	0.220
<b>General orientation - Impersonal</b>	0.173	0.201	-0.188	-0.164
R		<b>0.629</b>		<b>0.728</b>
R <sup>2</sup>		<b>0.395</b>		<b>0.530</b>
Adjusted R <sup>2</sup>		<b>0.322</b>		<b>0.473</b>

P values for  $\beta$  coefficients: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

#### 8.3.2.2.1 Subjective Vitality

A significant model emerged:  $F(8,66) = 5.391$ ,  $p < 0.001$ .  $F(8,66) = 5.391$ ,  $p < 0.001$ . Basic need satisfaction at work, internalisation of religious beliefs, religious coping and general causality orientation variables account for 32.2% of variance (Adjusted  $R^2 = 0.322$ ) in an individual's subjective vitality.

Table 12 details the beta coefficients for each variable. Basic Need Satisfaction at Work was one significant contributor to total explained variance, meaning improved subjective vitality was predicted by satisfaction of basic psychological needs in the workplace ( $p < 0.001$ ). This variable was the biggest predictor of subjective vitality.

Identified motivation for religious beliefs significantly contributed to vitality ( $p < 0.05$ ).

Individuals who rate motivations for religious beliefs as identified (i.e., autonomous) are more likely to experience vitality. As well as the specific motivations, the general orientation tendency plays a significant role. Controlled orientation was a significant negative predictor of vitality ( $p < 0.05$ ), such that individuals with low levels of controlled motivation have better vitality.

#### **8.3.2.2.2 Burnout**

The burnout multiple regression similarly showed basic need satisfaction, internalisation of religious beliefs, religious coping and general causality orientation resulted in a significant model:  $F(8,66) = 9.288$ ,  $p < 0.001$ . Those factors explain 47.3% of variance (Adjusted  $R^2 = 0.473$ ) in an individual's burnout.

The burnout model accounted for a greater amount of variance than the vitality model and yet it only has one factor whose beta coefficient shows it to be a significant predictor. The Basic Need Satisfaction at Work variable is significant ( $p < 0.001$ ). Brace et al (2009) wrote the model can be significant without necessarily having significant individual variables based on beta coefficients. The beta coefficient is a positive number but since the burnout scores had been reverse coded in the data preparation, this indicates need satisfaction in the work place is a predictor of low burnout levels.

Basic Need Satisfaction at Work (BNS-W) was the most significant predictor for both vitality and burnout. Multiple regressions were conducted again with BNS-W removed to see how that impacts on the variance of the model (Brace et al., 2009). For the subjective vitality outcome, there was still a significant model ( $F(7,67) = 2.943$ ,  $p < 0.01$ ) but this time it only accounted for 15.5% of variance as opposed to 32.2%. Burnout also still had a significant model ( $F(7,67) = 4.218$ ,  $p = 0.001$ ) but it only accounted for 23.3% instead of 47.3% of variance. This second MR analysis reaffirms the importance of BNS for both increasing vitality and decreasing burnout.

### **8.4 Qualitative Analysis**

A thematic analysis was conducted on the open-ended questions using the procedure outlined by Braun and Clarke (2006), from the initial stages of generating codes to form initial themes through to refining them to create main themes. In order to not lose the richness of the data, sub-themes were also identified under each main theme. Section 8.2.1 relates to the qualitative data on stress in the workplace and section 8.2.2 focuses on a participant's religious faith to deal with times of stress.

#### **8.4.1 Stress in the Workplace**

The data about stress in the workplace was centred around three main questions: sources of stress at work, the organisation's support for physical or emotional wellbeing, and the respondent's ways of coping with it. These were intended to gather different information but there is a certain extent to which these overlap. The sources of stress at work and the ways in which an organisation can support the wellbeing of the employees are sometimes corollaries of each other, and the employee's coping strategies may serve to instigate the support. For example, when stress stems from an employee being assigned tasks beyond their training thus precipitating a sense of incompetence, the organisation's support may include capacity building, especially if the employee can seek support from a supervisor with regard to this stressful situation.

#### **8.4.1.1 Sources of stress**

Burnout results from an accumulation of stress (Lazarus et al., 1980; Otis & Pelletier, 2005; Schaufeli & Enzmann, 1998) so the current research wanted to generate data about the stressors experienced by Christian humanitarian workers in Chennai, India.

The questions asking about stress and difficult things at work were intended to provide two angles to the same concept to gain a larger amount of information, and so the data extracts were analysed together. These data extracts yielded eleven initial themes: work overload, external barriers to work, physically difficult tasks, client trauma, uncooperative clients, interpersonal conflict, difficult employees, internal bureaucracy, cultural differences, unknown expectations, poor communication by management. These initial themes or 'theme-piles' were re-analysed to look for overarching themes and how these themes describe common phenomena. These can be combined into three main themes: the nature of the work, organisational stresses, and interpersonal stresses.

***Theme 1: Nature of the Work.*** The nature of the work has three sub-themes: the task, exposure to client tragedy, and outside stakeholders.

One sub-theme is specifically about the task itself. Research by Ehrenreich and Elliot (2004) into common stressors for humanitarian workers is largely echoed by the current study. The literature on stressors of the task is supported by the statements below (participants are identified by number):

“sometimes physical work needs to be done which can lead you to be tired and thus stressed out” (5)

“continuous long hours of trips” (14)

“travelling to long distances” (23)

“documentation and a lot of paperwork” (78) “

“lots of compliance with procedures and paperwork” (88)

“to generate income for the organisation” (43)

“there are different types of clients – fight, argument...” (38)

“delinquent clients” (43)

Another participant mentioned boredom: “my kind of work seems monotonous” (Participant 12). This fits with SDT’s notion of tendencies for growth being key to wellbeing (Deci & Ryan, 2000). Schaufeli and Peeters (2000) found boredom was a contributor to burnout among correctional officers, and they recommended job enrichment as a way to combat burnout.

The second sub-theme – exposure to client tragedy – is also reflected in previous research. Research into vicarious trauma (McCann & Pearlman, 1990) and compassion fatigue (Figley, 1995) have clearly noted the stress experienced by workers with frequent exposure to traumatised clients. Prosser and colleagues (1997) found ‘client’ stress was positively associated with increased depersonalisation in burnout. McCann and Pearlman (1990) were the first to identify empathetic engagement with traumatised clients as a vulnerability factor for helping professionals in developing cumulative negative outcomes. Participants mentioned the stress associated with clients’ problems:

“to tolerate the hardships faced by the victims and continue in the same journey of helping many more of the same kind” (6)

“most difficult thing that I face is listening to the stories of the forced labourers and the problems they face at the hands of their owners” (9)

The third sub-theme that emerged highlighted the stress associated with having to rely on external parties who are beyond the control of the humanitarian worker in order to achieve optimal outcomes for the clients. These external stakeholders range from government officials to other non-government organisations:

“To face hurdles from outside people like the government officials” (1)

“Changing mindsets in the community, judiciary, and government about bonded labour slavery” (11)

“relying on partnerships with organisations who are not as dedicated” (96)

***Theme 2: Organisational stresses.*** The organisational stresses theme has four sub-

themes: workload, poor management, human resource concerns, and bureaucracy.

Work overload is an antecedent to burnout (Cohen et al., 2004; Maslach et al., 2001; Prosser et al., 1997), and this sub-theme emerged as a source of stress in the current research:

“when I have too many tasks to complete” (67)

“Workload!” (77)

The second sub-theme is poor management. Antecedents of burnout research discovered the common frustrations associated with poor support by the organisation or poor management (Cohen et al., 2004; Prosser et al., 1997). Participants in the current research highlighted elements of poor management:

“lack of any direction from my boss” (13)

“the work gets delayed by the supervisor and nothing moves” (57)

“added expectations beyond my capacity and training that leads to stress and underachievement of a task” (72)

“Last minute, previously unknown expectations make me look incompetent” (18)

“poor coordination amongst the department heads in decision making and execution” (28)

“I keep getting different expectations about what work I should do from different levels of management in my department so it’s confusing” (59)

“difficult to solicit cooperation from others in management” (86)

“not being able to use my resources I see fit” (41)

“slow decision making and I can’t say my opinion” (55)

A third sub-theme is human resource concerns. The questionnaires were distributed to anybody within an international Christian humanitarian organisation including people in management. This would potentially account for why poor management and human resource concerns both emerged as themes of work stress. It is possible that these particular stresses at work are common to managers and are not specific to humanitarian organisations.

“unskilled staff who blame others for their lack of skills” (29)

“managing the staff” (33)

“undedicated staff” (43)

“HR related concerns and maintaining a quality approach” (63)

The last sub-theme here related to the perception of unnecessary processes or bureaucracy.

“complicated processes of getting things done” (Myers & 10-19.)

“office bureaucracy” (8)

“Being held back by too many unproductive meetings” (21)

**Theme 3: Interpersonal stresses.** The interpersonal stresses theme has two sub-themes: interpersonal conflict and cross-cultural issues.

Burnout is an interpersonal phenomenon (Maslach, 1998; Schaufeli & Enzmann, 1998), so finding interpersonal conflict was source of stress in the workplace in the current study was not surprising. They participants identified conflict in the following statements:

“people putting you down and taking the credit” (4)

“disrespect for me” (20)

“they cause unhealthy atmosphere...relating is tough with ego problems” (50)

“partiality and politics” (90)

“too many in meetings with selfish mottos” (97)

Cross-cultural challenges arise frequently in humanitarian work (Berry, 2005; Salama, 1999), and were noted in the current study:

“the differences in East/West practices in terms of attention to detail, punctuality, and what’s appropriate things to say to each other” (18)

“People not speaking English when I know they all can in a group and I can’t speak the local language” (21)

Beyond the major sources of stress, this research wanted to explore the participant’s perception of what their organisations were doing to support their wellbeing.

#### **8.4.1.2 Organisational support**

The data on organisation’s support for emotional or physical wellbeing produced nine initial themes: support group or mentor at work, supportive management, training, spiritual support, self-care seminars, counselling, spiritual support, outings/retreats, and adjusting workload. When re-analysed, these were combined into three main themes: staff care, supportive management, and capacity enhancement.

**Theme 1: Staff care.** Sub-themes were psychosocial programs, support for spirituality, and retreats.

One sub-theme related to psychosocial programs which is fits with previous research. Ehrenreich and Elliot (2004) emphasised the importance of having adequate training materials as well as in-service and exit psycho-social programs. The current study did not gather details about the content of the staff care plans or how they were implemented, but at least training, counselling and debriefing are mentioned:

“Seminars on stress management” (9)

“counselling” (53)

“debriefing” (74)

A second sub-theme related to support for spirituality. When faced with difficult situations, many people rely on religion (Pargament et al., 2000) and when working in humanitarian sphere “it may be impossible...walk away unchanged on a core spiritual level” (McKay, 2009, p. 4). One clear and most commonly mentioned theme that emerged from these Christian humanitarian workers was support for spirituality was perceived as support for wellbeing.

“morning devotions” (1)

“supports me with prayers” (6)

A third sub-theme was retreats and outings. This may function as a way for organisations to support staff wellbeing by encouraging relatedness or simply introducing more fun to alleviate the stress of the work.

“organised outings are nice” (5)

“staff and family retreats” (8)

***Theme 2: Supportive management.*** Respondents recognised having managers who were approachable and supportive as important for their own wellbeing. Empirical findings by Deci, Eghrari, Patrick, and Leone (1994) and Stone, Deci, and Ryan (2009) showed practical ways for managers to convey these principles of supporting basic needs, and minimising pressure to achieve the desired outcomes. The current study provides examples of transparency and social support which were perceived as evidence of a supportive management.

“Being candid, how and why such decisions are made” (17)

“office heads spend time with their staff” (5)

“when the organisation stands along with the employee” (42)

“Has an ‘open-door’ policy where we can approach” (93)

“They have support groups to talk through problems at work; and they have mentors and



supervisors to talk to” (14)

“Having the chance to talk to colleagues of the same profession so he/she can give guidance and empathy” (5)

**Theme 3: Capacity enhancement.** Capacity enhancement emerged from the qualitative data as an important part of an organisation supporting employee wellbeing – providing the tools and training in order to achieve their targets and for the employees to fulfil the expectations of them and satisfy their competence needs.

“giving us training” (39)

“training” (53)

#### 8.4.1.3 Most useful coping strategies

In the context of stress at work, participants were asked about helpful coping strategies. There were six initial themes drawn from the data on what is the most useful coping strategy: talking to somebody at work, talk to somebody outside of work, enjoyable activity, problem-solving, take a break, and religious coping.

These theme-piles were re-analysed and combined into four main themes: problem-focused, managing the stress, social support, and religious coping.

**Theme 1: Problem-focused.** The problem-focused theme that emerged fits with coping literature. The literature generally identifies two main approaches to coping: problem-focused and emotion-focused (Fleishman, 1984; Lazarus & Folkman, 1984), and these may be behavioural or cognitive (Thoits, 1986). Most people employ the use of both when faced with stress, and these coping approaches may overlap with the functions of one being achieved through the other (Zeidner & Saklofske, 1996). Emotion-focused coping can enable problem-focused coping by removing some of the negative affect that can hinder problem-focused approaches (Carver & Scheier, 1994). Problem-focused strategies tend to be highly dependent on the specific situation whereas emotion-focused coping strategies tend to be more consistent across situations since these are not focused specifically on the stressor (Aldwin & Revenson, 1987; Costa, Somerfield, & McCrae, 1996). Problem-solving is considered to be an effective coping approach since it directly deals with eliminating or mitigating the stressor (Savicki, 2002). The participants in the current study alluded to trying to find ways to resolve the problem:

“...think for a solution and execute it with prayer...” (31)

“...trying finding/planning out solutions with the help of experts, friends and God.” (36)

“I will solve the problem” (43)

“At times of stress, I discuss issues with my staff, colleagues and friends. This provides me with various possible solutions. Also it has varied opinions and suggestions from where I would look at things” (63)

**Theme 2: Managing the stress.** Emotion-focused strategies are also useful when a person cannot do anything to change or control the stress (Endler & Parker, 1990; Folkman & Lazarus, 1980; Carver et al., 1989). Managing the stress had two sub-themes: positive reinterpretation and engaging in enjoyable activities.

The reinterpretation or ‘processing’ sub-theme reflects previous studies. Positive reinterpretation is frequently aimed at managing negative emotions rather than directly addressing the stressful situation (Carver et al., 1989). Cognitive restructuring (e.g., adjusting negative thoughts about a situation into more positive and constructive thoughts) has been shown to be an effective way of changing mood (Beck, 1995; Jacobson et al., 1996), and maintaining vitality (Thayer, Newman, & McClain, 1994). Riolli and Savicki (2010) also found that positive reinterpretation as a form of cognitive restructuring is associated with lower psychological symptoms. The comments written below show this coping approach:

“Processing” (3)

“Taking time to think of new perspectives/angles and refocusing on the bigger picture” (11)

“take time to reflect” (13)

Engaging in enjoyable behaviours could appear to be a way of disengaging mentally or physically as avoidance which does not usually produce the desired results (Endler & Parker, 1990; Carver et al., 1989), or they could be effective by managing stress by restoring work/life balance (Warner & Hausdorf, 2009). To determine which intention is behind engaging in enjoyable behaviours, further information would be required from the responding participants.

“Dinner parties. Dancing. Running.” (3)

“Talk and laugh loud with friends” (16)

“Just lean back and take a deep breath” (76)

“Seek for funtime” (86)

**Theme 3: Social support.** Social support was a strong theme in the current study, both within and outside the workplace.

“Sharing the burden with someone in the same profession so he/she can empathise” (5)

“I will share my stressful situation with my colleague” (7)

“Sharing my feelings to my supervisor” (32)

“Share with supervisor” (86)

“Share with loved ones” (9)

“Sharing with my closest friends” (14)

“Share it with my friends and my spouse” (41)

“Will share the experience with my close friend” (46)

Social support can be problem-focused if it is instrumental in accessing resources, or it can be emotion-focused if it primarily for venting frustrations or receiving empathy (Thoits, 1986). Emotional social support is related to lower psychological symptoms (Rioli & Savicki, 2010), and perceived social support can mediate the relationship between stress and avoidance coping (Inglelew, Hardy, & Cooper, 1997) by acting on the cognitive appraisal process. This became a separate theme because of the importance that emerged on this relatedness need in terms of dealing with stress.

**Theme 4: Religious coping.** Carver and colleagues (1989) suggested turning to religion is an emotion-focused strategy. This theme was separated from the ‘managing the stress’ because much of the focus of the current research is on religious coping in particular. The researcher wants to determine the number of respondents who considered religion as a helpful coping strategy, even when it was not specifically asked about.

“submitting my thoughts to God” (1)

“pray and whine to God” (Myers & 10-19.)

“Prayer with a friend and reading some scriptures” (15)

“Being still and praying for God’s strength and tranquillity” (66)

“Seek divine guidance” (91)

As the graph below illustrates, religious coping was the most common theme reported for dealing with stress.

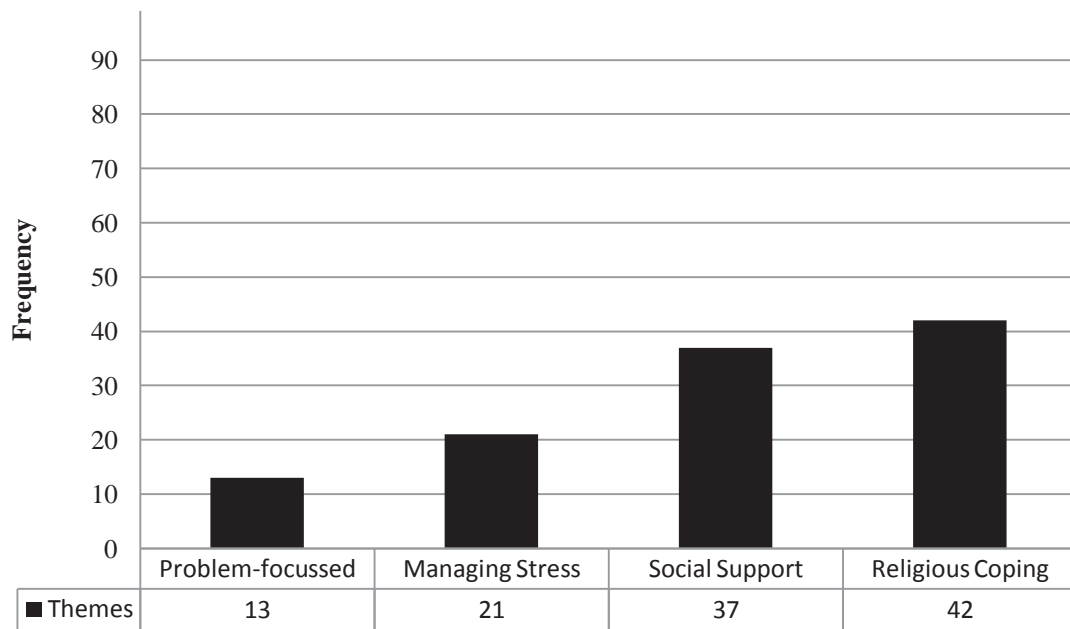


Figure 5. Relative frequency of main themes in coping with stress.

#### 8.4.2 Faith in Times of Stress

The faith questions were both aimed at eliciting information about a participant's views on how their religious beliefs are either helpful or unhelpful in times of stress. There were eleven initial themes drawn from the data on how the respondents views on their religious beliefs when under stress: frustration with God, punishment, avoidance, seek God, God's promises/scriptures, God in control, prayer, social support, purpose, learning, and receive characteristics needed to persevere.

##### 8.4.2.1 Most useful coping strategies

These theme-piles were re-analysed and combined into four main themes: Seek God, Purpose, Social support, and God's provision for dealing with the stress. Each of these touch on aspects of positive religious coping considered in previous studies (Ano & Vasconcelles, 2005; Pargament et al., 1998), and these will be revisited in the discussion chapter.

**Theme 1: Seek God.** There are three sub-themes: trust in who God is, God is with me, and spending time with God.

Participants in the current study dealt with stressful situations by focusing on trusting God by focusing on the character or attributes of God:

“without God’s will allowing it, nothing will happen” (7)

“I think God is in control” (89)

“I trust that my God is going to give me the breath that I breathe, so why not I trust Him for all these worldly stresses? Trust him fully as he leads, guides and provides” (34)

The second overlaps with trust in who God is, but is specifically based on the comfort that God is with the respondent in the difficult circumstances.

“I have an unshakeable faith and determination that God is with me” (68)

“It helps me to know...God is with me” (74)

“I am sure that God will never abandon me, rather will strengthen me and be by me” (97)

The third sub-theme relates to spending time with God. The respondents noted this in the following ways:

“often pray for peace and wisdom” (13)

“When I am stressed, I usually pray” (6)

“it’s a struggle to go to prayer but when I do, it always helps” (18)

“Spend more time with God” (31)

“I think about the promises of God in the Bible... helps me gain confidence” (36)

“I think about how God worked in the lives of people in the Bible, and previously in my life” (43)

**Theme 2: Purpose.** This also has two sub-themes although parts of them can be seen to overlap: God as the purpose in life, and purpose in suffering/meaning.

Purpose in life:

“My faith helps me to realise that the work I’m doing is for what I am on earth...” (9)

Participants noted a purpose in suffering, including learning, which gives it meaning:

“It helps me to try to find some meaning in the suffering...” (74)

“strengthens me to look for the best and keep on going, as this gives different meaning to life and shows beauty even in ashes” (92)

“Faith has taught me patience in stormy situations” (68)

“Every failure causing stress is a learning” (86)

**Theme 3: Social support.** Social support was a theme under the general coping question, but it was also a prominent theme when specifically asking about how faith is helpful

in times of stress, so it has also been included here.

“Seeking fellowship with other believers has also been helpful to gain perspective and reduce stress” (8)

Peres, Moreira-Almeida, Nasello, and Koenig (2007) identified that faith impacts on wellbeing in at least two ways: the cognitive dimension of faith and the social support area. Part of religious coping might be both ‘verticality’ or reliance on God for support and ‘horizontality’ or reliance on others for support, for instance in a church community.

***Theme 4: God’s provision for dealing with the stress.*** This theme is split into two sub-themes and refers to the various experiences with God which enable an individual to deal with the stress.

The first sub-theme notes strength, wisdom, and guidance from God which provide a direction and the endurance to address the problem.

“Faith enables us to stand and face the situation” (72)

“My faith strengthens me and motivates me and gets me going.” (4)

“seeking counsel from reading the Bible” (8)

“I pray for God’s guidance to take the right decision and come up with a solution” (58)

The second sub-theme relates to an individual’s state of being, such as having peace, joy, and hope in the face of stressful circumstances.

“It gives me values and state of being that brings me peace and joy” (11)

“faith rejuvenates me and gives me hope” (30)

#### **8.4.2.2 Faith as unhelpful in times of stress**

The researcher questioned whether religious faith can also be unhelpful in times of stress. One theme refers to the danger of deferring to God as a way of avoiding the problem, or the frustrations of not being able to defer completely to God because that will not solve the problem. Hathaway and Pargament (1990) noted deferring to God was not an effective coping strategy.

“Religious faith allows me to shift the burden of coming up with a viable solution from me to God” (18)

“Faith is helpful but you can’t rely on it to solve all your problems...need to solve it rationally” (63)

“Does not often help to solve immediate problems, only the way in which I face them.”  
(13)

It was difficult to determine ‘themes’ since there were not many answers to this question and those provided covered a wide range. The dearth of information clearly indicates how much this topic could be enriched by future research, but these statements give leads to follow up.

“...very often I get frustrated why God is letting this happen.” (4)

“God is also a hard task master!” (12)

“...if God does not answer I get annoyed and hurt even more” (12)

“ I still have unbelief in the corner of my heart which makes me feel discouraged” (14)

“At times I feel I am punished for my mistakes” (51)

“Faith is unhelpful...because it gives a wrong message to people that I am not under stress” (98)

“Coworkers who don’t get it...who spiritualise everything at work” (10)

## **9.0 Discussion**

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The purpose of this research was to attain a better understanding of subjective vitality and burnout among Christian employees of Christian humanitarian organisations by focusing on the effects of two contributing factors: basic need satisfaction at work and personal religious beliefs.

The findings will be interpreted and discussed in light of three Self-Determination Theory concepts: Basic Needs Theory, Causality Orientations Theory, and the Organismic Integration Theory on internalisation of beliefs and behaviours, each of which were directly measured in this study. Basic need satisfaction was specifically assessed in the workplace, the broad General Causality Orientations Scale was used to assess an individual's general tendencies in interacting with their environments, and the Christian Religious Internalisation Scale specifically assessed the internalisation of religious beliefs.

While need satisfaction at work is a main variable of interest with regard to its direct impact on vitality and burnout, basic need satisfaction is also as a useful framework for understanding and integrating SDT's other two mini-theories and findings. For example, the internalisation spectrum is based on levels of autonomy need satisfaction (Deci & Ryan, 1985a), and general causality orientations are thought to be based on past and present need fulfilment (Deci & Ryan, 2000).

This chapter discusses the findings of each of the variables that were predicted to impact on vitality and burnout. The implications of the research, limitations of the present study and suggestions for future research, are also discussed.

### **9.1 Research Findings**

The research findings are divided into two parts. The first section looks at the relationships need satisfaction at work and religious beliefs have with vitality and burnout. Due to the limited scope of this research, the constructs will be discussed as global entities rather than a more in-depth analysis of each of the subscales, although that could be an avenue for future research. The second part discusses the explanatory variables in terms of how much variance they account for in the vitality and burnout multiple regression models, providing information on their relative and combined importance in wellbeing of this population of Christian humanitarian workers.



### **9.1.1 Relationships between specific psychological variables**

The following section explores relationships among the psychological variables with a focus on how basic psychological need satisfaction in the workplace and religious beliefs are related to vitality and burnout.

#### **9.1.1.1 The wellbeing dichotomy: Vitality and Burnout**

The current study shows vitality and burnout are negatively correlated to each other such that a person with high vitality is likely to have low burnout and vice versa. This result is expected given vitality is the “conscious experience of having energy available to or within regulatory control of one’s self” (Ryan & Frederick, 1997, p. 530) while burnout relates to the depletion of energy (Maslach & Jackson, 1984). The correlation is a moderate effect size, confirming the use of a dichotomy is not redundant but vitality and burnout can each contribute knowledge about humanitarian worker wellbeing.

Investigating both indicators will provide insights about relationships to wellbeing that have different practical consequences. For factors with a direct relationship to burnout, focusing on providing an environment most conducive to low levels of burnout will be needed. Furthermore, due to the negative relationship between burnout and vitality, an attenuated way to try to minimise burnout is to increase vitality. Selye (1973) recognised having available energy as a resilience factor in dealing with stress and burnout is a gradual depletion of energy resulting from prolonged exposure to stress (Maslach & Jackson, 1984), making vitality important in reducing burnout.

#### **9.1.1.2 Basic Need Satisfaction at Work.**

Basic need satisfaction is so fundamental to wellbeing, according to SDT, because it is fulfilment of autonomy, competence and relatedness which fosters a person’s inherent inclination towards growth and optimal functioning (Deci & Ryan, 2000). A work environment conducive to supporting needs (e.g., autonomy support from managers) significantly predicts the degree to which employees experience need satisfaction (Baard et al., 2004; Senecal et al., 2001). In the current research, statistical analyses support SDT’s propositions about the importance of basic need satisfaction for wellbeing, as detailed below.

There was a significant gender difference in reported basic need satisfaction at work, with men reporting lower levels of need satisfaction, on average, than women. Previous studies have tended not to focus on gender differences (Deci et al., 2001; Ilardi et al., 1993), probably due to SDT’s argument that basic needs are universal, thus neglecting potential demographic

differences (Adie, Duda, & Ntoumanis, 2008). While asserting basic needs universality, Ryan and Deci (2000) wrote, “To suggest that the three needs are universal and developmentally persist does not imply that their relative salience and their avenues for satisfaction are unchanging across the life span or that their modes of expression are the same in all cultures” (p. 75). For example, Kasdan, Mishra, Breen, and Froh (2009) discovered differences between genders on whether gratitude was perceived to fulfil basic needs. Adie and colleagues (2008) discovered there were gender differences in the paths between autonomy support, need satisfaction, and vitality, supporting the notion that the current results may reflect a true difference rather than simply an anomaly due to unequal gender group sizes. This is an area which could be confirmed by future research.

*Hypothesis 1a: Supported - Basic need satisfaction at work will be positively correlated with vitality.*

The current research extended the literature by establishing significant relationships between need satisfaction and vitality in the Christian humanitarian worker population, meaning that fulfilled autonomy, competence and relatedness needs are associated with better vitality scores.

These results align with theoretical expectations based on SDT and previous research into BNS-W with different populations. Baard and colleagues (2004) found basic need satisfaction increased vitality in employees of the corporate sector. Van den Broeck and colleagues (2008) studied ‘vigour’ which is similar to vitality and found that in a heterogeneous group of employees, vigour fluctuates in response to need satisfaction. Reis and colleagues (2000) noted vitality and other positive wellbeing indicators in undergraduates improved with need satisfaction.

While this discussion does not delve in-depth into differences among subscales, the results do show each of the basic psychological needs was positively correlated with vitality. This supports previous research that has focused on individual needs, some of which is outlined in Chapter Four on Basic Need Satisfaction at Work. Autonomy support is positively associated with vitality and increased autonomous motivations (Baard et al., 2004; Otis & Pelletier, 2005; Senecal et al., 2001). Competence support expressed through interactions like supervisors giving positive feedback predicted more autonomous motivation for the work and increased vitality (Gagne et al., 1997; Otis & Pelletier, 2005). Relatedness and social support were positively associated with vitality (Baard et al., 2004; Reis et al., 2000), and ‘vigour’ (Van den Broeck et al., 2008).

Vitality was also associated with each of the basic need subscales (autonomy, competence, and relatedness) but the strongest correlation was with the aggregate basic need satisfaction construct. This also supports SDT's idea all three needs are required for the best psychological wellbeing outcomes (Deci & Ryan, 2000; Ryan & Deci, 2000; Sheldon & Niemiec, 2006).

The qualitative data generated information on participants' perceptions of how their organisations support their wellbeing, and this intersects with basic need satisfaction. The following statements show participants regarded aspects of autonomy support as valuable: "Being candid, how and why such decisions are made" (Participant 17) and "Has an 'open-door' policy where we can approach" (Participant 93). Competence support through being given training so that the task is matched to their skills is reflected in the statement: "give us training so that we can have a quality approach and I can show how capable I am" (Participant 63). Relatedness support also emerged from the qualitative data in the following comments: "They have support groups to talk about problems with the clients; and they have mentors and supervisors to talk to" (Participant 14) and "Having the chance to talk to colleagues of the same profession so he/she can give guidance and empathy" (Participant 5).

In a field where employees commonly suffer negative consequences of stress and organisations struggle to retain staff (DeFrank & Ivanchovich, 1998; Ehrenreich & Elliot, 2001; Eriksson et al., 2001; Flanigan, 2009), being able to increase subjective vitality will be invaluable. By increasing vitality through supporting basic needs at work, organisations may also benefit from the increase in other positive wellbeing covariates such as self-actualisation and self-esteem (Ryan & Frederick, 1997) and autonomous self-regulation (Nix et al., 1999). Increasing vitality is negatively correlated with negative psychological measures (Neyrinck et al., 2006; Ryan & Frederick, 1997) and this is seen in the current results with a negative association between vitality and burnout. This suggests vitality may be protective against burnout, although the correlational nature of this study prohibits a causal link. Regardless of whether basic need satisfaction lowers burnout indirectly through increasing vitality, there is a direct impact of need satisfaction at work on burnout which will be further discussed in the following section.

*Hypothesis 1b: Supported - Basic need satisfaction at work will be negatively correlated with burnout.*

The current research clearly demonstrates basic need satisfaction has a significant negative correlation with burnout. Fulfilment of autonomy, competence and relatedness are together and separately each correlated with less burnout in general, and with less emotional exhaustion, less depersonalisation, and a greater sense of personal accomplishment. According to Cohen's

(1992) effect sizes, these correlations are all either moderate or large. The results show that when there is low need satisfaction at work, there is a significantly larger risk of burnout, and as need satisfaction increases, the unhealthy burnout scores decrease.

The current results align with previous research (outlined in Chapter Four) about basic need satisfaction lowering burnout or elements of burnout in other populations. Adie and colleagues (2008) found need satisfaction in sports participants decreased the exhaustion component of burnout. Lonsdale and colleagues (2009) found need satisfaction was associated with lower burnout among elite athletes. Otis and Pelletier (2005) conducted a study amongst police officers and discovered need satisfaction lowers the perception or effect of daily hassles, thereby reducing burnout. Van den Broeck and colleagues (2008) found need satisfaction is negatively correlated with exhaustion in employees of a variety of work environments in Belgium (e.g., socio-cultural sector, service sector, health sector, teachers, businessmen).

While not exploring the relationships between subscales of the measures, the three basic needs are outlined separately below because it makes it easier to recognise the threads of thwarted needs that underlie the ‘sources of stress’ qualitative data.

***Autonomy:*** Fulfilled autonomy is associated with lower rates of burnout (Hatinen et al., 2007; Janssen & Nijhuis, 2004). Antecedents of burnout research like being overloaded at work, and poor organisation support (Prosser et al., 1997; Williams et al., 2001) are reflected in the qualitative data. Autonomy is undermined when the employee feels a lack of control over important aspects of work (Browner, 1987), and lack of influence over how the job gets done (Sullivan, 1989). The following statements from the current study can be seen as thwarting autonomy: “not being able to use my resources the way I see fit” (Participant 41) and “slow decision making and I can’t say my opinion” (Participant 55).

***Competence:*** The burnout subconstruct of diminished personal accomplishment refers to a feeling of reduced competence or capacity to perform the required job (Maslach & Jackson, 1984; Maslach et al., 2001), and therefore has theoretical connections to the competence basic need. Donat, Neal, and Addleton (1991) found the perception of incompetence at work was associated with experienced stress and negative outcomes. PE fit research notes the importance of good fit for skills and knowledge (Ostroff et al., 2005) because setting work within the parameters of an employee’s skill and knowledge allows employees to accomplish their tasks and obtain positive feedback, fulfilling the competence need. The qualitative data included two different types of comments that had thwarted competence at their core: “not having the

opportunity to show how capable I am” (Participant 62) and “expectations beyond my capacity that leads to a stress and underachievement of a task” (Participant 72). These statements align with research by Janssen and Nijhuis (2004) emphasising the importance of providing opportunities for professional development, as well as Csikszentmihalyi and LeFevre’s (1989) research showing employees who work within their skill sets report better wellbeing.

***Relatedness:*** Social support has been negatively associated with burnout (Baruch-Feldman et al., 2002; Brown et al., 2003). Social support from a supervisor or manager was particularly associated with less fatigue and emotional exhaustion (Janssen & Nijhuis, 2004). Social support at work was also positively correlated with personal accomplishment (Eriksson et al., 2009). Social support moderated the impact of the engagement with traumatic material resulting in less psychological strain (Harrison & Westwood, 2009; Killion, 2008). Being grounded in a professional community for support and supervision facilitates fulfilment of relatedness and competence needs (Harrison & Westwood, 2009; Killion, 2008) by setting accountability for self-awareness and self-care, professional development and new perspectives client cases.

There were numerous comments made about interpersonal conflict as a source of stress in the workplace. While the qualitative data does not measure burnout, burnout does result from an accumulation of stress and is an interpersonal phenomenon (Maslach, 1998; Schaufeli & Enzmann, 1998). The following statements highlight the perception participants have of undermined relatedness: “people putting you down and taking the credit” (Participant 4), “disrespect for me” (Participant 20), and “they cause unhealthy atmosphere...relating is tough with ego problems” (Participant 50).

#### **9.1.1.3 Individual factor influence on wellbeing: Religious beliefs.**

The question of how religion relates to psychological wellbeing has piqued the interest of numerous researchers (Krishnakumar & Neck, 2002). The ubiquity of religious beliefs across boundaries of gender, ethnicity, culture, socio-economic strata or other demographic variables means the impact that religion has on vitality and burnout is of practical and academic importance. This research narrowed the focus to Christian religious beliefs since ‘religion’ is too broad to measure adequately in a study of this size.

The internalisation construct is sufficiently broad to allow for predictions about wellbeing across a range of situations, providing useful insights into the relationship between religious beliefs and wellbeing. However, due to the breadth of the construct, Ano and Vasconcelles (2005) recommended also introducing a narrower variable to answer particular questions in particular

situations or populations. Given the stressful nature of humanitarian work, religious coping seemed to be a useful additional variable to study religion's impact on wellbeing of Christian humanitarian workers by focusing specifically on religion's role in dealing with stress.

### ***Internalisation of religious beliefs.***

To understand the results pertaining to religious beliefs in the current research, one needs to draw on the Organismic Integration Theory (OIT) explained in Chapter Two. The OIT spectrum of internalisation delineates different types of motivation based on how autonomous that motivation is (Deci & Ryan, 1985a). Generally, identified motivation for religion is positively correlated with positive outcome measures and negatively correlated with negative outcome measures and introjected regulation for religious beliefs show the opposite pattern (Neyrinck et al., 2006; O'Connor & Vallerand, 1990; Ryan et al., 1993). The current study aims to extend previous research by examining the relationships identified (i.e., autonomous) and introjected (i.e., non-autonomous) motivations for religious beliefs have with vitality and burnout among Christian humanitarian workers.

*Hypothesis 2a: Supported - Identified religious beliefs will be positively associated with vitality.*

The current results show a clear positive relationship between identified motivation for religious beliefs and vitality, as was expected based on previous research.

Identification is a label for autonomous extrinsic motivations (Deci & Ryan 1985a) and vitality's definition requires energy to be experienced as autonomous (Ryan & Frederick, 1997), making it very likely that identified religious beliefs will also be associated with vitality. Evidence showing identification is generally associated with a range of positive physical and psychological wellbeing indicators has accumulated across organisational (Ilardi et al., 1993; Kasser et al., 1992), prosocial (Ryan & Connell, 1989), and religious (Neyrinck et al., 2006; O'Connor & Vallerand, 1990; Ryan et al., 1993) settings.

One reason worth considering for the positive impact of identified religious beliefs on vitality is the healthy lifestyle that religion tends to engender or the positive mental health traits like forgiveness that are linked with religion (Koenig, 2008). There is likely some benefit to objectively healthy choices which are encouraged by religion, such as moderating alcohol consumption. However, these are unlikely to be the main mechanisms explaining the outcomes because internalisation contends that the outcomes of religious beliefs are primarily not due to

involvement in a particular activity but to the attitude behind the behaviour. For example, a person who is praying may be doing so out of a sense of obligation, judgement, guilt or shame (i.e., introjected) or may be doing so out of a sincere desire to talk to God (i.e., identified).

A more likely mechanism underlying the internalisation construct and enabling predictions about wellbeing is need satisfaction. Internalisation captures the extent to which originally external values or beliefs have been incorporated by a person and it is the level of internalisation rather than the content of the beliefs which determine outcomes (Deci & Ryan, 1985a). The continuum is based on a spectrum of autonomy satisfaction (Deci & Ryan, 1985a) with the levels having qualitatively different outcomes (Burton et al., 2006; Koestner & Losier, 2002). A person with introjected religious beliefs will be engaging in religious activities but with a sense of internal insincerity or pressure rather than as an outworking of their most true selves (Neyrinck et al., 2006; Ryan et al., 1993). While the OIT internalisation continuum refers to autonomy fulfilment, Sansone and Smith (2000) speculated it is possible there may be similar phenomena associated with varying levels of competence or relatedness satisfaction but that no spectrums have yet been created to articulate these distinctions. This may provide potential future research prospects.

*Hypothesis 2b: Not supported - Identified religious beliefs will be negatively associated with burnout.*

A negative correlation between identified religious beliefs and burnout was expected based on previous research showing autonomous regulation at work is associated with reduced burnout (Deci & Ryan, 2000; Janssen & Nijhuis, 2004). More specifically related to religion, Kovacs and Kezdy (2008) used a measure called ‘subjective importance of religiosity’ and discovered that higher importance placed on religious beliefs was associated with less burnout on each of the subscales. Importance of religiosity has some similarities to identification of religious beliefs leading to the hypothesis that identification would also be negatively correlated with burnout. Contrary to the researcher’s expectations, there was no statistically significant support for this proposed relationship.

One possible theoretical explanation for not finding a significant relationship is based on the extent to which ‘energy’ is fundamental to the construct. In this study, identification is associated with vitality which is consistent with SDT’s (Deci & Ryan, 2000) assertion that acting in accordance with the self’s deepest values is energising. Burnout is also an energy-related construct, but it is comprised of three sub-constructs: emotional exhaustion, depersonalisation, and diminished personal accomplishment (Maslach & Jackson, 1981; Maslach & Jackson, 1984), with emotional exhaustion having the most direct theoretical



connection with energy. Further research could explore the possibility of ‘energy’ being key by assessing identified religious beliefs in relation to only emotional exhaustion, rather than being amalgamated with the less energy-driven depersonalisation and diminished personal accomplishment.

Secondly, one may argue that burnout is a stress-related phenomenon most commonly seen in work settings (Maslach & Jackson, 1984; Schaufeli & Enzmann, 1998), and therefore has little theoretical relevance to religious beliefs. However, this is undermined by the results of the following hypothesis which show that introjected (i.e., non-autonomous) religious beliefs are strongly associated with burnout. That establishes that the extent of internalisation of religious beliefs can affect wellbeing indicators associated with domains of life outside religious settings.

A third reason relates to the findings by Reis and colleagues (2000), Ryan and Frederick (1997), and Tassell (2009) who discovered that positive and negative psychological outcomes do not necessarily lie on the same continuum. The wellbeing dichotomy has been useful in this study which has borne out that the presence of autonomous motivations are related to vitality, and the presence of non-autonomous regulations are associated with burnout (Hypothesis 3b).

Alternatively, it is possible that there is a relationship between identification and burnout, but it has not been detected due to methodological or statistical reasons. This is possible given there is a non-significant relationship in the expected direction, and a relatively small sample size. Furthermore, while the correlation is not statistically significant, according to Cohen’s (1992) statistical power analysis, there is a small effect. With a larger sample size, the correlation could increase enough to make it a statistically significant relationship. Sample size is discussed in greater detail in relation to the religious coping hypotheses.

*Hypothesis 3a: Not supported - Introjected religious beliefs will be negatively associated with vitality.*

Contrary to expectations, the correlation between introjected regulation and vitality was close to zero ( $r = -0.03$ ), signalling there is no relationship between the two variables. The correlation is so small it is unlikely that even adjusting sample size or statistical power would lead to a significant relationship.

Introjection is generally negatively associated with positive outcomes and positively associated with negative outcomes (Deci & Ryan, 2000; Neyrinck et al., 2006). In the religious context, introjection spans external regulators like familial or social pressure through to more intra-



psychic extrinsic motivators like engaging in religion to avoid guilt, shame, or self-disapproval (Ryan et al., 1993), and it was predicted that this non-autonomous regulation would be negatively associated with vitality.

However, previous findings do show some instances where there was no association between introjected religious beliefs and positive outcomes. Ryan and colleagues (1993) conducted a sample among students and although they did not study vitality, they found there was no relationship between introjected religious beliefs and self-actualisation and self-esteem measures. Tassell (2009) similarly found that introjected regulation of work values had no relationship with vitality among humanitarian workers.

*Hypothesis 3b: Supported - Introjected religious beliefs will be positively associated with burnout.*

The current study shows introjected religious beliefs are positively associated with burnout, although it is a small effect size (Cohen, 1992). This means people with introjected religious beliefs (e.g., societal or familial pressure, or fear, shame, or guilt) tend to be higher risk for developing burnout.

This aligns with previous research showing introjection is positively associated with negative outcomes (Neyrinck et al., 2006; O'Connor & Vallerand, 1990; Ryan et al., 1993). Kovacs and Kezdy (2008) found low importance of religiosity (some overlap to introjection) was associated with all three components of burnout, but recommended further research.

Need satisfaction may be one explanation for these results since introjection is a non-autonomous regulation and as such does not fulfill basic psychological needs (Deci & Ryan, 2000). People who regulate themselves in accordance with beliefs that have not been properly assimilated tend to experience a range of negative behavioural and psychological outcomes (Deci & Ryan, 2000; Gagne & Deci, 2005; Ilardi et al., 1993). Introjected reasons for Christianity mean it has only been partially assimilated and is not experienced as emanating from the self, and internal conflict tends to lead to negative psychological outcomes (Neyrinck et al., 2006; Ryan & Connell, 1989; Ryan et al., 1993).

However, the need satisfaction argument may not completely explain the results. If this was so, one would expect similar results regardless of specific application of internalisation, but there are some exceptions to this general pattern. One example is Tassell's (2009) study into vitality and burnout among humanitarian workers. Contrary to expectations, identification was positively associated with burnout and introjection was negatively associated with burnout.

Tassell (2009) suggested her results may be different from the preponderance of research because the length of time doing humanitarian work increased with identification and this persistence may push workers beyond the bounds of healthy capacity.

One distinguishing factor between Tassell's (2009) research and the current study is she investigated internalisation of work values or attitudes, while the current study focused on internalisation of religious beliefs. The internalisation of religious beliefs may not have such a direct connection to work persistence, and therefore that length of time doing humanitarian work does not interfere.

Another possible reason for the results could be due to a nexus between introjection and burnout through the mechanism of increased rigidity and inflexibility of a dogmatic approach to religion. Neyrinck and colleagues (2006) noted that even Ryan and colleagues (1993) acknowledged they failed to take the influence of dogmatic and authentic approaches to religious beliefs into account. Dogmatism is understood as a literal, narrow and close-minded way of approaching belief contents, and the religious beliefs and practices are adhered to in a rigid, unreflective fashion (Neyrinck et al., 2006; Duriez, Soenens, & Hutsebaut, 2005). Neyrinck and colleagues (2006) addressed internalisation of religion and the individual's cognitive styles to approaching Christian beliefs and found the rigid, literal, dogmatic approach to religion is associated with introjection. In addition to the specific domain of religious regulation, research into general causality orientations found controlled motivation is associated with rigid adherence to social conventions (Neyrinck et al., 2006; Soenens, Berzonsky, Vansteenkiste, Beyers, & Goossens, 2005). Burnout may be a greater risk for people with introjected religious beliefs due to a more rigid adherence to Christian "rules" and doing humanitarian work because they "should" even if it pushes them beyond their emotional and physical limitations.

A third reasonable explanation is based on Ryan and colleagues (1993) assertion that "...introjection is theorized to be associated with conflict and pressure." (p. 594). Introjection regulates behaviour via external or intra-psychic pressure (Deci & Ryan, 1985a). Introjection may be built on guilt, shame or fear all of which can control behaviour (Herman, 1997; Tangney, 1995; Witte, 1994) whether they are generated internally or imposed from an external source. As such, introjection may usher in these types of phenomena all of which are associated with negative psychological outcomes including substance abuse and various other psychopathologies (Potter-Efron, 1989; Tangney, 1995). Guilt is associated with depression (Exline, Yali, & Sanderson, 2000) and with burnout (Gil-Monte, 2011). In the case of religion,

introjection could also lead to a belief that in order to be worthy they have to follow a set of rules or rituals, setting up contingent self-worth which is associated with psychological vulnerability (Crocker, 2002).

*The General Causality Orientation Scale measure in this research.* The discussion relating to the General Causality Orientation Scale (GCOS) is included here because in this research GCOS is used as an auxiliary variable rather than a main focus. GCOS was necessary to determine whether the findings above on internalisation of religion will hold after controlling for general causality orientations. The process used is explained in greater detail below.

*General causality orientations and religious internalisation.* SDT views motivation from two perspectives: the general causality orientation (i.e., GCOS) and the more specific motivations of internalisation, in this case the CRIS. An individual's global motivation (GCOS) tends to drive the particular type of self-regulation displayed in more specific areas like work and religion (Guay, Mageau, & Vallerand, 2003; Hagger, Chatzisarantis, & Harris, 2006; Vallerand, 1997). This implies wellbeing outcomes may falsely be attributed to specific internalisation of religious beliefs (i.e., CRIS) when they may simply be a reflection of the general causality orientation. To attribute wellbeing outcomes to the specific internalisation of religious beliefs (i.e., CRIS), one needs to be able to distinguish the effect of the internalisation of religious beliefs from the effect of the wider tendency (i.e., GCOS).

If there were no significant relationships between GCOS and CRIS, it would remove the GCOS could account for CRIS results. If there are significant correlations between identification and autonomous orientation or between introjections and controlled or impersonal orientations, it may show the constructs are difficult to separate in terms of their outcomes, undermining the conviction with which CRIS results can be attributed to specific internalisation of religious beliefs.

In the current study, Pearson's correlations showed autonomous orientations are positively associated with identification of religious beliefs, and the non-autonomous orientations (i.e., controlled and impersonal) are positively associated with introjection of religious beliefs. Therefore, further analysis was required, investigating whether GCOS is actually associated with vitality and burnout.

*General causality orientations and vitality and burnout.* Previous research has established different orientations as being associated with various types of outcomes (Deci & Ryan, 1985b; Deponte, 2004). Autonomous orientations were associated with positive wellbeing indicators (Baard et al., 2004; Deci & Ryan, 1985b; Hodgins et al., 1996; Koestner et

al., 1992; Vallerand, 1997) while controlled and impersonal orientations were frequently associated with negative wellbeing outcomes (Deci & Ryan, 2000; Neyrinck et al., 2006).

If there were no significant correlations found in this study, it rules out the possibility that GCOS is responsible for the vitality and burnout results in this study. In this case, there are significant correlations between autonomous orientations and vitality, and between controlled or impersonal orientations and burnout. This meant a third step of analysis was required to distinguish the effect of CRIS from that of GCOS; the hierarchical multiple regression.

*Hierarchical MR model to control for GCOS.* The current study employed a hierarchical multiple regression (MR) to control for general causality orientations, in the same manner as used by Black and Deci (2000) and Neyrinck and colleagues (2006). Multiple regression analyses were conducted for both vitality and burnout using models that include all the explanatory variables in this research, and then with these same variables except for the GCOS.

If the presence or absence of GCOS in the model causes a significant change in the relationship that CRIS has with vitality or burnout, then the relationships between internalisation of religion is overly influenced by GCOS.

In the current study, results show GCOS had little impact on the relationship between CRIS and wellbeing. Therefore, internalisation of religious faith provides an independent contribution to wellbeing rather than simply being a manifestation of a general tendency captured by GCOS.

### ***Religious coping.***

In choosing to investigate burnout amongst Christian humanitarian workers, studying religious coping became a variable of interest. This was based on four general propositions: humanitarian work is stressful (Antares Foundation, 2006), burnout results from prolonged exposure to stress (Maslach, 1998; Schaufeli & Enzmann, 1998), coping is used to deal with a stressful encounter or its consequences (Dewe, Cox, & Ferguson, 1993; Lazarus & Folkman, 1984), and religious people tend to rely on religion for their most effective coping (Day, 2005; Pargament et al., 1998).

Religious coping was one of four main themes emerging from the qualitative data on general coping strategies in the face of stress at work, along with problem-focused, managing stress, and social support. General coping is not the main focus of this research, but it is interesting to note the coping strategies mentioned align with much of the coping literature (Carver et al., 1989;

Lazarus & Folkman, 1984), some of which is outlined along with the qualitative results in section 8.2.1.3.

The use of religious coping was commonly cited as a helpful coping strategy even when it was not specifically asked about. The main themes emerging from the qualitative data on helpful religious coping were: Seeking God, Purpose, Social support, and God's provision for dealing with the stress. These echo items on the positive coping items in the Brief RCOPE measure.

The literature on religious coping produced mixed results (Bergin, 1983; Pargament et al., 1998) leading to the dichotomisation of positive and negative religious coping (Pargament et al., 1998) to explain the divergent results of research mentioned in Chapter Five, and below.

Positive religious coping is positively associated with a range of psychological outcomes in reaction to stress, including happiness, hope, optimism, purpose in life, resilience, posttraumatic growth and mental wellbeing (Ano & Vasconcelles, 2005; Meisenhelder & Marcum, 2009; Pargament et al., 1998; Prati & Pietrantonio, 2009). The use of positive religious coping – both reported in the Brief RCOPE and in the qualitative data– are positive ways of seeking God's love, care, strength, and guidance in the face of stressful situations.

Ano and Vasconcelles (2005) also found in their meta-analysis that positive religious coping is negatively associated with anxiety, distress, negative affect, social dysfunction, anger, and post-traumatic stress disorder symptoms. Ano and Vasconcelles (2005) used 20 indicators of negative psychological adjustment to stress, but they did not include burnout or obviously energy-related constructs. A few of the indicators reflected aspects of the burnout construct. For example, emotional exhaustion may include elements of burden or impairment, depersonalisation may include callousness or hostility, and diminished personal accomplishment may include hopelessness or impairment. This meta-analysis was the foundation of the expected hypotheses in the current research: that positive religious coping would be positively correlated to vitality and negatively correlated to burnout.

While the literature on positive religious coping is clear on the likely wellbeing outcomes being positive, the literature on negative religious coping is more equivocal (Ano & Vasconcelles, 2005). Negative religious coping has generally been associated with negative wellbeing outcomes, including higher depression and poorer psychological and physical health (Meisenhelder & Marcum, 2009; Pargament et al., 2001). Ano and Vasconcelles (2005) proposed one reason why negative religious coping is associated with increased negative outcomes is that it provides an additional burden on the person facing the stressful situation. Other research found a correlation between negative religious coping and positive wellbeing

outcomes, specifically posttraumatic growth (Calhoun et al., 2000; Pargament et al., 2006). Due to the preponderance of studies indicating negative religious coping generally leads to non-optimal wellbeing, the current research anticipated negative religious coping to have a negative correlation with vitality and a positive correlation with burnout.

*Hypothesis 4a: Not supported -Positive religious coping will be positively associated with vitality.*

*Hypothesis 4b: Not supported -Positive religious coping will be negatively associated with burnout.*

*Hypothesis 5a: Not supported -Negative religious coping will be negatively associated with vitality.*

*Hypothesis 5b: Supported -Negative religious coping will be positively associated with burnout.*

Contrary to expectations, three of the four hypotheses relating to religious coping and wellbeing were not supported. The correlations were in the expected directions but were not statistically significant. There are potential statistical reasons why this research failed to show significant relationships which are equally applicable to all the hypotheses since they used the sample size and the same psychometric measures.

Sample size is important for detecting relationships, and small sample sizes can lead to non-significant results even if there is a relationship there to be detected (Bonett, 2002; Lenth, 2001). One popular approach to determining sample size involves statistical power, level of significance or alpha, and effect size provided by  $r$  value correlations (Bartlett, Kotrlik, & Higgins, 2001; Friedman, 1982; Lenth, 2001). According to the Friedman's (1982) table suggesting sample sizes, 82 people are a sufficiently large sample size to detect relationships at the 0.30 effect size, with alpha at 0.05 as an acceptable estimation of error, and statistical power at the standard 80%. With these same parameters to measure relationships at a 0.25 correlation (measure of effect size), a sample of 120 would be required.

The current sample had 99 respondents so even with some missing values, it is likely to have sufficient power to detect relationships at  $r$  0.30. In the current research, there were a total of 56 correlation relationships tested although the correlations relating to the subscales of the measures are not in the discussion due to the limited scope of this particular study. They have been included in the correlation tables in the results chapter (Chapter Eight). Of the 56

relationships tested, 40 were found to be statistically significant, with 31 over 0.30, 7 between 0.25 and 0.30, and only two between 0.20 and 0.25. For the majority of the relationships tested, it could be argued the sample size was adequate for the key analyses performed in this research even though a larger sample size may strengthen these correlations, allow for less margin of error by using a smaller alpha, or even detect relationships currently not considered significant.

The three unsupported hypotheses fall within Cohen's (1992) weak effect range, with the association between negative religious coping and vitality being particularly weak ( $r = -0.103$ ). This suggests even if there was larger sample size, it may not yield significant results and it is unlikely that a beta (or Type II) error is the reason for failing to find significant relationships.

A methodological explanation is weak but possible and focuses on the measure used, the Brief RCOPE. Russell and Bobko (1992) wrote it is ideal to have a measure high in sensitivity and low in measurement error to get optimal statistical power. Likert scales with two, three, or four points (e.g., Brief RCOPE) tend to perform poorly on the ability to discriminate statistical power (Churchill & Peter, 1984; Preston & Colman, 2000), thus undermining the true results. Reduced power due to method of measurement may contribute to the non-significant finding, but it is unlikely to fully explain these results.

The statistical and methodological reasons are not sufficiently compelling for these hypotheses to be unsupported so there are likely to be theoretical reasons to account for this.

The measures used in this analysis were created and validated in Western settings (Maslach & Jackson, 1981; Pargament et al., 1998; Ryan & Frederick, 1997), and it is possible that cultural differences account for the weaker than expected correlations due to different ways stress, coping, and wellbeing outcomes are related. The relationships between these variables, their relative salience and impact differ across cultures. Mirowsky and Ross (1984) explored differences between Mexican, Mexican American and Anglo adults in Mexico and the United States. They discovered in Mexican culture that stress increases depression but decreases anxiety. Dyal and Chan (1985) found significant differences between Chinese and Canadian university students in how stress affects their wellbeing. Sinha and Watson (2007) conducted cross-cultural research exploring the relationship stress and coping have with psychological outcomes amongst university students in Canada and India. Sinha and Watson (2007) noted a striking difference between the two samples with stress and coping accounting for a much smaller percentage of the variance in the psychological symptoms of Indian students than Canadian students. They determined cultural factors must influence this relationship leading to the weaker relationships in the Indian sample. In that research, Sinha and Watson (2007)



investigated nine psychological symptoms including somatisation, depression, anxiety and interpersonal sensitivity. However, this provides a plausible explanation for why religious coping has unexpectedly small relationships with vitality and burnout. Future research could explore the paths between stress, religious coping, and vitality and burnout in the Indian culture.

In addition to these reasons that apply to all of the religious coping hypotheses, each hypothesis will be considered separately below.

*Hypothesis 4a: Not supported - Positive religious coping will be positively associated with vitality.*

It is possible a connection between positive religious coping and vitality is too tenuous to be statistically significant. For example, the item “focused on religion to stop worrying about my problems” is on the Brief RCOPE as a positive coping strategy but it may actually lend itself more to ineffective coping strategies like avoidance than effective ones. Secondly, the assumption is that reduced stress will lead to increased vitality, which may need further research in the cultural setting of India.

Another potential reason why this hypothesis is unsupported is there could be unknown factors influencing the process of coping and leading to weak effect sizes. Research has found numerous factors which influence the effectiveness of coping, including optimism (Rioli & Savicki, 2003), attachment style (Mikulincer & Florian, 1995; Schottenbauer et al., 2006) and control perceptions (Petrosky & Birkimer, 1991). This does not mean one of these is necessarily at work in the current study, but there are many potential unaccounted for factors, necessitating future research into mediating and moderating variables on religious coping.

*Hypothesis 4b: Not Supported - Positive religious coping will be negatively associated with burnout.*

It could be that employing religious coping strategies does not adequately alleviate the problems of interpersonal daily hassles in the workplace. The type of stressful situation requires different coping strategies for effective control of the stressor and its impact (Rioli & Savicki, 2010; Schottenbauer et al., 2006). Schottenbauer and colleagues (2006) found the use of religion as a coping strategy also depended on the type of stress, and was used for events like a death in the family more frequently than with practical difficulties. They also noted an individual is more likely to use maladaptive coping in situations of greater severity or stress. Harris and colleagues



(2010) investigated aspects of religious coping and discovered they were more effective with non-personal trauma than with interpersonal difficulties.

Another reason why this may not be shown to be supported is it is a correlational study rather than being conducted in a controlled environment. It does not control for the extent of the stress experienced or other influencing factors. There is also no way to ascertain to what extent religious coping is supporting wellbeing because there is no comparison group of people who are not using religious coping.

*Hypothesis 5a: Not supported - Negative religious coping will be negatively associated with vitality.*

Ano and Vasconcelles' (2005) meta-analysis found no significant statistical support for their hypothesis that negative religious coping will be inversely related to positive psychological adjustment. They suggested this may be the case due to a disconnect between the theoretical constructs. They believed negative religious coping may be harmful but does not necessarily prevent people from experiencing positive outcomes.

Research into posttraumatic growth suggests negative religious coping can lead to certain positive outcomes (Tedeschi & Calhoun, 1996), although further research is needed to investigate other factors at play.

*Hypothesis 5b: Supported - Negative religious coping will be positively associated with burnout.*

The current findings support the hypothesis that negative religious coping is positively correlated with burnout as a measure of negative psychological outcomes, despite the small sample size. The more an individual engages in negative religious coping strategies in dealing with stressful situations, the more that person is prone to burnout.

This relationship may be due to negative religious coping being a part of an individual's 'substitute fulfilment' as a Self-Determination Theory notion. SDT asserts need satisfaction leads to optimal functioning (behavioural and affective) and non-optimal functioning occurs as a consequence of proximal or developmental thwarted need satisfaction (Deci & Ryan, 2000). When a need is persistently blocked, an individual may adapt and attempt to get their needs met through compensatory avenues or substitute fulfilments. In fact, one characteristic of SDT is equifinality where "people are persistent in their attempts to satisfy primary needs, devising new paths when old routes no longer work" ((Deci & Ryan, 2000, p.248). These processes can be

defensive, angry, or they could take the form of passivity and apathy, or any other maladaptive approaches to human behaviour. Deci and Ryan (2000) acknowledged that while compensatory processes do not achieve optimal functioning, they tend to serve some purpose in an unsupportive environment.

A second explanation for this outcome could be due to the effect of the beliefs underlying negative religious coping. The negative religious coping items on the Brief RCOPE are: wondered if God abandoned me, feel punished by God for lack of devotion, wondered what I did for God to punish me, questioned God's love for me, wondered whether church abandoned me, decided the devil made this happen, and questioned the power of God. These beliefs may act to undermine effective coping approaches like problem-solving or drawing strength, guidance, or peace to be able face the stressful situation. These religious coping responses are not likely to inspire prompt cognitive or behavioural positive reinterpretation or action thus maintaining the undesirable status quo or encouraging avoidance.

Thirdly, the results may be partially explained by 'quest'. Burris and colleagues (1996) studied 'quest' and defined it as the process of open-ended existential questioning in the face of life's struggles. The difficulties a person encounters can challenge the views they hold about God, contributing to burnout development. Quest can have some positive outcomes like encouraging deep thinking about struggles rather than simplistic answers and challenging established hegemonies including prejudice (Burris et al., 1996). Burris and colleagues (1996) did not investigate burnout, but it seems the struggling of quest would be draining, thus requiring further emotional and physical energy.

### ***Interaction between internalisation and religious coping***

In the current study, potential interactions between internalisation of religious beliefs and religious coping were investigated.

First, Pearson's correlations were conducted to investigate the relationships between the internalisation of religious beliefs and religious coping variables. The results showed identified regulation for religious beliefs was positively associated with positive religious coping but there was no significant relationship with negative religious coping. Introjected motivation for religious beliefs was positively correlated with negative religious coping, and there was also a non-significant positive correlation to positive religious coping. This implies introjection may also lead to positive religious coping, although not as frequently as negative religious coping.

A hierarchical multiple regression analysis was conducted to test for moderation interactions. A study by Ross and colleagues (2009) found wellbeing outcomes were worse when a person who reports high scores on religion measures also selects a self-directing coping style than when they select deferring, collaborative or turning to religion coping styles. Ross and colleagues (2009) suggested dissonance may play a role in increasing negative psychological outcomes. Cognitive dissonance is a negative state which occurs when a person holds two inconsistent cognitions (e.g., opinions, beliefs) (Aronson, 1969), and emotional dissonance is the incongruence between feeling and action (Lewig & Dollard, 2003). Dissonance is associated with discomfort and negative psychological states (Festinger, Riecken, & Schachter, 1956; Zapf, Seifert, Schmutte, Mertini, & Holz, 2001) and may lead to lowered self-esteem, depression, cynicism and alienation from work (Lewig & Dollard, 2003). Research has linked dissonance with an increased risk of burnout (Bakker & Heuven, 2006; Zapf et al., 2001). The current study investigated the possibility of a similar interaction where, for example, a person with identified religious beliefs uses negative religious coping, thus introducing some incongruency between religion and religious coping.

The multiple regression results clearly showed that in the current study the interactions between internalisation and religious coping did not function through dissonance. Instead, there was a moderation effect showing that the combination of two variables in the same direction was significant, increasing their predictive value. Regarding the vitality moderation analysis, an interaction effect was noted between introjection and negative religious coping, and this interaction is a significant negative predictor affecting vitality. The burnout moderation analysis, noted that the interaction between identification and positive religious coping was significant negatively related to burnout. There were moderating effects such that introjection and negative religious coping strengthened each other, as did identification and positive religious coping.

The current research investigated moderation due to the possible interference it might have had in producing significant or non-significant relationships to vitality and burnout, but future research could investigate potential mediation. It is possible religious coping partially mediates the relationship between internalisation of religion and wellbeing because the images or beliefs people hold about God affects religious coping strategies (Maynard, Gorsuch, Bjorck, 2001). The extent of internalisation likely influences the type of coping an individual selects, leading to different responses and outcomes. For example, someone with identified or integrated religious beliefs could view God as benevolent and loving, thus shaping a more natural positive religious coping response. Someone with an introjected or more external religious faith could view God as judgmental, punishing, abandoning or guilt-tripping, which fits with negative religious coping.

### **9.1.2 Relative Contributions of Explanatory Variables to Outcome Variables: Regression Analysis**

Wellbeing outcomes amongst humanitarian workers are divergent (Antares Foundation, 2006; Cooper & Bright, 2001; McFarlane, 2004). The purpose behind investigating the relationships that basic need satisfaction at work and religious beliefs have with vitality and burnout is to gain a better understanding of wellbeing amongst Christian humanitarian workers. This will be a first step towards individuals and humanitarian organisations being able to implement more effective ways of maintaining employee wellbeing in the midst of human suffering. However, vitality and burnout are influenced by factors beyond the current study. Accordingly, it is important to conduct a multiple regression (MR) analysis to determine how much variance in vitality and burnout can be attributed to the variables measured in this research. Basic need satisfaction at work, internalisation of religious beliefs, religious coping, and general causality orientations were all factored into the MR models.

#### **9.1.2.1 Vitality**

Basic Need Satisfaction at Work (BNS-W) was the most significant variable in the model. The fulfilment of autonomy, competence and relatedness in the workplace significantly contributed to an individual's vitality. The importance of this environment factor to the vitality outcome was emphasised by the decrease in the amount of variance the model accounted for when BNS-W was removed from the model (32.2% variance to 15.5% variance).

Identified motivation for religious belief significantly contributed to vitality. This autonomous internalisation of religion is associated with vitality, as would be expected in accordance with need satisfaction.

Identification regulates behaviour at a specific area of life, in this case relating to religion. Beyond the specific motivation, the multiple regression found a controlled general causality orientation to be a significant variable contributing to vitality. Controlled orientation had a significant negative impact on vitality, indicating a person who has a general controlled approach to interacting with their environment is likely to experience low levels of vitality. This fits with previous studies into the relationships between controlled orientation and diminished wellbeing (Deci & Ryan, 2000; Deci & Ryan, 2008a). Need satisfaction may be the mechanism underlying this result as well given that controlled orientation results from partial need satisfaction, with autonomy being particularly thwarted (Deci & Ryan, 2008b).

The model with eight variables, including these three significant predictors, accounted for 32.2% of the variance in vitality. However, the amount of variance still unaccounted for clearly demonstrates there are other influential predictors of vitality not considered in this research. This emphasises the need for continued research to identify additional factors crucial to increasing vitality amongst humanitarian workers.

### **9.1.2.2 Burnout**

A multiple regression was conducted for burnout to investigate the relative contribution of the same factors considered for vitality. Basic need satisfaction at work, internalisation of religious beliefs, religious coping and general causality orientations in the burnout model account for a larger amount of variance than in the vitality model (47.3% variance compared to 32.2% variance).

Brace and colleagues (2009) stated that a multiple regression model can still be significant even when the individual variables within the model are not individually significant. Basic need satisfaction at work is the only variable in this model that has a large enough beta regression coefficient ( $\beta$ ) to be statistically significant predictor on its own. The analysis shows that need satisfaction at work is a predictor of low burnout levels. BNS-W is a larger contributor to the burnout model than to vitality, indicating that thwarted needs at work are even more influential in burnout than fulfilled needs are to vitality.

The 47.3% variance supports the idea that there are numerous other factors involved in determining an individual's likelihood of developing burnout. Schaufeli and Peeters (2000) reviewed studies identifying factors that increased the risk of burnout at work, and one category of stressors not considered in this study was non-work variables like poor community support or work-family conflict.

There are some noteworthy differences in the effects of the variables of interest on vitality and burnout. The vitality model contained three significant predictors but burnout only had one. Identification of religious beliefs was positively associated with vitality but has no significant effect on burnout, although there is a non-significant negative association; nor is introjection significantly associated with burnout. Controlled orientations were negative predictors of vitality but have no significant relationship to burnout, nor does autonomous orientation have a significant relationship to burnout. The introjection of religious beliefs, positive and negative religious coping, and autonomous causality orientation all had stronger  $\beta$  coefficients with burnout than with vitality, but they were still beneath the threshold of being statistically significant on their own.

## 9.2 Practical Implications

The impact of work stress on organisations has become widely researched due to the loss of productivity and increased problems with retention of staff (DeFrank & Ivanchevich, 1998; Eriksson et al., 2001; Nelson & Simmons, 2003), and this plight significantly affects humanitarian organisations (Antares Foundation, 2006). This research was prompted by the prevalence of burnout amongst humanitarian workers (Antares Foundation, 2006; Fawcett, 2003; McFarlane, 2004), as well as the ensuing effect that has high rates of burnout on the organisations they represent and the people they serve. The findings should help employees and their organisations to encourage those variables positively associated with vitality while becoming increasingly aware and taking appropriate measures to minimise the risk of burnout.

### 9.2.1 Basic Need Satisfaction at Work.

Basic need satisfaction at work (BNS-W) was positively associated with vitality and negatively correlated with burnout. Basic need satisfaction was measured from the employee's perspective but there is a clear relationship between an individual employee's perceived need satisfaction at work and the management of the organisation intentionally trying to support their employees' basic needs (Baard et al., 2004; Deci et al., 1994; Stone et al., 2009). This transforms what could arguably be a personal factor into an environmental factor as the organisation establishes the environment which is conducive either to thwarting or supporting needs. As expected, studies have shown organisations which strive to be supportive environments have a much larger proportion of employees who report a sense of need satisfaction (Deci et al., 1989; Deci et al., 1994; Stone et al., 2009).

The finding that basic need satisfaction at work is associated with increased vitality and reduced burnout, places an onus on the organisation to support autonomy, competence, and relatedness amongst their staff as an integral part of their staff care. The stressful nature of humanitarian work may threaten need satisfaction meaning organisations with staff working in these environments should be particularly intentional about implementing practices to counter this. Previous literature suggests the following:

Maslach and Jackson (1984) found task significance in terms of impact on lives, feedback from the job, and opportunity for growth were all associated with decreased burnout scores.

Deci and colleagues (1994) and Stone and colleagues (2009) conducted research and compiled guidelines to create a workplace conducive to employee wellbeing, but they can also be viewed

as practical ways to implement support for autonomy, relatedness and competence; and the qualitative data in the current study alluded to some of these management styles. Deci and colleagues (1994) identified three approaches for management to implement support for basic needs: provide a meaningful rationale for an activity the employee is asked to do, acknowledge any conflicting feelings around that activity, and use an interpersonal style that minimises pressure and conveys choice where possible. Stone and colleagues (2009) outlined six directives to increase autonomous motivations of employees. First, ask open questions and invite participation in problem solving. Secondly, actively listen and acknowledge employee perspectives. Thirdly, offer choices within structure including the clarification of responsibilities while maintaining managerial responsibility. Fourthly, provide sincere, positive feedback that acknowledges initiative as well as factual, nonjudgmental feedback about problems. Fifthly, minimise coercive controls which focus on external factors like rewards and comparisons with others. Lastly, develop talent and share knowledge to enhance competence and autonomy.

The qualitative data about stress at work and the way that the subject organisations support employee wellbeing do mirror aspects of these guidelines. Comments recognising supportive management were made, reflecting the principles of providing a rationale, listening, asking for input, and developing knowledge and skills.

By contrast, the ‘sources of stress’ qualitative data included when the management interpersonal style is one of undermining autonomy, competence, or relatedness. Another aspect of poor management generated by the qualitative data related to poor communication, ambiguity in delegated tasks and lack of direction. The recommendations for management to clearly communicate roles, responsibilities, and duties (Gerstein, Topp, & Correll, 1987) would address a number of these concerns.

Schaufeli and Peeters (2000) suggested two interventions to minimise burnout: helping employees develop skills recognise and deal with stress more effectively and changing the work environment to eliminate or reduce the stressor. These concepts emerged in the qualitative data relating to staff care.

One theme generated by the qualitative data which is not reflected in organisational psychology literature is that the current population are Christians working for Christian humanitarian organisations, and as such support for spiritual wellbeing was rated highly as a way the organisation can support them.

The current research shows there are more people who have unhealthy scores on the emotional



exhaustion scale than the depersonalisation or diminished personal accomplishment subscales. Research suggests that burnout is a progression from emotional exhaustion to depersonalisation resulting in diminished personal accomplishment (Schaufeli & Peeters, 2000). If true, organisations would be well advised to note the first stage of burnout to prevent it becoming worse. Diestel and Schmidt (2010) examined five proposed models of how the burnout subconstructs relate to one another. They conducted thorough tests and found exhaustion is longitudinally associated with depersonalisation and that accomplishment is longitudinally predicted by both depersonalisation and exhaustion. Taris and colleagues (2005) likewise found high levels of emotional exhaustion were associated with high levels of depersonalisation and high levels of depersonalisation led to higher levels of emotional exhaustion and lower levels of personal accomplishment.

### **9.2.2 Religious Beliefs.**

The findings on religious beliefs, particularly on internalisation, have practical implications for Christian humanitarian organisations. Identified religious beliefs were positively associated with vitality. Introjected religious beliefs were positively associated with burnout, as was the use of negative religious coping to deal with stressful situations. The fact Christian religious beliefs are shared by the organisation and employee may work in one of two ways. Firstly, it may increase positive work-related phenomena through good person-environment fit (Kristof-Brown et al., 2002; Morley, 2007; Sekiguchi, 2007; Taormina, 2009), facilitate internalisation of work goals (Ellemers et al., 2004), and improve social cohesion between staff (Taormina, 2009). Alternatively, it may be that being part of an organisation that openly believes and encourages Christian beliefs could be perceived as extra pressure on an employee, particularly if that person already has introjected faith. For a person with introjected religious beliefs who adheres to Christianity because of societal pressure or intrapsychic drives like guilt, becoming part of a Christian organisation may simply reinforce the ‘shoulds’ and ‘musts’ associated with their perception of Christianity.

Since these two outcomes are possibilities, Christian humanitarian organisations should be careful not to use shared religious beliefs to exercise a level of control over employees nor to appeal to religious notions that promote external regulation of religious beliefs like fear, guilt, or shame. Even if management is careful not to assert pressure on employees by appealing to religious rules or regulations typically associated with introjected religious beliefs, the environment may breed ‘religious’ pressure amongst colleagues.



It is possible the tendency to be self-righteous infiltrates the workplace and leads to certain beliefs which were labelled as unhelpful in the qualitative data set. For example, frustration with God when it appears someone else's prayers are working better; or secondary guilt or shame associated with having doubts about God. It also may lead to a false portrayal of all being well.

On the other hand, a dominant theme that came through the qualitative data was an appreciation for an organisation which provides spiritual support for the employees. Having shared morning meetings which include devotions, prayer, and being free to share concerns was definitely noted as a way in which organisations cared for their employees' wellbeing.

It is also possible religious coping intersects with organisational support in the realm of debriefing or counselling provided. Exline and colleagues (2000) found individuals who experienced greater religious strain expressed greater interest in addressing religious issues in therapy. It may also be useful for an individual or their supervisor/counsellor to be aware of the religious coping style that a person tends to use and whether it is a resource a burden to them (Ano & Vasconcelles, 2005), as well as how the work they undertake may challenge the religious beliefs they hold dear. Understanding negative forms of religious coping may help practitioners identify possible warning signs (Pargament, Zinnbauer, Scott, Butter, Zerowin, & Stanik, 1998).

### **9.3 Limitations of the Present Study and Suggestions for Future Research**

#### **9.3.1 Limitations**

There were a number of limitations in the current study, which are discussed below and are in addition to those mentioned throughout the discussion (e.g., sample size discussed in relation to the religious coping findings).

The study is correlational so causal relationships cannot be established between basic need satisfaction at work or religious beliefs and vitality or burnout. The multiple regression analyses are also correlational, so causality is not implied when an explanatory variable predicts the outcome. The study is cross-sectional capturing responses at one point in time, whereas religious coping is dynamic rather than static (Pargament et al., 1990), and the progressive nature of health or psychological outcomes suggests a longitudinal study should be used to investigate causality in these relationships.

This research relies on self-reported data which may introduce various response biases, so caution is advised in interpreting results. In a Christian organisation, there may be a sense of pressure to portray that all is well and may include denying doubts of their religious beliefs. The

social desirability bias may underestimate the amount of negative religious coping amongst the population. Further, an unsupportive work environment, is exactly the type of place that may disapprove or punish an employee from disagreeing with their management. The risk of such biases in the reported results is mitigated by having anonymous questionnaires, but it is still a possibility.

There was a practical limitation of using only English translations of the questionnaires. This meant the research population frame was international Christian humanitarian organisation workers (expatriate and local), but not grassroots organisations. This was done deliberately to minimise coverage error so the sample would be more representative of the population (Johnson et al., 2000), but it means the population is more narrow than if it had included Tamilian (local) humanitarian organisations. The sample being restricted to those who are proficient in English limits the generalisability of findings.

A second restriction on the generalisability of this study is it was a Christian religious sample. The corollary to the practical need to narrow ‘religion’ is that the results pertaining to the impact of religious faith cannot be generalised beyond the bounds of Christianity. This may be particularly the case with religions that are not monotheistic - for example, the tenets of Hinduism and Christianity are so divergent that there is unlikely to be much applicability of the results to a Hindu context.

A third restriction on generalisability is based on the locale of the research. The respondents included expatriate and national staff introducing some cultural variety to the sample, but the research is based in Chennai, India. The variables of interest may be influenced by the region or culture, limiting the applicability to other populations. While basic psychological needs are considered universal (Deci & Ryan, 2000), even they may have cultural differences in how the needs are perceived to be thwarted or fulfilled (Ryan & Deci, 2000).

Despite the limitations of generalisability, these results can still be a basis for future research in other contexts since some of these theoretical constructs are dispositional and seem to be true universally (Basic Need Satisfaction at Work, and Internalisation).

The difficulties with generalising the findings result from narrowing down the parameters of research to focus on a homogeneous sample, and therefore, cannot necessarily be extracted and applied to different groups. The converse of this narrowed focus is the encompassing of various factors which could be differentiated for future research, such as distinguishing based on

national or expatriate workers and based on the type of work.

Ahmed (2002) and Allan and Melville (2004) have researched some of the stressors facing national staff in particular, and some of the differences between supporting national and expatriate humanitarian workers. Hawker and Hawker have produced an online training module on supporting national staff that is accessed through The Headington Institute.

Regarding the type of humanitarian work, the current sample included workers who were 'humanitarian' in the broad sense. This means the study's population will have a large span in terms of the intensity of the encounters with human suffering. This research did not have participants who work in natural disaster emergency relief; rather the participants deal with human rights crises, rescue from violent forces of oppression, and development. While some participants will encounter extreme trauma, they are not amongst those who experience the widespread immediate devastation associated with war or natural disasters. Further research into how to best support staff depending on the type of work they are engaged in might provide insights necessary to practically help a range of humanitarian organisations to support their employees maintain wellbeing.

### **9.3.2 Future research**

The limitations of this study and the restricted scope mean there are possibilities for future research.

First, the constructs in this research were predominantly discussed as global entities (burnout rather than emotional exhaustion, depersonalisation, and diminished personal accomplishment; basic need satisfaction at work rather than autonomy, competence, and relatedness). Previous research has investigated the differential impacts of the needs fulfilment (Deci & Ryan, 2008b) on general causality orientations. Taris and colleagues (2005) and Diestel and Schmidt (2010) studied interactions between burnout subscales that may have practical implications for organisations, as emotional exhaustion signals the first stage of burnout development. Future research could shed light on whether specific needs have specific relationships with aspects of burnout. For example, does thwarted competence have a particularly strong correlation with diminished personal accomplishment in burnout? Or, does thwarted relatedness precipitate depersonalisation? This potential branch of research could also explore the differential impact of need satisfaction on wellbeing depending on need deprivation or strength. Specific research could focus on the effect of need satisfaction in the context of the most challenged need. This could shed light on wellbeing depending on need deprivation or need strength. Organisations could benefit by knowing how best to support an employee who is challenged in one particular

way. For instance, if relatedness is particularly deprived in dealing with ungrateful or hostile clients, does this require compensation (i.e., extra relatedness support) to fulfill need? Deci and Ryan (2000) acknowledged there may be differences in need strength, although this was not the focus of their research. Such research could have significant impact on the ability of organisations to provide the best support for employee wellbeing and to protect against burnout.

Another aspect of general causality orientations for future research is related to the interaction between general motivation and specific motivation. One of Vallerand's observations relevant to this research is that usually general orientations are predictive of more specific regulatory styles (Vallerand, 1997). Vallerand (2000) explains there is a bottom-down influence, an interaction between domains and also a top-up or 'recursive' influence, making it possible that specific motivations have an effect on general causality orientations. Given the general tendency can also be shaped by proximal need satisfaction (Deci & Ryan, 2000), and that everybody experiences all three orientations to some extent anyway (Deci & Ryan, 1985b; Deponete, 2004), under what circumstances would a set of internalised values end up changing an individual's particular propensity for interacting with the world? For example, could identified faith result in a change of general causality orientation from controlled or impersonal to more autonomous?

Thirdly, future research in various cultural settings could expand Deci and colleagues' (1994) and Stone and colleagues' (2009) research into how organisations and management can best implement support for need satisfaction in different cultures. The cultural differences in what is considered respectful communication and ways of relating provide a plausible basis to suggest that the interpersonal interactions which are intended to support basic needs could be interpreted differently depending on culture. This future research could be beneficial to both corporate and non-profit international organisations who are operating with employees from various cultural backgrounds.

Fourthly, future research could continue to investigate wellbeing of humanitarian workers using different wellbeing indicators. The current research used vitality and burnout. Apart from burnout, humanitarian workers may experience a range of other negative psychological outcomes in response to stress (Eriksson et al., 2001) like Post-Traumatic Stress Disorder (PTSD), Vicarious Trauma (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995) or Compassion Fatigue (Figley, 1995). Focused research into the relative prevalence of these negative outcomes of stress could lead to appropriate psychosocial support being implemented, and resources being allocated in the most effective way.

## 9.4 Conclusion

The overall aim of the research was to develop a better understanding of wellbeing among humanitarian workers, specifically those working in Christian humanitarian organisation. This research focused on the relationships between need satisfaction at work and wellbeing as well as the relationships between religious faith and wellbeing.

Basic need satisfaction at work was associated with increased vitality and decreased burnout. The investigation into the relationship between religious faith and wellbeing that showed one cannot provide a blanket answer as to whether religious beliefs increase wellbeing in Christian humanitarian workers. The extent to which religious faith is internalised is a factor that impacts wellbeing, separate from simply being a manifestation of the general causality orientation. Identified religious beliefs were positively associated with vitality while introjected religious beliefs were positively associated with burnout. The religious coping constructs were not clearly linked with wellbeing outcomes except for negative religious coping being positively correlated with burnout.

The results have been discussed along with a number of limitations, suggestions for future research and practical implications. There are a large number of Christian based humanitarian organisations representing large numbers of employees. This research can contribute to greater psychological knowledge, allowing humanitarian organisations to continually develop better practices based on sound theoretical and empirical foundations to ensure staff wellbeing, and to reduce the incidence of burnout.

## References

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- Abelson, R. P. (1995). *Statistics as principled argument*. Hillsdale, NJ: Lawrence Erlbaum.
- Adie, J. W., Duda, J. L., & Ntoumanis, N. (2008). Autonomy support, basic need satisfaction and the optimal functioning of adult male and female sport participants: A test of basic needs theory. *Motivation and Emotion*, 32, 189-199.
- Ahmad, M. M. (2002). Who cares? The personal and professional problems of NGO fieldworkers in Bangladesh. *Development in Practice*, 12, 177-191.
- Allan, A., & Melville, F. (2004). Mitigating stress of national staff: Suggestions for proactive management. Presented at conference Cross-cultural perspectives on psychosocial issues of humanitarian staff care, Melbourne, 16-17, November 2004. Retrieved from [http://groups.psychology.org.au/Assets/Files/mitigating\\_stress.pdf](http://groups.psychology.org.au/Assets/Files/mitigating_stress.pdf)
- Aldwin, C. M. (1994). *Stress, coping and development: An integrative perspective*. New York, NY: Guilford.
- Aldwin, C. M., & Revenson, T. A. (1987). Does coping help? A re-examination of the relation between coping and mental health. *Journal of Personality and Social Psychology*, 53, 337-348.
- Alexander, M., & Hegarty, J. R. (2000). Measuring staff burnout in a community home. *The British Journal of Developmental Disabilities*, 46, 51-62.
- Altman, D. G., & Royston, P. (2006). The cost of dichotomising continuous variables. *British Medical Journal*, 332, 1080.
- Andersen, S. M., Chen, S., & Carter, C. (2000). Fundamental human needs: Making social cognition relevant. The commentaries on "The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 269-275.
- Ano, G. G., & Vasconcelles, E. B. (2005). Religious coping and psychological adjustment to stress: A meta-analysis. *Journal of Clinical Psychology*, 61, 461-480.
- Antares Foundation. (2006). *Managing stress in humanitarian workers: Guidelines for good practice*. (2<sup>nd</sup> ed.). Amsterdam: Antares Foundation.
- Arehart-Treichel, J. (2005). Dissociation often precedes PTSD in sexually abused children. *Psychiatric News*, 40, 34.
- Arnette, N. C., Mascaro, N., Santana, M. C., Davis, S., & Kaslow, N.J. (2007). Enhancing spiritual well-being among suicidal African American female survivors of intimate partner violence. *Journal of Clinical Psychology*, 63, 909-924.
- Aronson, E. (1969). The theory of cognitive dissonance: A current perspective. In L. Berkowitz (Ed.), *Advances in experimental social psychology*. (Vol. 4, pp. 2-35). New York, NY: Academic Press Inc.
- Austin, J. T., Boyle, K. A., & Lualhati, J. C. (1998). Statistical conclusion validity for

- organizational science researchers: A review. *Organizational Research Methods*, 1, 164-208.
- Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology*, 34, 2045-2068.
- Bakker, A. B., & Heuven, E. (2006). Emotional dissonance, burnout, and in-role performance among nurses and police officers. *International Journal of Stress Management*, 13, 423-440.
- Bargh, J. A., Gollwitzer, P. M., Lee-Chai, A., Barndollar, K., & Trötschel, R. (2001). The automated will: Nonconscious activation and pursuit of behavioral goals. *Journal of Personality and Social Psychology*, 81, 1041-1027.
- Barnett, V., & Lewis, T. (1994). *Outliers in Statistical Data*. New York, NY: John Wiley and Sons.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Barron, R. A. (1999). Psychological trauma and relief workers. In J. Leaning, S. M. Briggs, & L. C. Chen (Eds.), *Humanitarian crises: The medical and public health response* (pp. 143-175). Cambridge, MA: Harvard University Press.
- Bartlett, J. E., Kotrlik, J. W., & Higgins, C. C. (2001). Organizational research: Determining appropriate sample size in survey research. *Information Technology, Learning, and Performance Journal*, 19, 43-50.
- Baruch-Feldman, C., Brondolo, E. Ben-Dayan, D. & Schwartz, J.(2002). Sources of social support and burnout, job satisfaction, and productivity. *Journal of Occupational Healthy Psychology*, 7, 84-93.
- Bateson, C. D. (1976). Religion as prosocial: Agent or double agent? *Journal for the Scientific Study of Religion*, 15, 29-46.
- Baumeister, R., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497-529.
- Beck, J. S. (1995). *Cognitive therapy: Basics and beyond*. New York, NY: Guilford Press.
- Belavich, T. G., & Pargament, K. I. (2002). The role of attachment in predicting spiritual coping with a loved one in surgery. *Journal of Adult Development*, 9, 13-29.
- Bergin, A. E. (1983). Religiosity and mental health: A critical reevaluation and meta-analysis. *Professional Psychology: Research and Practice*, 14, 170-184.
- Bergin, A. E. (1991). Values and religious issues in psychotherapy and mental health. *American Psychologist*, 46, 394-403.



- Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29, 697-712.
- Bjorck, J. P., & Kim, J. W. (2009). Religious coping, religious support, and psychological functioning among short-term missionaries. *Mental Health, Religion and Culture*, 12, 611-626.
- Bjorck, J. P., & Thurman, J. W. (2007). Negative life events, patterns of positive and negative religious coping, and psychological functioning. *Journal for the Scientific Study of Religion*, 46, 159-167.
- Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Education*, 84, 740-756.
- Blustein, D. L. (1988). The relationship between motivational processes and career exploration. *Journal of Vocational Behavior*, 32, 345-357.
- Boggiano, A. K., & Ruble, D. N. (1979). Competence and the overjustification effect: A developmental study. *Journal of Personality and Social Psychology*, 37, 1462-1468.
- Bonett, D. G. (2002). Sample size requirements for testing and estimating coefficient alpha. *Journal of Educational and Behavioral Statistics*, 27, 335-340.
- Bostic, T. J., Rubio, D. M., & Hood, M. (2000). A validation of the Subjective Vitality Scale using structural equation modeling. *Social Indicators Research*, 52, 313-324.
- Brace, N., Kemp, R., & Snelgar, R. (2009). *SPSS for psychologists*. New York, NY: Routledge.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.
- Breaugh, J. A. (1985). The measurement of work autonomy. *Human Relations*, 38, 551-570.
- Bretz, R. D., & Judge, T. A. (1994). Person-organization fit and the theory of work adjustment: implications for satisfaction, tenure, and career success. *Journal of Vocational Behavior*, 44, 32-54.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research (methodology in the social sciences)*. New York, NY: Guilford Press Inc.
- Brown, N. C., Prashantham, B. J., & Abbott, M. (2003). Personality, social support and burnout among human service professionals in India. *Journal of Community and Applied Social Psychology*, 13, 320-323.
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84, 822-848.
- Browner, C. H. (1987). Job stress and health: The role of social support at work. *Research in Nursing and Health*, 10, 93-100.



- Burris, C. T., Jackson, L. M., Tarpley, W. R., & Smith, G. J. (1996). Religion as quest: The self-directed pursuit of meaning. *Personality and Social Psychology Bulletin*, 22, 1068-1076.
- Burton, K. D., Lydon, J. E., D'Alessandro, D. U., & Koestner, R. (2006). The differential effects of intrinsic and identified motivation on well-being and performance: Prospective, experimental and implicit approaches to self-determination theory. *Journal of Personality and Social Psychology*, 91, 750-762.
- Cain, D. J. (2010). *Person-centered psychotherapies*. Washington, DC: American Psychological Association.
- Calarco, M. M. (2011). The impact of positive practices on nurse work environments: Emerging applications of positive organizational scholarship. *Western Journal of Nursing Research*, 33, 365-384.
- Calhoun, L. G., Cann, A., Tedeschi, T. G., & McMillan, J. (2000). A correlational test of the relationship between posttraumatic growth, religion, and cognitive processing. *Journal of Traumatic Stress*, 13, 521-527.
- Carver, C. S., & Scheier, M. F. (1994). Situational coping and coping dispositions in a stressful transaction. *Journal of Personality and Social Psychology*, 66, 184-195.
- Carver, C. S., & Scheier, M. F. (2000). Autonomy and self-regulation. Commentaries on "the 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 284-291.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56, 267-283.
- Chaves, M., & Tsitsos, W. (2001). Congregations and social services: What they do, how they do it, and with whom. *Nonprofit and Voluntary Sector Quarterly*, 30, 660-683.
- Cherniss, C. (1980). *Staff burnout: Job stress in the human services*. Beverly Hills, CA: Sage.
- Chirkov, V. I., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology*, 84, 91-110.
- Churchill, G. A., Jr., & Peter, J. P. (1984). Research design effects on the reliability of rating scales: A meta analysis. *Journal of Marketing Research*, 21, 360-375.
- Clegg, F. (1998). *Simple Statistics*. Cambridge: Cambridge University Press
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.
- Cohen, J., Cohen, P., West, S. H., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence

- Erlbaum Associates.
- Cohen, M., Village, J., Ostry, A. S., Ratner, P.A., Cvitkovich, Y., & Yassi, A. (2004). Workload as a determinant of staff injury in intermediate care. *International Journal of Occupational Medicine and Environmental Health*, 10, 375-383.
- Connors, G. J., Tonigan, J. S., & Miller, W. R. (1996). A measure of religious background and behavior for use in behavior change research. *Psychology of Addictive Behaviors*, 10, 90-96.
- Conrad, D., & Kellar-Guenther, Y. (2006). Compassion fatigue, burnout, and compassion satisfaction among Colorado child protection workers. *Child Abuse & Neglect*, 30, 1071-1080.
- Cooksey, R. W. (2001). Pursuing an integrated decision science: Does "naturalistic decision making" help or hinder? . *Journal of Behavioral Decision Making*, 14, 361-362.
- Cooper, L., & Bright, J. (2001). Individual differences in reactions to stress. In F. Jones & J. Bright (Eds.), *Stress: Myth, theory and research*. Harlow, England: Pearson.
- Cooper, L. B., Bruce, A. J., Harman, M. J., & Boccaccini, M. T. (2009). Differentiated styles of attachment to God and varying religious coping efforts. *Journal of Psychology and Theology*, 37, 134-141.
- Costa, P. T., Somerfield, M. R., & McCrae, R. R. (1996). Personality and coping: A reconceptualisation. In M. Zeidner & N. S. Endler (Eds.), *Handbook of coping: Theory, research, applications* (pp. 44-61). New York: John Wiley & Sons, Inc.
- Crocker, J. (2002). Contingencies of self-worth: Implications for self-regulation and psychological vulnerability. *Self and Identity*, 1, 143-149.
- Csikszentmihalyi, M., & Figurski, T. (1982). Self-awareness and aversive experience in everyday life. *Journal of Personality*, 50, 15-28.
- Csikszentmihalyi, M., & LeFevre, J. (1989). Optimal experience in work and leisure. *Journal of Personality and Social Psychology*, 56, 815-822.
- Day, N. E. (2005). Religion in the workplace: Correlates and consequences of individual behavior. *Journal of Management, Spirituality and Religion*, 2, 104-135.
- deCharms, R. (1968). *Personal causation: The internal affective determinants of behavior*. New York, NY: Academic Press.
- Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organisation. *Journal of Applied Psychology*, 74, 580-590.
- Deci, E. L., Eghrari, H., Patrick, B.C., & Leone, D.R. (1994). Facilitating internalization: The self-determination theory perspective. *Journal of Personality*, 62, 119-142.
- Deci, E. L., & Ryan, R. M. (1985a). *Intrinsic motivation and self-determination in human*

- behavior*. New York, NY: Plenum.
- Deci, E. L., & Ryan, R. M. (1985b). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19, 109-134.
- Deci, E. L., & Ryan, R. M. (2000). The what and why of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.
- Deci, E. L., & Ryan, R. M. (2008a). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology*, 49, 14-23.
- Deci, E. L., & Ryan, R. M. (2008b). Self-Determination Theory: A macrotheory of human motivation, development, and health. *Canadian Psychology*, 49, 182-185.
- Deci, E. L., Ryan, R. M., Gagne', M., Leone, D. R., Usunov, J., & Kornazheva, B. P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former Eastern Bloc country. *Personality and Social Psychology Bulletin*, 27, 930-942.
- DeFrank, R., & Ivanchevich, J. (1998). Stress on the job: An executive update. *Academy of Management Executive*, 12, 55-66.
- Deponte, A. (2004). Linking motivation to personality: Causality orientations, motives and self-descriptions. *European Journal of Personality*, 18, 31-44.
- Dewe, P., Cox, T., & Ferguson, E. (1993). Individual strategies for coping with stress at work: A review. *Work & Stress*, 7, 5-15.
- Dewe, P., & Trenberth, L. (2004). Work stress and coping: Drawing together research and practice. *British Journal of Guidance & Counselling*, 32, 143-156.
- Diestel, S., & Schmidt, K. H. (2010). Direct and interaction effects among the dimensions of the Maslach Burnout Inventory: Results from two German longitudinal samples. *International Journal of Stress Management*, 17, 159-180.
- DiLalla, D., & Dollinger, S. (2006). Cleaning up data and running preliminary analyses. In F. T. Leong & J. T. Austin (Eds.), *The Psychology Handbook: A Guide for Graduate Students and Research Assistants* (2nd ed., pp. 241-253). Thousand Oaks, CA: Sage Publications.
- Donat, D. C., Neal, B., & Addleton, R. (1991). Situational sources of stress for direct care staff in a public psychiatric hospital. *Psychosocial Rehabilitation Journal*, 14, 76-81.
- Duriez, B., Soenens, B., & Hutsebaut, D. (2005). Introducing the shortened Post-Critical Belief Scale. *Personality and Individual Differences*, 38, 851-857.
- Dyal, J. A., & Chan, C. (1985). Stress and distress: A study of Hong Kong Chinese and Euro-Canadian students. *Journal of Cross-Cultural Psychology*, 16, 447-466.
- Edgington, E. S. (1995). *Randomization tests*. New York, NY: M. Dekker.
- Edmunds, J., Ntoumanis, N., & Duda, J. L. (2006). A test of self-determination theory in the exercise domain. *Journal of Applied Social Psychology*, 36, 2241-2265.

- Edwards, J., & Cooper, C. (1988). The impacts of positive psychological states on physical health: A review and theoretical framework. *Social Science Medicine*, 27, 1447-1459.
- Egbert, N., Mickley, J., & Coeling, H. (2004). A review and application of social scientific measures of religiosity and spirituality: Assessing a missing component in health communication research. *Health Communication*, 16, 7-27.
- Ehrenreich, J. H., & Elliot, T. L. (2004). Managing stress in humanitarian aid workers: A survey of humanitarian aid agencies' psychosocial training and support for staff. *Peace and Conflict: A Journal of Peace Psychology*, 10, 53-66.
- Ellemers, N., de Gilder, D., & Haslam, S. A. (2004). Motivating individuals and groups at work: A social identity perspective on leadership and group performance. *Academy of Management Review*, 29, 459-478.
- Endler, N. S., & Parker, J. D. A. (1990). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality and Social Psychology*, 58, 844-854.
- Epstein, S. (1992). Coping ability, negative self-evaluation and overgeneralisation: Experiment and theory. *Journal of Personality and Social Psychology*, 37, 1097-1126.
- Erez, M., Gopher, D., & Arzi, N. (1990). Effects of goal difficulty, self-set goals, and monetary rewards on dual task performance. *Organizational Behavior and Human Decision Processes*, 47, 247-269.
- Eriksson, C. B., Vande Kemp, H., Gorsuch, R., Hoke, S., & Foy, D. W. (2001). Trauma exposure and PTSD symptoms in international relief and development personnel. *Journal of Traumatic Stress*, 14, 205-212.
- Eriksson, C. B., Bjorck, J. P., Larson, L. C., Walling, S. M., Trice, G. A., Fawcett, J.,...Foy, D. W. (2009). Social support, organisational support, and religious support in relation to expatriate humanitarian aid workers. *Mental Health, Religion, and Culture*, 12, 671-686.
- Etzion, D. (1984). Moderating effect of social support on the stress-burnout relationship. *Journal of Applied Psychology*, 69, 615-622.
- Exline, J. J., Yali, A. M., & Sanderson, W. C. (2000). Guilt, discord, and alienation: The role of religious strain in depression and suicidality. *Journal of Clinical Psychology*, 56, 1481-1496.
- Fawcett, J. (2003). *Stress and trauma handbook: Strategies for flourishing in demanding environments*. California: World Vision International.
- Ferris, E. (2005). Faith-based and secular humanitarian organizations. *International Review of the Red Cross*, 87, 311-325.

- Festinger, L., Riecken, H. W., & Schachter, S. (1956). *When prophecy fails*. New York, NY: Harper and Row.
- Field, A. (2005). *Discovering statistics using SPSS* (2<sup>nd</sup> ed.). London: Sage Publications Ltd.
- Figley, C. R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. Bristol, PA: Brunner/Mazel.
- Flanigan, S. T. (2009). Staff perceptions of the benefits of religion in health and human services nonprofits: Evidence from international development. *Journal of Health and Human Services Administration*, 32, 164-194.
- Fleishman, J. A. (1984). Personality characteristics and coping patterns. *Journal of Health and Social Behaviour*, 25, 229-244.
- Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. *Journal of Personality and Social Psychology*, 46, 839-852.
- Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 21, 219-239.
- Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology*, 55, 745-774.
- Frick, R. W. (1996). The appropriate use of null hypothesis testing. *Psychological Methods* 1, 379-390.
- Friedman, H. (1982). Simplified determinants of statistical power, magnitude of effect and research sample sizes. *Educational and Psychological Measurement*, 42, 521-526.
- Fuhrman, X., & Holmbeck, G. N. (1995). A contextual moderator analysis of emotional autonomy and adjustment in adolescence. *Child Development*, 66, 793-811.
- Fyvie, C. & Ager, A. (1999). NGOs and innovation: Organisational characteristics and constraints in development assistance work in The Gambia. *World Development*, 27, 1383-1395.
- Gagne, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26, 331-362.
- Gagne, M., Senecal, C. B., & Koestner, R. (1997). Proximal job characteristics, feelings of empowerment, and intrinsic motivation: A multidimensional model. *Journal of Applied Social Psychology* 27, 1222-1240.
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update* (4th ed.). Boston: Allyn & Bacon.
- Gerdes, E. P., & Ping, G. (1994). Coping differences between college women and men in China and the United States. *Genetic, Social, & General Psychology Monographs*, 120, 169-198.
- Gergen, K. (1985). The social constructionist movement in modern psychology. *American*

- Psychologist*, 40, 266-275.
- Gerstein, L. H., Topp, C. G., & Correll, G. (1987). The role of the environment and person when predicting burnout among correctional personnel. *Criminal Justice and Behavior*, 14, 352-369.
- Giles, D. C. (2002). *Advanced research methods in psychology*. Hove, UK: Routledge.
- Gil-Monte, P. R. (2011). The Influence of guilt on the relationship between burnout and depression. *European Psychologist*, 1, 1-6.
- Gillespie, J. Z. (2009). A humanistic viewpoint on use-inspired motivation research. *Industrial and Organizational Psychology*, 2, 115-117.
- Green, B. L. (1996). Traumatic stress and disaster: Mental health effects and factors influencing adaptation. . In F. L. Mak & C. C. Nadelson (Eds.), *International review of psychiatry* (Vol. 2, pp. 177-210). Washington, DC: American Psychiatric Press.
- Green, T. K. (2005). Work culture and discrimination. *California Law Review*, 93, 625-684.
- Greguras, G. J., & Diefendorff, J. M. (2009). Different fits satisfy different needs: Linking person-environment fit to employee commitment and performance using Self-Determination Theory. *Journal of Applied Psychology*, 94, 465-477.
- Greguras, G. J., & Diefendorff, J. M (2010). Why does proactive personality predict employee life satisfaction and work behaviors? A field investigation of the mediating role of the self-concordance model. *Personnel Psychology*, 63, 539-560.
- Grubbs, F. E., & Beck, G. (1972). Extension of sample sizes and percentage points for significance tests of outlying observations. *Technometrics*, 14, 276-284.
- Guay, F., Mageau, G. A., & Vallerand, R. J. (2003). On the hierarchical structure of self-determined motivation: A test of top-down, bottom-up, reciprocal, and horizontal effects. *Personality and Social Psychology Bulletin*, 29, 992-1004.
- Guay, F., Ratelle, C. F, Senecal, C., Larose, S., & Deschenes, A. (2006). Distinguishing developmental from chronic career indecision: Self-efficacy, autonomy, and social support. *Journal of Career Assessment*, 14, 235-251.
- Guillory, W. A. (2000). *The Living Organization: Spirituality in the Workplace*. Salt Lake City, UT: Innovations International Inc.
- Hagger, M. S., Chatzisarantis, N. L. D., & Harris, J. (2006). From psychological need satisfaction to intentional behavior: Testing a motivational sequence in two behavioral contexts. *Personality and Social Psychology Bulletin*, 32, 131-148.
- Halbesleben, J. R., Wakefield, B. J., Wakefield, D. S., & Cooper, L. B. (2008). Nurse burnout and patient safety outcomes: Nurse safety perception versus reporting behavior. *Western Journal of Nursing Research* 30, 560-577.



- Harris, J. I., Erbes, C. R., Engdahl, B. E., Tedeschi, R. G., Olson, R. H., Winskowski, A. M. M., & McMahon, J. (2010). Coping Functions of Prayer and Posttraumatic Growth. *International Journal for the Psychology of Religion*, 20, 26-38.
- Harrison, R. L., & Westwood, M. J. (2009). Preventing vicarious traumatization of mental health therapists: Identifying protective practices. *Psychotherapy Theory, Research, Practice, Training*, 46, 203-219.
- Hathaway, W. L., & Pargament, K. I. (1990). Intrinsic religiousness, religious coping, and psychological competence: A covariance structure analysis. *Journal for the Scientific Study of Religion*, 29, 423-441.
- Hatinen, M., Kinnunen, U., Pekkonen, M., & Kalimo, R. (2007). Comparing two burnout interventions: Perceived job control mediates decreases in burnout. *International Journal of Stress Management*, 14, 227-248.
- Hawker, D. & Hawker, D. Supporting national staff. Headington Institute online training module. Retrieved from <http://headington-institute.org/Default.aspx?tabid=2632>
- Heath, R. L., & Bryant, J. (2000). *Human communication theory and research: Concepts, contexts and challenges*. (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates, Inc., Publisher.
- Herman, J. L. (1997). *Trauma and recovery: The aftermath of violence - from domestic abuse to political terror*. New York, NY: Basic Books.
- Hills, J., Paice, J. A., Cameron, J. R., & Shott, S. (2005). Spirituality and distress in palliative care consultation. *Journal of Palliative Medicine*, 8, 782-788.
- Hodgins, H. S., Koestner, R., & Duncan, N. (1996). On the compatibility of autonomy and relatedness. *Personality and Social Psychology Bulletin*, 22, 227-237.
- Howell, D. C. (2007). *Statistical methods for psychology*. Belmont, CA: Thomson Wadsworth.
- Ilardi, B. C., Leone, D., Kasser, T., & Ryan, R. M. (1993). Employee and supervisor ratings of motivation: Main effects and discrepancies associated with job satisfaction and adjustment in a factory setting. *Journal of Applied Social Psychology*, 23, 1789-1805.
- Ingledeu, D. K., Hardy, L., & Cooper, C. L. (1997). Do resources bolster coping and does coping buffer stress? An organisational study with longitudinal aspect and control for negative affectivity. *Journal of Occupational Health Psychology*, 2, 118-133.
- International Federation of Red Cross and Red Crescent Societies and the ICRC. (1995). *The Code of Conduct for the International Red Cross and Red Crescent Movement and NGOs in Disaster Relief* (Annex VI to the Resolutions of the 26<sup>th</sup> International Conference of the Red Cross and Red Crescent). Geneva. Retrieved from [www.ifrc.org/Docs/idr/I259EN.pdf](http://www.ifrc.org/Docs/idr/I259EN.pdf)

- Iyengar, S. S., & Lepper, M. R. (1999). Rethinking the value of choice: A cultural perspective on intrinsic motivation. *Journal of Personality and Social Psychology*, 76, 349-366.
- Jacobson, N. S., Dobson, K. S., Truax, P. A., Addis, M. E., Koerner, K., Gollan, J. K.,... Prince, S. E. (1996). A component analysis of cognitive-behavioral treatment for depression. *Journal of Consulting and Clinical Psychology*, 64, 295-304.
- Jamieson, S. (2004). Likert scales: How to (ab)use them. *Medical Education*, 38, 1212-1218.
- Jang, H., Reeve, J., Ryan, R.M., & Kim, A. (2009). Can self-determination theory explain what underlies the productive, satisfying learning experiences of collectivistically oriented Korean students? *Journal of Educational Psychology*, 101, 644-661.
- Janssen, N., & Nijhuis, F. J. N. (2004). Associations between positive changes in perceived work characteristics and changes in fatigue. *Journal of Occupational and Environmental Medicine*, 46, 866-875.
- Jawahar, I. M., Stone, T. H., & Kisamore, J. L. (2007). Moderating Effects of Political Skill and Perceived Organizational Support on Burnout. *International Journal of Stress Management*, 14, 142-159.
- Jenaro, C., Flores, N., & Arias, B. (2007). Burnout and coping in human service practitioners. . *Professional psychology: Research and practice*. 38, 80-87.
- Johnson, L. C., Beaton, R., Murphy, S., & Pike, K. (2000). Sampling bias and other methodological threats to the validity of health survey research. *International Journal of Stress Management*, 7, 247-267.
- Joiner, T. E. Jr., Sheldon, K. M., Williams, G., & Pettit, J. (2003). The integration of self-determination principles and scientifically informed treatments is the next tier. *Clinical Psychology: Science and Practice*, 10, 318-319.
- Jones, F., & Bright, J. (Eds.) (2001). *Stress: Myth, theory and research*. Harlow, England: Pearson.
- Kalliath, T. J., Gillespi, D. F., O'Driscoll, M. P., & Bluedorn, A. C. (2000). A Test of the Maslach Burnout Inventory in Three Samples of Healthcare Professionals. *Work & Stress*, 14, 35-50.
- Kasdan, T. B., Mishra, A., Breen, W. E., & Froh, J. J. (2009). Appraisals, narratives, the willingness to express emotions, and changes in psychological needs. *Journal of Personality*, 77, 1-40.
- Kaplan, R., & Kaplan, S. (1989). *The experience of nature: A psychological perspective*. New York: Cambridge University Press.
- Kasser, T., Davey, J., & Ryan, R. M. (1992). Motivation and employee-supervisor discrepancies in a psychiatric vocational rehabilitation setting. *Rehabilitation Psychology*, 37, 175-



- 187.
- Kernis, M. H., Paradise, A. W., Whitaker, D. J., Wheatman, S. R., & Goldman, B. N. (2000). Master of one's psychological domain? Not likely if one's self-esteem is unstable. *Personality and Social Psychology Bulletin*, 26, 1297-1305.
- Kiener, M. (2006). Decision making and motivation and its impact on career search behaviours: The role of self-regulation. *College Student Journal*, 40, 350-360.
- Killion, K. D. (2008). Helping till it hurts? A multimethod study of compassion fatigue, burnout, and self-care in clinicians working with trauma survivors. *Traumatology*, 14, 32-44.
- Kline, R. B. (2004). *Beyond significance testing: Reforming data analysis methods in behavioral research*. (1st ed.). Washington, DC: American Psychological Association.
- Koenig, H. G. (2008). Concerns about measuring "spirituality" in research. *The Journal of Nervous and Mental Disease*, 196, 349-355.
- Koenig, H., McCullough, M., & Larson, D. (2001). *Handbook of religion and health*. New York, NY: Oxford University Press.
- Koestner, R., Bernieri, F., & Zuckerman, M. (1992). Self-determination and consistency between attitudes, traits, and behaviors. *Personality and Social Psychology Bulletin*, 18, 52-59.
- Koestner, R., & Losier, G. (2002). Distinguishing three ways of being internally motivated: A closer look at introjection, identification, and intrinsic motivation. In E. Deci & R. Ryan (Eds.), *Handbook of self-determination research* (pp. 101-121). Rochester, NY: University of Rochester Press.
- Kovacs, B., & Kezdy, A. (2008). Religious belief and burnout. *European Journal of Mental Health*, 3, 253-265.
- Kowalski, C., Driller, E., Ernstmann, N., Alich, S., Karbach, U., Ommen, O.,...Pfaff, H. (2010). Associations between emotional exhaustion, social capital, workload, and latitude in decision-making among professionals working with people with disabilities. *Research in Developmental Disabilities*, 31, 470-479.
- Krishnakumar, S., & Neck, C. P. (2002). The "what", "why", and "how" of spirituality in the workplace. *Journal of Managerial Psychology*, 17, 153-164.
- Kristof-Brown, A. L., Jansen, K. J., & Colbert, A.E. (2002). A policy-capturing study of the simultaneous effects of fit with jobs, groups, and organizations. *Journal of Applied Psychology*, 87, 985-993.
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person-job, person-organization, person-

- group, and person-supervisor fit. *Personnel Psychology*, 58, 281-342.
- Kuzon, W. M., Jr, Urbanchek, M. G., & McCabe, S. T. (1996). The seven deadly sins of statistical analysis. *Annals of Plastic Surgery*, 37, 265-272.
- LaGuardia, J. G., & Ryan, R. M. (2007). Why identities fluctuate: Variability in traits as a function of situational variations in autonomy support. *Journal of Personality*, 75, 1205-1228.
- Lam, D. J., & Palsane, M. N. (1997). Research on stress and coping: Contemporary Asian approaches. In H. S. R. Kao, & D. Sinha (Eds.), *Asian perspectives on psychology* (pp. 265-281). New Delhi, India: Sage.
- Lawson, D. A., & O'Brien, R. M. (1994). Behavioral and self-report measures of staff burnout in developmental disabilities. *Journal of Organizational Behavior Management*, 14, 37-54.
- Lazarus, R. S. (1996). The role of coping in the emotions and how coping changes over the life course. In C. Maletesta-Magni & S. H. McFadden (Eds.), *Handbook of emotion, adult development, and aging* (pp. 289-306). New York, NY: Academic Press.
- Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. New York: Springer.
- Lazarus, R. S., Cohen, J. B., Folkman, S., Kanner, A., & Schaefer, C. (1980). Psychological stress and adaptation. Some unresolved issues. In H. Selye, (Ed.). *Guide to stress research* (pp. 90-117). New York, NY: Van Nostrand Reinhold.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: NY: Springer.
- Leary, M.R., Tambor, E.S., Terdal, S.K. & Downs D.L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology*, 68, 518-530.
- Lee, R. T., & Ashforth, B. E. (1996). The meta-analytic examination of the three dimensions of job burnout. *Journal of Applied Psychology*, 81, 123-133.
- Leiter, M. P., & Laschinger, H. K. S. (2006). Relationships of work and practice environment to professional burnout. *Nursing Research*, 55, 137-146.
- Lenth, R. V. (2001). Some practical guidelines for effective sample size determination. *The American Statistician*, 55, 187-193.
- Levi, L. (2005). Introduction. In C. L. Cooper (Ed.), *Handbook of stress medicine and health*. (2nd ed.). Boca Raton, FL: CRC Press.
- Lewig, K. A., & Dollard, M. F. (2003). Emotional dissonance, emotional exhaustion and job satisfaction in call centre workers. *European Journal of Work and Organizational Psychology*, 12, 366- 392.
- Lonsdale, C., Hodge, K., & Rose, E.A. (2009). Burnout in elite sport: A self-determination

- perspective. *Journal of Sports Sciences*, 27, 785-795.
- Lopes-Cardozo, B., & Salama, P. (2002). Mental health of humanitarian aid workers in complex emergencies. In Y. Danieli (Ed.), *Sharing the front line and the back hills: Peacekeepers, humanitarian aid workers and the media in the midst of crisis* (pp. 242-255). Amityville, NY: Baywood Publishing Company, Inc.
- Maehr, M. L., & Karabenick, S. (2005). *Advances in motivation and achievement* (Vol. 14). Greenwich, CT.: Jai Press Inc.
- Markus, H. R. & Kitayama, S. K. (2003). Models of agency: Sociocultural diversity in the construction of action. In V. Murphy-Berman & J. J. Berman (Eds.), *Cross-cultural differences in perspectives on the self* (pp. 1-57). Lincoln, NE: University of Nebraska Press.
- Martin, W. S. (1973). The effects of scaling on the correlation coefficient: A test of validity. . *Journal of Marketing Research*, 10, 316-318.
- Maslach, C. (1998). A multidimensional theory of burnout. In C. L. Cooper (Ed.), *Theories of organisational stress*. New York, NY: Oxford University Press.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2, 99-113.
- Maslach, C., & Jackson, S. E. (1984). Burnout in organizational settings. In S. Oskamp (Ed.), *Applied social psychology annual* (pp.133-153). Beverly Hills, CA: Sage.
- Maslach, C., Schaufeli, W. B., & Leiter, M. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422.
- Maynard, E. A., Gorsuch, R. L., & Bjorck, J. P. (2001). Religious coping style, concept of God, and personal religious variables in threat, loss, and challenge situations. *Journal for the Scientific Study of Religion*, 40, 65-74.
- McCann, L., & Pearlman, L. A. (1990). Vicarious traumatization: A framework for understanding the psychological effects of working with victims. *Journal of Traumatic Stress*, 3, 131-149.
- McFarlane, C. A. (2004). Risks associated with the psychological adjustment of humanitarian aid workers. *The Australasian Journal of Disaster and Trauma Studies*, 1. Retrieved from <http://www.massey.ac.nz/~trauma/issues/2004-1/mcfarlane.htm>
- McGowan, J., Gardner, D., & Fletcher, R. (2006). Positive and negative affective outcomes of occupational stress. *New Zealand Journal of Psychology*, 35, 92-98.
- McGraw, K. O., & McCullers, J. C. (1979). Evidence of a detrimental effect of extrinsic incentives on breaking a mental set. *Journal of Experimental Social Psychology*, 15, 285-294.
- McKay, L. (2010). Spirituality and humanitarian work: Maintaining your vitality. Headington

- Institute online training module. Retrieved from <http://headington-institute.org/Default.aspx?tabid=2909>
- Meiri, E. I., & Melamed, S. (1986). The accumulation of person-environment congruences and well-being. *Journal of Occupational Behaviour* 7, 315-323.
- Meisenhelder, J. B., & Marcum, J. P. (2009). Terrorism, post-traumatic stress, coping strategies, and spiritual outcomes. *Journal of Religion and Health*, 48, 46-57.
- Mickey, R. M., Dunn, O. J., & Clark V.A. (2004). *Applied statistics: Analysis of variance and regression*. New York, NY: John Wiley & Sons, Inc.
- Mikulincer, M., & Florian, R. (1995). Appraisal of and coping with a real-life stressful situation: The contribution of attachment styles. *Personality and Social Psychology Bulletin*, 21, 406-414.
- Milyavskaya, M., Gingras, I., Mageau, G. A., Koestner, R., Gagnon, H., Fang, J., & Boiche, J. (2009). Balance across contexts: Importance of balanced need satisfaction across various life domains. *Personality and Social Psychology Bulletin*, 35, 1031-1045.
- Mirowsky, J., & Ross, C. (1984). Mexican culture and its emotional contradictions. *Journal of Health and Social Behaviour*, 25, 1-13.
- Mlay, W. (2004). Some myths about faith-based humanitarian aid. *Humanitarian Exchange Magazine*, Humanitarian Practice Network/Overseas Development Institute. Retrieved from <http://www.odihpn.org/humanitarian-exchange-magazine/issue-27/some-myths-about-faith-based-humanitarian-aid>
- Morley, M. J. (2007). Person-organization fit. *Journal of Managerial Psychology*, 22, 109-117.
- Murphy, K. (2002). Using power analysis to evaluate and improve research. In S. G. Rogelberg (Ed.), *Handbook of research methods in industrial and organizational psychology* (pp. 119-137). Malden, MA: Blackwell.
- Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science*, 6, 10-19.
- Nakamura, Y. M., & Orth, U. (2005). Acceptance as a coping reaction. Adaptive or not? *Swiss Journal of Psychology*, 64, 281-292.
- Nelson, D., & Simmons, B. (2003). Health psychology and work stress: A more positive approach. In J. Quick & L. Tetrick (Eds.), *Handbook of occupational health psychology* (pp. 97-117). Washington, DC: American Psychological Association.
- Newton, A. T., & McIntosh, D. N. (2010). Specific religious beliefs in a cognitive appraisal model of stress and coping. *International Journal for the Psychology of Religion*, 20, 39-58.

- Neyrinck, B., Vansteenkiste, M., Lens, M., Duriez, B., & Hutsebaut, D. (2006). Cognitive, affective and behavioral correlates of internalization of regulations for religious activities. *Motivation and Emotion*, 30, 323-334.
- Niedhammer, I., Chastang, J. F., & David, S. (2008). Importance of psychosocial work factors on general health outcomes in the national French SUMER survey. *Occupational Medicine* 58, 15-24.
- Nix, G. A., Ryan, R. M., Manly, J. B., & Deci, E. L. (1999). Revitalization through self-regulation: The effects of autonomous and controlled motivation on happiness and vitality. *Journal of Experimental Social Psychology*, 35, 266-284.
- Nunnally, J. (1978). *Psychometric theory* (2nd ed.). New York, NY: McGraw-Hill.
- O'Connor, B. P., & Vallerand, R. J. (1990). Religious motivation in the elderly: A French-Canadian replication and an extension. *Journal of Social Psychology*, 130, 53-59.
- Oksanen, T., Kouvonen, A., Kivimäki, M., Pentti, J., Virtanen, M., Linna, A., & Vahtera, J. (2008). Social capital at work as a predictor of employee health: multilevel evidence from work units in Finland. *Social Science & Medicine*, 66, 637-649.
- Ostroff, C., Shin, Y., & Kinicki, A.J. (2005). Multiple perspectives of congruence: relationships between value congruence and employee attitudes. *Journal of Organizational Behavior*, 26, 591-623.
- Otis, N., & Pelletier, L. G. (2005). A motivational model of daily hassles, physical symptoms, and future work intentions among police officers. *Journal of Applied Social Psychology*, 35, 2193-2214.
- Ott, L., & Longnecker, M. (2008). *An introduction to statistical methods and data analysis*. (5th edition ed.). Pacific Grove, CA: Duxbury Press.
- Ozer, E. J., Best, S. R., Lipsey, T. L., & Weiss, D. S. (2003). Predictors of posttraumatic stress disorder and symptoms in adults: A meta-analysis. *Psychological Bulletin*, 129, 52-73.
- Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (Version 15)*. Crows Nest, NSW: Allen & Unwin.
- Pargament, K. I. (1997). *The psychology of religion and coping: Theory, research, practice*. New York, NY: Guilford Press.
- Pargament, K. I., Desai, K. M., & McConnell, K. M. (2006). Spirituality: A pathway to posttraumatic growth or decline? In L. G. Calhoun & R. Tedeschi (Eds.), *Handbook of posttraumatic growth: Research and practice* (pp. 121-137). London: Erlbaum.
- Pargament, K. I., Koenig, H. G., & Perez, L. (2000). The many methods of religious coping: Development and initial validation of the RCOPE. *Journal of Clinical Psychology*, 56, 519-543.
- Pargament, K. I., Koenig, H. G., Tarakeshwar, N., & Hahn, J. (2001). Religious struggle

- as a predictor of mortality among medically ill elderly patients: A two-year longitudinal study. *Archives of Internal Medicine*, 161, 1881-1885.
- Pargament, K. I., Smith, B. W., Koenig, H. G., & Perez, L. (1998). Patterns of positive and negative religious coping with major life stressors. *Journal for the Scientific Study of Religion*, 37, 710-724.
- Pargament, K. I., Zinnbauer, B. J., Scott, A. B., Butter, E. M., Zerowin, J., & Stanik, P. (1998). Red flags and religious coping: Identifying some religious warning signs among people in crisis. *Journal of Clinical Psychology*, 54, 77-89.
- Pearlman, L. A., & Saakvitne, K. W. (1995). Treating therapists with vicarious traumatization and secondary traumatic stress disorders. In C. R. Figley (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized* (pp. 150-177). Levittown, PA: Brunner/Mazel.
- Pedhazur, E., & Schmelkin, L. (1991). *Measurement, design, and analysis: An integrated approach*. Mahwah, NJ: Lawrence Erlbaum.
- Peres, J. F. P., Moreira-Almeida, A., Nasello, A. G., & Koenig, H. G. (2007). Spirituality and resilience in trauma victims. *Journal of Religion and Health*, 46, 343-350.
- Petrosky, M. J., & Birkimer, J. C. (1991). The relationship among locus of control, coping styles, and psychological symptom reporting. *Journal of Clinical Psychology*, 47, 336-345.
- Pett, M. A. (1997). *Non-parametric statistics for health care research*. London: SAGE Publications.
- Peytremann, I., Baduraux, M., O'Donovan, S., & Loutan, L. (2001). Medical evacuations and fatalities of United Nations High Commissioner for Refugees field employees. *Journal of Travel Medicine*, 8, 117-121.
- Phelps, A. C., Maciejewski, P. K., Nilsson, M., Balboni, T. A., Wright, A. A., Paulk, M. E.,...Prigerson, H. G. (2009). Religious coping and use of intensive life-prolonging care near death in patients with advanced cancer. *Journal of the American Medical Association*, 301, 1140-1147.
- Potter-Efron, R. T. (1989). *Shame, guilt and alcoholism: Treatment issues in clinical practice*. New York, NY: Haworth Press.
- Prati, G., & Pietrantonio, L. (2009). Optimism, social support, and coping strategies as factors contributing to posttraumatic growth: A meta-analysis. *Journal of Loss and Trauma*, 14, 364-388.



- Preston, C. C., & Colman, A. M. (2000). Optimal number of response categories in rating scales: Reliability, validity, discriminating power, and respondent preferences. *Acta Psychologica, 104*, 1-15.
- Prosser, D., Johnson, S., Kuipers, E., Szmukler, J., Bebbington, P., & Thornicroft, G. (1997). Perceived sources of work stress and satisfaction among hospital and community mental health staff, and their relation to mental health, burnout and job satisfaction. *Journal of Psychosomatic Research, 43*, 51-59.
- Purcell, A. T. (1982). The structure of activation and emotion. *Multivariate Behavioral Research, 17*, 221-251.
- Pyszczynski, T., Greenberg, J., & Solomon, S. (2000). Towards a dialectical analysis of growth and defensive motives. Commentaries on "the 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 301-305.
- Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, J., & Ryan, R. M. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin, 26*, 419-435.
- Rieff, D. (1995). The humanitarian trap. *World Policy Journal, 12*, 1-11.
- Riulli, L., & Savicki, V. (2003). Optimism and coping as moderators of the relation between work resources and burnout in information service workers. *International Journal of Stress Management, 10*, 235-252.
- Riulli, L., & Savicki, V. (2010). Coping effectiveness and coping diversity under traumatic stress. *International Journal of Stress Management, 17*, 97-113.
- Robak, R. W., & Nagda, P. R. (2011). Psychological needs: A study of what makes life satisfying. *North American Journal of Psychology, 13*, 75-86.
- Roesch, S. C., Weiner, B., & Vaughn, A. A. (2002). Cognitive approaches to stress and coping. *Current Opinion in Psychiatry, 15*, 627-632.
- Rohland, B. M., Kruse, G. R., & Rohrer, J. E. (2004). Validation of a single-item measure of burnout against the Maslach Burnout Inventory among physicians. *Stress and Health, 20*, 75-79.
- Ross, K., Handal, P. J., Clark, E. M., & Vander Wal, J. S. (2009 ). The relationship between religion and religious coping: Religious coping as a moderator between religion and adjustment. *Journal of Religion and Health, 48*, 454-467.
- Rupert, P. A., & Kent, J. S. (2007). Gender and work setting differences in career-sustaining behaviours and burnout among professional psychologists. *Professional Psychology: Research and Practice, 38*, 88-96.
- Russell, C. J., & Bobko, P. (1992). Moderated regression analysis and Liker scales too coarse

- for comfort. *Journal of Applied Psychology*, 77, 336-342.
- Ryan, R., & Connell, J. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57, 749-761.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Ryan, R. M., & Frederick, C. (1997). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, 65, 529 - 565.
- Ryan, R. M., Huta, V., & Deci, E. L. (2008). Living well: A self-determination theory perspective on eudaimonia. *Journal of Happiness Studies*, 9, 139-170.
- Ryan, R. M., Rigby, S., & King, K. (1993). Two types of religious internalization and their relations to religious orientations and mental health. *Journal of Personality and Social Psychology*, 65, 586 - 596.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069-1081.
- Sadock, B. J., & Sadock, V. A. (Eds.). (2007). *Kaplan and Sadock's synopsis of psychiatry: Behavioral sciences/ Clinical psychiatry*. (10th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
- Salama, P. (1999). The psychological health of relief workers: Some practical suggestions. *Relief and Rehabilitation Network*, 15, 12-15.
- Sansone, C., & Smith, J. L. (2000). The "how" of goal pursuit: Interest and self-regulation. Commentaries on "the 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 306-309.
- Saunders, D. R. (1956). Moderator variables in prediction. *Educational and Psychological Measurement*, 16, 209-222.
- Savicki, V. (2002). *Burnout across thirteen cultures: Stress, and coping in child and youth care workers*. Westport, CT: Praeger.
- Schaufeli, W. B., & Enzmann, D. (1998). *The burnout companion to study and practice: A critical analysis*. Philadelphia, PA: Taylor & Francis Ltd.
- Schaufeli, W. B., & Bakker, A. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25, 293-315.
- Schaufeli, W. B., & Peeters, M. C. (2000). Job stress and burnout among correctional officers: A literature review. *International Journal of Stress Management*, 7, 19-48.



- Scherbaum, C. A. (2006). A basic guide to statistical research and discovery: Planning and selecting statistical analyses. In F. T. L. Leong & J.T. Austin, (Eds.), *The Psychology Handbook: A Guide for Graduate Students and Research Assistants*, (pp. 293-305). Thousand Oaks, CA: Sage Publications.
- Schmidt, F., & Hunter, J. (2002). Are there benefits from NHST? *American Psychologist*, 57, 65-66.
- Schneider, B. (2001). Fits about fit. *Applied Psychology: An International Review*, 50, 141-152.
- Schottenbauer, M. A., Klimes-Dougan, B., Rodriguez, B. F., Arnkoff, D. B., Glass, C. R., & LaSalle, V. H. (2006). Attachment and affective resolution following a stressful event: General and religious coping as possible mediators. *Mental Health, Religion and Culture*, 9, 448-471.
- Sekiguchi, T. (2007). A contingency perspective of the importance of PJ fit and PO fit in employee selection. *Journal of Managerial Psychology*, 22, 118-131.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5-14.
- Selye, H. (1973). The evolution of the stress concept. *American Scientist*, 61, 692-699.
- Semmer, N. K., McGrath, J. E., & Beehr, T. A. (2005). Conceptual issues in research on stress and health. In C. L. Cooper (Ed.), *Handbook of stress medicine and health*. Boca Raton, FL: CRC Press.
- Senecal, C., Vallerand, R. J., & Guay, F. (2001). Antecedents and outcomes of work-family conflict: Toward a motivational model. *Personality and Social Psychology Bulletin*, 27, 176-186.
- Shanafelt, T. D., Bradley, K., Wipf, J. E., & Back, A. L. (2002). Burnout and self-reported patient care in an internal medicine residency program. *Annals of Internal Medicine*, 136, 358-367.
- Sheldon, K. M., & Niemiec, C. P. (2006). It's not just the amount that counts: Balanced need satisfaction also affects well-being. *Journal of Personality and Social Psychology*, 91, 331-341.
- Sheldon, K. M., Elliot, A. J., Kim, Y., & Kasser, T. (2001). What is satisfying about satisfying events? Testing 10 candidate psychological needs. *Journal of Personality and Social Psychology*, 81, 325-339.
- Sheldon, K. M., Ryan, R. M., & Reis, H. T. (1996). What makes for a good day? Competence and autonomy in the day and in the person. *Personality and Social Psychology Bulletin*, 22, 1270-1279.
- Shirom, A. (2005). Reflections on the study of burnout. *Work and Stress*, 19, 263 - 270.
- Simmonds, S., Gilbert-Miguet, P., Siem, H., Carballo, M., & Zeric, D. (1998). *Occupational*

- health of field personnel in complex emergencies: Report of a pilot study*. Geneva: World Health Organization.
- Sinha, B. K., & Watson, D. C. (2007). Stress, coping and psychological illness: A cross-cultural study. *International Journal of Stress Management*, 14, 386-397.
- Slim, H. (2000). Dissolving the difference between humanitarianism and development: The mixing of a rights-based solution. *Development in Practice*, 10, 491-494.
- Smith, B. (2002). The dangers of aid work. In Y. Danieli (Ed.), *Sharing the front line and the back hills: Peacekeepers, humanitarian aid workers and the media in the midst of crisis* (pp.171-177). Amityville, NY: Baywood Publishing Company, Inc.
- Smith, B., Agger, I., Danieli, Y., & Weisaeth, L. (1996). Emotional responses of international humanitarian aid workers: The contribution of non-governmental organizations. In Y. Danieli, N. Rodley, & L. Weisaeth (Eds.), *International responses to traumatic stress* (pp. 397-423). New York, NY: Baywood.
- Smith, T. B., McCullough, M. E., & Poll, J. (2003). Religiousness and depression: Evidence for a main effect and the moderating influence of stressful life events. *Psychological Bulletin*, 129, 614-636.
- Smith, E. R., Murphy, J., & Coats, S. (1999). Attachment to groups: Theory and measurement. *Journal of Personality and Social Psychology*, 77, 94-110.
- Soenens, B., Berzonsky, M. D., Vansteenkiste, M., Beyers, W., & Goossens, L. (2005). Identity styles and causality orientations: In search of the motivational underpinnings of the identity exploration process. *European Journal of Personality* 19, 427-442.
- Sokal, R. R., & Rohlf, F. J. (1995). *Biometry: the principles and practice of statistics in biological research*. (3<sup>rd</sup> ed.). New York, NY: W. H. Freeman.
- Sørebo, Ø, Halvari, H., Gullia, V. F., & Kristiansena, R. (2009). The role of self-determination theory in explaining teachers' motivation to continue to use e-learning technology. *Computers & Education*, 53, 1177-1187
- Spector, P. E. (1986). Perceived control by employees: A meta-analysis of studies concerning autonomy and participation at work. *Human Relations*, 39, 1005-1016.
- Spector, P. E., Chen, P. Y., & O'Connell, B. J. (2000). A longitudinal study of relations between job stressors and job strains while controlling for prior negative affectivity and strains. *Journal of Applied Psychology*, 85, 211-218.
- Srinivasan, V., Jain, A. K., & Malhotra, N. K. (1983). Improving predictive power of conjoint analysis by constrained parameter estimation. *Journal of Marketing Research*, 20, 433-

- 438.
- Steel, P., & Konig, C. J. (2006). Integrating theories of motivation. *Academy of Management Review*, 31, 889-913.
- Stewart, A. L., Hays, R. D., & Ware, J. E., Jr. (1992). Health perceptions, energy/fatigue, and health distress measures. In A. L. Stewart & J. E. Ware, Jr (Eds.), *Measuring functioning and well-being: The medical outcomes study approach* (pp. 143-172). Durham, NC: Duke University Press.
- Stine, W. W. (1989). Meaningful inference: The role of measurement in statistics. *Psychological Bulletin*, 105, 147-155.
- Stone, D. N., Deci, E. L., & Ryan, R. M. (2009). Beyond talk: Creating autonomous motivation through self-determination theory. *Journal of General Management*, 34, 75-91.
- Stuart, E. H., Jarvis, A., & Daniel, K. (2008). A ward without walls? District nurses' perceptions of their workload management priorities and job satisfaction. *Journal of Clinical Nursing*, 17, 3012-3020.
- Suh, E., Diener, E., & Fujita, F. (1996). Events and subjective wellbeing: Only recent events matter. *Journal of Personality and Social Psychology*, 70, 1091-1102.
- Sullivan, I. G. (1989). Burnout - A study of a psychiatric center. *Loss, Grief, and Care*, 3, 83-93.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th edition ed.). Boston: Allyn and Bacon.
- Taku, K., Cann, A., Calhoun, L. G., & Tedeschi, R. G. (2008). The factor structure of posttraumatic growth inventory: A comparison of five models using confirmatory factor analysis. *Journal of Traumatic Stress*, 21, 158-164.
- Tangney, J. P. (1995). Recent advances in the empirical study of shame and guilt. *American Behavioral Scientist*, 38, 1132-1145.
- Taormina, R. J. (2009). Organizational socialization: the missing link between employee needs and organizational culture. *Journal of Managerial Psychology*, 24, 650-676.
- Tamas, M., Aniko, K., & Katalin, H. S. (2011). Religious motivations for everyday goals: Their religious context and potential consequences. *Motivation and Emotion*, 35, 75-88.
- Taris, T. W., Le Blanc, P. M., Schaufeli, W. B., & Schreurs, P. J. G. (2005). Are there causal relationships between the dimensions of the Maslach Burnout Inventory? A review and two longitudinal tests. *Work and Stress*, 19, 238-255.
- Tassell, N. A. (2009). *Motivation and well-being in humanitarian health workers: Relating self-determination theory to hedonic vs. eudaimonic well-being, vitality and burnout*. Doctor of Philosophy in Psychology, Massey University, Palmerston North.
- Taylor, I. M., & Lonsdale, C. (2010). Cultural differences in the relationships among autonomy

- support, psychological need satisfaction, subjective vitality, and effort in British and Chinese physical education. *Journal of Sport and Exercise Psychology*, 32, 655-673.
- Tedeschi, R. G., & Calhoun, L. G. (1996). The posttraumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, 9, 455-471.
- Thayer, R. E., Newman, R., & McClain, T. M. (1994). Self-regulation of mood: Strategies for changing a bad mood, raising energy, and reducing tension. *Journal of Personality and Social Psychology*, 67, 910-925.
- Thoits, P. A. (1986). Social support as coping assistance. *Journal of Consulting and Clinical Psychology*, 54, 416-423.
- Tinsley, H. E. A., & Brown, S. D. (2000). Multivariate statistics and mathematical modeling. In H. E. A. Tinsley & S. D. Brown, (Eds.), *Handbook of applied multivariate statistics and mathematical modeling*. (pp. 8-36). San Diego, CA: Academic Press.
- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. *Advances in Experimental Social Psychology*, 29, 271-361.
- Vallerand, R. J. (2000). Deci and Ryan's self-determination theory: A view from the hierarchical model of intrinsic and extrinsic motivation. Commentaries on "The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 312-318.
- Vallerand, R. J., Blais, M. R., LaCouture, Y., & Deci, E (1987). The General Causality Orientation Scale: The Canadian French version of the General Causality Orientations Scale. *Canadian Journal of Behavioural Science*, 19, 1-15.
- Vallerand, R. J., & Reid, G. (1984). On the causal effects of perceived competence on intrinsic motivation: A test of cognitive evaluation theory. *Journal of Sport Psychology*, 6, 94-102.
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., & Lens, W. (2008). Explaining the relationships between job characteristics, burnout and engagement: The role of basic psychological need satisfaction. *Work and Stress*, 22, 277-294.
- van Dierendonck, D., Garssen, B., & Visser, A. (2005). Burnout prevention through personal growth. *International Journal of Stress Management*, 12, 62-77.
- Van Dyke, C. J., Glenwick, D. S., Cercero, J. J., & Kim, S. K. (2009). The relationship of religious coping and spirituality to adjustment and psychological distress in urban early adolescents. *Mental Health, Religion and Culture*, 12, 369-383.
- Van Hoof, E. A. J., Born, M., Taris, T. W., & Van der Flier, H. (2006). Ethnic and gender differences in applicants' decision-making processes: An application of the theory of reasoned action. *International Journal of Selection and Assessment*, 14, 156-166.

- van Knippenberg, D., & Van Schie, E. C. M. (2000). Foci and correlates of organizational identification. *Journal of Occupational and Organizational Psychology*, 73, 137-147.
- Vansteenkiste, M., Neyrinck, B., Niemiec, C. P., Soenens, B., De Witte, H., & Van den Broeck, A. (2007). On the relations among work value orientations, psychological need satisfaction, and job outcomes: A self-determination theory approach. *Journal of Occupational and Organizational Psychology*, 80, 251-277.
- Walsh, F. (1999). *Spiritual resources in family therapy*. New York, NY: The Guilford Press.
- Warner, M. A., & Hausdorf, P. A. (2009). The positive interaction of work and family roles: Using need theory to further understand the work-family interface. *Journal of Managerial Psychology*, 24, 372-385.
- Weinstein, N., & Ryan, R. M. (2010). When helping helps: Autonomous motivation for prosocial behavior and its influence on well-being for the helper and the recipient. *Journal of Personality and Social Psychology*, 98, 222-244.
- Wenemark, M., Frisman, G. H., Svensson, T., & Kristenson, M. (2010). Respondent satisfaction and respondent burden among differently motivated participants in a health-related survey. *Field Matters*, 22, 378-390.
- West, C. P., Huschka, M. M., Novotny, P. J., Sloan, J. A., Kolars, J. C., Habermann, T. M., et al. (2006). Association of perceived medical errors with resident distress and empathy: A prospective longitudinal study. *Journal of The American Medical Association*, 296, 1071-1078.
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66, 297-333.
- Wilkinson, L. (1999). Task Force on Statistical Inference. Statistical methods in psychology journals: Guidelines and explanations. *American Psychologist*, 54, 594-604.
- Williams, E. S., Konrad, T.R., Scheckler, W.E., Pathman, D.E., Linzer, M., McMurray, J.E., et al. (2001). Understanding physicians' intentions to withdraw from practice: The role of job satisfaction, job stress, mental and physical health. *Health Care Management Review*, 26, 7-19.
- Witte, K. (1994). Fear control and danger control: A test of the extended parallel process model (EPPM). *Communication Monographs*, 61, 113-134.
- Yaman, H., & Soler, J. K. (2002). The job related burnout questionnaire: A multinational pilot study. *Australian Family Physician*, 31, 1055-1056.
- Yaniv, E., & Farkas, F. (2005). The impact of person-organization fit on the corporate brand perception of employees and of customers. *Journal of Change Management*, 5, 447-461.
- Yi, M. S., Mrus, J. M., Wade, T. J., Ho, M. L., Hornung, R. W., Cotton, S.,... Tsevat, J.

- (2006). Religion, spirituality, and depressive symptoms in patients with HIV/AIDS. *Journal of General Internal Medicine*, 21, S21-S27.
- Yin, R. K. (2008). *Case study research: Design and methods*. (4th ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Zapf, D., Seifert, C., Schmutte, B., Mertini, H., & Holz, M. (2001). Emotion work and job stressors and their effects on burnout. *Psychology & Health*, 16, 527-545.
- Zeidner, M., & Saklofske, D. (1996). Adaptive and maladaptive coping. In M. Zeidner & N. S. Endler (Eds.), *Handbook of coping: Theory, research, applications* (pp.505-531). New York, NY: John Wiley & Sons, Inc.

## Appendix A – Research Information Sheet for Organisations

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### WELL-BEING IN EMPLOYEES OF CHRISTIAN-BASED HUMANITARIAN ORGANISATIONS.

#### INFORMATION SHEET

##### **Who is doing this research?**

My name is Tamara Williams and I am currently completing my Master of Arts degree in Psychology. This research is being conducted through the School of Psychology, Massey University, Palmerston North, New Zealand. My supervisor is Dr Natasha Tassell who is a lecturer with the School of Psychology at Massey University.

##### **What is this research about?**

I am interested in looking at the well-being of Christian employees in Christian-based humanitarian organisations. The work in such organisations can be very challenging but satisfying too! I want to find out more about what increases the rewarding aspects and what decreases the draining aspects, especially since research has noticed that burnout is becoming more prevalent. This has extensive ramifications both for the employees personally and for their workplaces. A lot of studies have found two major influences on a person's well-being in a stressful work environment. Firstly, a person's religious faith can have a large impact on their well-being. Secondly, a work environment can influence their well-being through supporting them in three main areas: their sense of autonomy (or ability to make their own choices), their sense of competence, and their sense of relatedness (or connecting with people).

##### **Who can participate in this research?**

I am seeking workers from international Christian-based humanitarian organisations based in Chennai to participate. I would like to invite your organisation to participate in this research by allowing me to distribute surveys amongst your staff. I will leave the questionnaires with you, and ask you make them available to any of your employees that wish to participate. There will be a freepost envelope attached to the questionnaire so participants can mail them back to me. No expense will be borne by your organisation. The questionnaires will be anonymous so individual participants will not be able to be identified, nor will the organisation that employs them. All information obtained during the project will only be accessible to me and to my supervisor, and will be destroyed when it is no longer required. I would like the opportunity to meet briefly with your workers to provide a brief presentation of the study and requirements of participation. This will also give potential participants the opportunity to ask any questions they may have of me before they participate.

##### **What will the organisation be asked to do?**

If you would like your organisation to participate, I would like access to your staff by meeting with them as a group to explain the research. I will then leave some questionnaires with you, so participants may collect and complete them at their leisure, and are anonymous to me.



Completion of the questionnaire will take approximately 20 minutes to complete, and participants are able to complete it at a time and place suitable to them, so this will not impede on their work time. As mentioned above, freepost envelopes will be provided with the questionnaires, so participants can post them back to me at their convenience.

### **What are the organisation's rights in allowing staff to participate?**

If you would like your organisation to participate, you are welcome to ask any questions. You will have the choice to allow your organisation to be named in the research or the name withheld. If you allow your organisation to be named, there is still no way of determining which participants belong to your organisation. All information which is kept during the project will only be accessible to me and to my supervisor, and will be destroyed when it is no longer required. If answering this questionnaire raises any issues for any of your staff that they wish to discuss further, they will be encouraged to contact my supervisor Dr Natasha Tassell ([N.A.Tassell@massey.ac.nz](mailto:N.A.Tassell@massey.ac.nz)).

### **How can I find out about the results?**

I will provide a summary of the findings to each organisation that has employees participating in this research, and will also ask that you distribute the results to your staff so any participants can see the findings.

### **What do I do now?**

If you would like your organisation to be a part of this research, then please fill in the accompanying Consent Form. We will then arrange the most suitable time for me to meet with your staff to explain the research, and for your organisation to distribute the questionnaires and information sheets to potential participants in your staff. If you are interested but have further questions about the research before you want to participate, then feel free to contact me at [tammysthesis@gmail.com](mailto:tammysthesis@gmail.com) and I will answer any questions. Thank you for your help and support and all the best for your continued work in humanitarian settings!

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*This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 10/27. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email [humanethicsouthb@massey.ac.nz](mailto:humanethicsouthb@massey.ac.nz)*



## Appendix B – Informed Consent Form for Organisations

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### WELL-BEING IN EMPLOYEES OF CHRISTIAN-BASED HUMANITARIAN ORGANISATIONS

#### INFORMED CONSENT FORM

I have read details of the Information Sheet and have had the opportunity to ask questions about it which have been answered to my satisfaction, and I have the right to ask further questions at any time.

I consent to members of this organisation participating in the research, as set out in the information sheet.

I agree/ do not agree to have the name of this organisation mentioned as participating in this research.

Name of the organisation: \_\_\_\_\_

Name: \_\_\_\_\_ Job title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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## Appendix C – Research Information Sheet for Participants

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### WELL-BEING IN EMPLOYEES OF CHRISTIAN-BASED HUMANITARIAN ORGANISATIONS.

#### **INFORMATION SHEET**

##### **Who is doing this research?**

My name is Tamara Williams and I am currently completing my Master of Arts degree in Psychology. This research is conducted through the School of Psychology, Massey University, Palmerston North, New Zealand. My supervisor is Dr Natasha Tassell, who is a lecturer with the School of Psychology at Massey University.

##### **What is this research about?**

I am interested in looking at the well-being of Christian employees in Christian-based humanitarian organisations. The work in such organisations can be very challenging but satisfying too! I want to find out more about what increases the rewarding aspects and what decreases the draining aspects, especially since research has noticed that burnout is becoming more prevalent. This has extensive ramifications both for the employees personally and for the organisations for which they work. A lot of studies have found two major influences on a person's well-being in a stressful work environment. Firstly, a person's religious faith can have a large impact on their well-being. Secondly, a work environment can influence their well-being through supporting them in three main areas: their sense of autonomy (or ability to make their own choices), their sense of competence, and their sense of relatedness (or connecting with people).

##### **Who can participate in this research?**

If you are working in a Christian humanitarian organisation, identify yourself as a Christian, and are over the age of 18 years, I would like to invite you to have your say about this subject! All the questionnaires will be in English and you will also be asked how long you have been working in humanitarian work environments.

##### **What will I be asked to do?**

You will be asked to complete an anonymous questionnaire relating to your levels of well-being, your work environment, your Christian faith and general approach to life, as well as some demographic questions. It will take approximately 20 minutes to complete. Once you have completed the questionnaire, place it in the freepost envelope provided and send it back to me, before the 1<sup>st</sup> October 2010.

##### **What are my rights as a participant?**

If you would like to participate, you can choose not to answer certain questions, and you are welcome to ask any question. Your questionnaire will be anonymous so there is no way that anybody, including me as the researcher, can identify your information. You may withdraw your involvement up until the point that you return the questionnaire to me, but after that I will not be able to withdraw your information as I will not be able to identify your questionnaire. To protect your confidentiality, please do not write your name or other identifiable information anywhere on the questionnaire. All information kept during the project will only be accessible to me and to my supervisor, and will be destroyed when it is no longer required. The final thesis will not contain any names or identifying features. If answering this questionnaire raises any issues for you that you would like to discuss further, then please contact my supervisor Dr Natasha Tassell ([N.A.Tassell@massey.ac.nz](mailto:N.A.Tassell@massey.ac.nz)) in the first instance.

### **How can I find out about the results?**

I will provide a summary of the findings to each humanitarian organisation with employees participating in this research, and I will ask them to distribute it. Alternatively, you may email me at [tammysthesis@gmail.com](mailto:tammysthesis@gmail.com) and I will ensure I send you a copy of the findings directly when the thesis has been completed.

### **What do I do now?**

Filling out this questionnaire and returning it to me, implies you consent to participate. To return the questionnaire, post it back to me in the addressed prepaid envelope that is provided with the questionnaire. If you are interested but have further questions about the research before you want to participate, then feel free to contact me at [tammysthesis@gmail.com](mailto:tammysthesis@gmail.com) and I will do my best to answer any questions. Thank you for your help and support and all the best for your continued work in the humanitarian settings!

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## Appendix D – Research Questionnaire

Thank you for reading the Information Sheet and deciding to take approximately 20 minutes out of your day to contribute to this research!

The questionnaire consists of five sections asking about your sense of well-being, your work environment, your faith, your general approach to life and finally, a few demographic questions about yourself.

### SECTION A – WELL-BEING

Please rate the statements in this section depending on how true they are for you in general using the scale below.

1	2	3	4	5	6	7
not at all true			somewhat true			very true

Rate these statements to indicate how true each of these is in your life.	1 not at all	2	3	4 somewhat true	5	6	7 very true
I feel alive and vital.	1	2	3	4	5	6	7
Sometimes I feel so alive I just want to burst.	1	2	3	4	5	6	7
I have energy and spirit.	1	2	3	4	5	6	7
I look forward to each new day.	1	2	3	4	5	6	7
I nearly always feel alert and awake.	1	2	3	4	5	6	7
I feel energised.	1	2	3	4	5	6	7

Please rate the statements in this section depending on how often they occur, using the scale provided.

“Recipients” mean the people who receive the benefit of the service(s) provided through your work and the work of your organisation.

Rate these statements	never	a few times a year	monthly	a few times a month	every week	a few times a week	daily
I feel emotionally drained from my work.	1	2	3	4	5	6	7
I can easily understand how my recipients feel about things.	1	2	3	4	5	6	7
I feel I treat some recipients as if they were impersonal ‘objects’.	1	2	3	4	5	6	7
I feel used up at the end of the work day.	1	2	3	4	5	6	7
I deal very effectively with the problems of my recipients.	1	2	3	4	5	6	7

I've become more callous towards people since I took this job.	1	2	3	4	5	6	7
I feel fatigued when I get up in the morning and have to face another day on the job.	1	2	3	4	5	6	7
I feel I'm positively influencing other people's lives through my work.	1	2	3	4	5	6	7
I worry that this job is hardening me emotionally.	1	2	3	4	5	6	7
Working with people all day is really a strain for me.	1	2	3	4	5	6	7
I feel very energetic.	1	2	3	4	5	6	7
I don't really care what happens to some recipients.	1	2	3	4	5	6	7
I feel burned out from my work.	1	2	3	4	5	6	7
I can easily create a relaxed atmosphere with my recipients.	1	2	3	4	5	6	7
I feel recipients blame me for some of their problems.	1	2	3	4	5	6	7
I feel frustrated by my job.	1	2	3	4	5	6	7
I feel exhilarated after working closely with my recipients.	1	2	3	4	5	6	7
I feel I'm working too hard on my job.	1	2	3	4	5	6	7
I have accomplished many worthwhile things in this job.	1	2	3	4	5	6	7
Working with people directly puts too much stress on me.	1	2	3	4	5	6	7
In my work, I deal with emotional problems very calmly.	1	2	3	4	5	6	7
I feel like I'm at the end of my rope.	1	2	3	4	5	6	7

## SECTION B – WORK

The following questions concern your feelings about your job during the last year (If you have been on this job for less than a year, this concerns the entire time you have been at this job). Please indicate how true each of the following statements is for you given your experiences on this job. Remember that your boss will never know how you responded to the questions. Please use the following scale in responding to the items:

1	2	3	4	5	6	7
not at all true			somewhat true			very true

Rate these statements to indicate how true each of these is in your life.	1	2	3	4	5	6	7
	not at all		somewhat true				very true
I feel like I can make a lot of inputs to deciding how my job gets done.	1	2	3	4	5	6	7
I really like the people I work with.	1	2	3	4	5	6	7
I do not feel very competent when I am at work.	1	2	3	4	5	6	7
People at work tell me I am good at what I do.	1	2	3	4	5	6	7
I feel pressured at work.	1	2	3	4	5	6	7
I get along with people at work.	1	2	3	4	5	6	7
I pretty much keep to myself when I am at work.	1	2	3	4	5	6	7
I am free to express my ideas and opinions on the job.	1	2	3	4	5	6	7
I consider the people I work with to be my friends.	1	2	3	4	5	6	7
I have been able to learn interesting new skills on my job.	1	2	3	4	5	6	7
When I am at work, I have to do what I am told.	1	2	3	4	5	6	7
Most days I feel a sense of accomplishment from working.	1	2	3	4	5	6	7
My feelings are taken into consideration at work.	1	2	3	4	5	6	7
On my job I do not get much of a chance to show how capable I am.	1	2	3	4	5	6	7
People at work care about me.	1	2	3	4	5	6	7

There are not many people at work that I am close to.	1	2	3	4	5	6	7
I feel like I can pretty much be myself at work.	1	2	3	4	5	6	7
The people I work with do not seem to like me much.	1	2	3	4	5	6	7
When I am working I often do not feel very capable.	1	2	3	4	5	6	7
There is not much opportunity for me to decide for myself how to go about my work.	1	2	3	4	5	6	7
People at work are pretty friendly towards me.	1	2	3	4	5	6	7

Please feel free to write any comments in relation to the following questions
What is/are the largest source(s) of stress in your workplace?
What are the most difficult things that you face at work?
What, if anything, does your organisation do that can help you with your emotional and physical wellbeing?
In times of stress or when you are facing difficulties, what do you do that you find most useful in coping with those situations?

# SECTION C – RELIGIOUS BELIEFS 1

This section has four statements, each of which is followed by three possible responses. Please read the first statement, and then consider each response. Indicate on all three responses how true each is for you, using the following scale:

1	2	3	4	5	6	7
not at all			somewhat			very true
true			true			

Rate these statements to indicate how true each of these are in your life.	1	2	3	4	5	6	7
	not at all		somewhat	true			very true
<b>A. One reason I think it's important to actively share my faith with others is:</b>							
1. Because God is important to me and I'd like other people to know about Him too.	1	2	3	4	5	6	7
2. Because I would feel bad about myself if I didn't.	1	2	3	4	5	6	7
3. Because I want other Christians to approve of me.	1	2	3	4	5	6	7
<b>B. When I turn to God, I most often do it because:</b>							
4. I enjoy spending time with Him.	1	2	3	4	5	6	7
5. I would feel guilty if I didn't.	1	2	3	4	5	6	7
6. I find it is satisfying to me.	1	2	3	4	5	6	7
<b>C. A reason I think praying by myself is important is:</b>							
7. Because if I don't, God will disapprove of me.	1	2	3	4	5	6	7
8. Because I enjoy praying.	1	2	3	4	5	6	7
9. Because I find prayer satisfying.	1	2	3	4	5	6	7
<b>D. An important reason why I attend church is:</b>							
10. Because one is supposed to go to church.	1	2	3	4	5	6	7
11. By going to church I learn new things.	1	2	3	4	5	6	7
12. Because others would disapprove of me if I didn't.	1	2	3	4	5	6	7



**RELIGIOUS BELIEFS 2**

Think about how you try to understand and deal with difficult or stressful times in your life. Please use the scale below to indicate the extent you use each of the following methods of coping to deal with problems:

0	1	2	3
not at all			a great deal

<b>Rate the extent that you used these methods to cope with difficult or stressful times</b>	<b>0 not at all</b>	<b>1</b>	<b>2</b>	<b>3 a great deal</b>
Looked for a stronger connection with God.	0	1	2	3
Sought God's love and care.	0	1	2	3
Sought help from God in letting go of my anger.	0	1	2	3
Tried to put my plans into action together with God.	0	1	2	3
Tried to see how God might be trying to strengthen me in this situation.	0	1	2	3
Asked forgiveness for my sins.	0	1	2	3
Focused on religion to stop worrying about my problems.	0	1	2	3
Wondered whether God had abandoned me.	0	1	2	3
Felt punished by God for my lack of devotion.	0	1	2	3
Wondered what I did for God to punish me.	0	1	2	3
Questioned God's love for me.	0	1	2	3
Wondered whether my church had abandoned me.	0	1	2	3
Decided the devil made this happen.	0	1	2	3
Questioned the power of God.	0	1	2	3

**Please feel free to write any comments in relation to the following questions:**

Please explain how you tend to view your faith in times of stress? Feel free to discuss both negative and positive ways in which you view your faith at these times.

Please explain ways in which your faith is helpful and/or unhelpful in times of stress.

### SECTION D – GENERAL APPROACH TO LIFE

On these pages you will find a series of scenarios. Each one describes a situation and lists three ways of responding to it. Please read each scenario and rate how likely it is you would respond in each of the three ways. We all respond in a variety of ways to situations, and probably each response is at least slightly likely for you. If it is *very unlikely* you would respond in the way described in a given response, you would select numbers 1 or 2. If it is *moderately likely*, you would respond in the midrange of numbers; and if it is *very likely* that you would respond as described, you would select the 6 or 7. Please select one number for each of the three responses on the answer sheet for each scenario.

Rate these statements to indicate how likely it is that you would respond in this way.	1 very unlikely	2	3 moderately likely	4	5	6	7 very likely
<b>A. You have been offered a new position in a company where you have worked for some time. The first question that is likely to come to mind is:</b>							
1. What if I can't live up to the new responsibility?	1	2	3	4	5	6	7
2. Will I make more at this position?	1	2	3	4	5	6	7
3. I wonder if the new work will be interesting.	1	2	3	4	5	6	7
<b>B. You had a job interview several weeks ago. In the mail you received a form letter which states that the position has been filled. It is likely that you might think:</b>							
4. It's not what you know, but who you know.	1	2	3	4	5	6	7
5. I'm probably not good enough for the job.	1	2	3	4	5	6	7

6.	Somehow they didn't see my qualifications as matching their needs.	1	2	3	4	5	6	7
<b>C. You are a plant supervisor and have been charged with the task of allotting coffee breaks to three workers who cannot all break at once. You would likely handle this by:</b>								
7.	Telling the three workers the situation and having them work with you on the schedule.	1	2	3	4	5	6	7
8.	Simply assigning times that each can break to avoid any problems.	1	2	3	4	5	6	7
9.	Find out from someone in authority what to do or do what was done in the past.	1	2	3	4	5	6	7
<b>D. You have just received the results of a test you took, and you discovered that you did very poorly. Your initial reaction is likely to be:</b>								
10.	"I can't do anything right," and feel sad.	1	2	3	4	5	6	7
11.	"I wonder how it is I did so poorly," and feel disappointed.	1	2	3	4	5	6	7
12.	"That stupid test doesn't show anything," and feel angry.	1	2	3	4	5	6	7
<b>E. You have been invited to a large party where you know very few people. As you look forward to the evening, you would likely expect that:</b>								
13.	You'll try to fit in with whatever is happening in order to have a good time and not look bad.	1	2	3	4	5	6	7
14.	You'll find some people with whom you can relate.	1	2	3	4	5	6	7
15.	You'll probably feel somewhat isolated and unnoticed.	1	2	3	4	5	6	7

Rate these statements to indicate how likely it is that you would respond in this way.	1 very unlikely	2	3 moderately likely	4	5	6 very likely	7
<b>F. You are asked to plan a picnic for yourself and your fellow employees. Your style for approaching this project could most likely be characterized as:</b>							
16. Take charge: that is, you would make most of the major decisions yourself.	1	2	3	4	5	6	7
17. Follow precedent: you're not really up to the task so you'd do it the way it's been done before.	1	2	3	4	5	6	7
18. Seek participation: get inputs from others who want to make them before you make the final plans.	1	2	3	4	5	6	7
<b>G. Recently a position opened up at your place of work that could have meant a promotion for you. However, a person you work with was offered the job rather than you. In evaluating the situation, you're likely to think:</b>							
19. You didn't really expect the job; you frequently get passed over.	1	2	3	4	5	6	7
20. The other person probably "did the right things" politically to get the job.	1	2	3	4	5	6	7
21. You would probably take a look at factors in your own performance that led you to be passed over.	1	2	3	4	5	6	7
<b>H. You are embarking on a new career. The most important consideration is likely to be:</b>							
22. Whether you can do the work without getting in over your head.	1	2	3	4	5	6	7
23. How interested you are in that kind of work.	1	2	3	4	5	6	7
24. Whether there are good possibilities for advancement.	1	2	3	4	5	6	7

Rate these statements to indicate how likely it is that you would respond in this way.	1 very unlikely	2	3 moderately likely	4	5	6 very likely	7
<b>I. A woman who works for you has generally done an adequate job. However, for the past two weeks her work has not been up to par and she appears to be less actively interested in her work. Your reaction is likely to be:</b>							
25. Tell her that her work is below what is expected and that she should start working harder.	1	2	3	4	5	6	7
26. Ask her about the problem and let her know you are available to help work it out.	1	2	3	4	5	6	7
27. It's hard to know what to do to get her straightened out.	1	2	3	4	5	6	7
<b>J. Your company has promoted you to a position in a city far from your present location. As you think about the move you would probably:</b>							
28. Feel interested in the new challenge and a little nervous at the same time.	1	2	3	4	5	6	7
29. Feel excited about the higher status and salary that is involved.	1	2	3	4	5	6	7
30. Feel stressed and anxious about the upcoming changes.	1	2	3	4	5	6	7
<b>K. You have a school-age daughter. On parents' night the teacher tells you that your daughter is doing poorly and doesn't seem involved in the work. You are likely to:</b>							
31. Talk it over with your daughter to understand further what the problem is.	1	2	3	4	5	6	7
32. Scold her and hope she does better.	1	2	3	4	5	6	7
33. Make sure she does the assignments, because she should be working harder.	1	2	3	4	5	6	7

<b>L. A close (same -sex) friend of yours has been moody lately, and a couple of times has become very angry with you over "nothing." You might:</b>							
34. Share your observations with him/her and try to find out what is going on for him/her.	1	2	3	4	5	6	7
35. Ignore it because there's not much you can do about it anyway.	1	2	3	4	5	6	7
36. Tell him/her that you're willing to spend time together if and only if he/she makes more effort to control him/herself.	1	2	3	4	5	6	7

### SECTION E – DEMOGRAPHICS

Finally, just a little information about yourself:

What is your gender? Male ☐ Female ☐

Please indicate your age range: 18-29 ☐ 30-39 ☐ 40-49 ☐ 50+ ☐

Do you work: Full-time? ☐ Part-time? ☐

How long have you worked in a Christian humanitarian/development organisation? \_\_\_\_\_

If you have moved to Chennai, how long have you lived here? \_\_\_\_\_

Thank you for your participation! Remember, if you would like the results of this thesis emailed to you directly, contact me at [tammysthesis@gmail.com](mailto:tammysthesis@gmail.com) and I will add you to my distribution list.

*This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 10/27. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email [humanethicsouthb@massey.ac.nz](mailto:humanethicsouthb@massey.ac.nz)*

## **Appendix E – Open-ended questions to elicit qualitative data**

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### **STRESS IN THE WORKPLACE QUESTIONS**

1. What is/are the largest source(s) of stress in your workplace?
2. What are the most difficult things that you face at work?
3. What, if anything, does your organisation do that can help you with your emotional and physical wellbeing?
4. In times of stress or when you are facing difficulties, what do you do that you find most useful in coping with those situations?

### **FAITH IN TIMES OF STRESS QUESTIONS**

1. Please explain how you tend to view your faith in times of stress? Feel free to discuss both negative and positive ways in which you view your faith at these times.
2. Please explain ways in which your faith is helpful and/or unhelpful in times of stress.

## Appendix F – Exploratory Data Analysis

### 1. *Missing values.*

- *Analysis:* Percentage of missing values was calculated.
- *Result:* Less than 5% were missing cases with missing values were excluded so as to not distort the data (Pallant, 2007) although if more were missing, it would be advisable to input the mean of the variable into the missing values (Tabachnick & Fidell, 2007).

### 2. *Outliers.* Important to identify if these are accurate reflections of the data or most likely represent invalid data.

- *Analyses:* The real mean and 5% trimmed mean were compared (Pallant, 2007), boxplots were graphed (Grubbs & Beck, 1972),  $z$  scores were calculated as suggested by Barnett and Lewis (1994), and descriptive analyses were conducted with and without these suspected outliers.
- *Result:* No major differences were found indicating that they are not significantly distorting the data so the potential outliers were retained to sustain the sample size and maximise statistical power (Barnett & Lewis, 1994; DiLalla & Dollinger, 2006; Pallant, 2007). Except when re-examined for normality of data transformations. For three items, the removal of two outliers each did make a difference to normality assessments and brought them into an acceptable range of  $z$  scores between positive and negative 1.96 (See Table 13). These outliers also appeared to be inconsistent with the participant's other answers and so the remainder of the statistical analyses will be conducted without these outliers.

Table 13

*The  $z$  values indicating normality of data transformations with and without outliers*

Subscale and item	$z$ score with outliers	$z$ score with outliers removed
Subjective Vitality Scale, Item 4	2.925925926	1.8653061
GCOS Autonomous orientation, Item 6	2.383673469	1.952
GCOS Autonomous orientation, Item 9	2.109311741	1.88

### 3. *Statistical Assumptions.* Many statistical tests are based on certain assumptions which, if violated, can misrepresent or weaken the results (Pallant, 2007; Scherbaum, 2006; Tabachnick & Fidell, 2007; Tinsley & Brown, 2000). Where there are violations, data



needs to be re-expressed to bring it closer to statistical assumptions if parametric analyses are to be used (Sokal & Rohlf, 1995; Tabachnick & Fidell, 2007).

- a. **Independence of observations.** The independence of observations assumption is intact since this study collected data through confidential written questionnaires (Ott & Longnecker, 2008).
- b. **Linearity and 'homoscedasticity'.** The assumption that the relationship between variables is linear is important for many analyses, as well as a related assumption called 'homoscedasticity' which assumes a similar distribution or variability of scores for all variables (Brace et al., 2009; Pallant, 2007).
  - *Analyses:* For continuous variables like the ones examined here, linearity and homoscedasticity are assessed simultaneously by viewing bivariate scatterplots (Brace et al., 2009; Pallant, 2007). Univariate homoscedasticity was assessed in this case by visual inspection of scatterplots since the explanatory and outcome variables are continuous. Levene's tests were not employed as that is only appropriate for grouped data and continuous variables are not subjected to a formal homogeneity test (Tabachnick & Fidell, 2001).
  - *Result:* There appear to be some irregularities but *data transformations* bring them closer to statistical assumptions (Tabachnick & Fidell, 2007). These will be explained after the section on normality.
- c. **Normality.** The majority of behavioural or social sciences data does not follow a normal distribution (Pallant, 2007) making the normality assessments particularly important.
  - *Analysis:* If the standardised test of skewness provides a *z* value between positive and negative 1.96, it is deemed in the acceptable range (DiLalla & Dollinger, 2006; Mickey, Dunn, & Clark, 2004).
  - *Result:* According to skewness scores, none of the items were normally distributed. Therefore, the data was re-expressed using data transformations which are outlined below.

#### 4. Data Transformations

There are various ways to transform data (Tabachnick & Fidell, 2007) with a staged progression from square root transformation to logarithmic to inverse for more serious deviations from statistical assumptions (Tabachnick & Fidell, 2007). Data transformations should be applied consistently across variables used in the same analyses (Mickey et al., 2004; Field, 2009) and can enhance stability, interpretability and predictive power (Srinivasan, Jain & Malhotra, 1983).

##### Application to the current research:

1. In the current research, certain items and subscales were negatively skewed while others were positively skewed so the items in the negatively skewed subscales were reverse coded (e.g. a score of 1 on a scale became a 7, 2 became 6 etc) to become positively

skewed (displayed in Table 13). Subscales that were reverse-coded to become positively skewed as preparation for data transformation: SVS, MBI Personal Accomplishment subscale, all three Basic Need Satisfaction at Work subscales, CRIS Identification subscale, Brief RCOPE Positive religious coping subscale, and GCOS autonomous subscale.

2. The Subjective Vitality, MBI, BNS-W and GCOS became reasonably normal after a log transformation, but the CRIS and Brief RCOPE were still slightly negatively skewed. An inverse transformation generally improved normality for the CRIS and Brief RCOPE except for the Brief RCOPE positive religious coping scale which remained skewed. However, since inverse transformations over-corrected most of the subscales, only a log transformation has been applied. Potential negative effects are mitigated by the use of tests (e.g. ANOVA) which are reasonably robust to departures from homoscedasticity and normality.
3. Since the raw data comes from Likert scales rather than intrinsically meaningful units like time, or levels of chemicals, the data transformations should not present any problems (Brown, 2006; Tabachnick & Fidell, 2007). Nevertheless, it is important to note which ones have been reverse coded so that can be taken into consideration in the interpretation of results to determine what positive or negative associations mean.

**Appendix G – Descriptive Statistics for all individual items on each subscale**

\* The Brief RCOPE and GCOS measures have not been included in this appendix because those measures are scored by totals of all items, meaning descriptive statistics for each individual item will not be particularly helpful.

Table 14

*Sample sizes, Means and Standard Deviations of all relevant individual items*

Scale	Subscale	Item	N	Mean	SD
Vitality		I feel alive and vital.	99	5.42	1.371
		Sometimes I feel so alive I just want to burst.	99	4.37	1.776
		I have energy and spirit.	99	5.78	1.139
		I look forward to each new day.	99	5.79	1.327
		I nearly always feel alert and awake.	99	5.42	1.363
		I feel energised.	99	5.48	1.240
Burnout	EE	I feel emotionally drained from my work.	99	3.26	1.770
		I feel used up at the end of the work day.	96	4.26	2.043
		I feel fatigued when I get up in the morning and have to face another day on the job.	96	3.13	1.996
		Working with people all day is really a strain for me.	96	2.66	1.640

<b>Scale</b>	<b>Subscale</b>	<b>Item</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
		I feel burned out from my work.	98	2.40	1.780
		I feel frustrated by my job.	98	2.28	1.525
		I feel I'm working too hard on my job.	95	3.82	2.149
		<b>Item</b> Working with people directly puts too much stress on me.	<b>N</b> 96	<b>Mean</b> 2.74	<b>SD</b> 1.730
		I feel like I'm at the end of my rope.	96	2.51	1.852
Burnout	PA	I can easily understand how my recipients feel about things.	96	5.23	1.707
		I deal very effectively with the problems of my recipients.	97	5.41	1.519
		I feel I'm positively influencing other people's lives through my work.	98	5.52	1.742
		I feel very energetic.	98	5.55	1.613
		I can easily create a relaxed atmosphere with my recipients.	97	5.42	1.713
		I feel exhilarated after working closely with my recipients.	94	4.18	1.973
		I have accomplished many worthwhile things in this job.	97	4.85	1.698
		In my work, I deal with emotional problems very calmly.	96	4.56	1.851

Scale	Subscale	Item	N	Mean	SD
Burnout	D	I feel I treat some recipients as if they were impersonal 'objects'.	99	2.34	1.691
		I've become more callous towards people since I took this job.	95	3.06	2.072
		I worry that this job is hardening me emotionally.	98	2.57	1.681
		I don't really care what happens to some recipients.	96	1.92	1.519
		I feel recipients blame me for some of their problems.	96	2.43	1.513
		I feel like I can make a lot of inputs to deciding how my job gets done.	99	5.44	1.272
Basic Need Satisfaction at Work	Autonomy	I feel pressured at work.	99	4.56	1.891
		I am free to express my ideas and opinions on the job.	98	5.47	1.548
		When I am at work, I have to do what I am told.	96	3.60	1.849
		My feelings are taken into consideration at work.	98	4.80	1.735
		I feel like I can pretty much be myself at work.	99	4.97	1.574
		There is not much opportunity for me to decide for myself how to go about my work.	99	5.00	1.824
		I do not feel very competent when I am at work.	99	4.94	1.789

		People at work tell me I am good at what I do.	97	5.49	1.324
		I have been able to learn interesting new skills on my job.	99	5.84	1.338
		Most days I feel a sense of accomplishment from working.	99	5.34	1.479
		On my job I do not get much of a chance to show how capable I am.	99	4.48	1.886
		When I am working I often do not feel very capable.	99	5.25	1.692
Basic Need Satisfaction at Work	Relatedness	I really like the people I work with.	99	5.78	1.234
		I get along with people at work.	99	5.72	1.246
		I pretty much keep to myself when I am at work.	99	3.52	1.843
		I consider the people I work with to be my friends.	99	5.52	1.466
		People at work care about me.	99	5.47	1.445
		There are not many people at work that I am close to.	99	4.45	1.981
		The people I work with do not seem to like me much.	98	5.45	1.541
		People at work are pretty friendly towards me.	99	5.58	1.429
CRIS	Identified religious beliefs	I share my faith with others because God is important to me and I'd like other people to know about Him too.	99	6.22	1.250

		I turn to God because I enjoy spending time with Him.	99	6.31	.911
		I turn to God because I find it is satisfying to me.	98	5.95	1.395
		I pray because I enjoy praying.	99	6.04	1.160
		I pray because I find prayer satisfying.	98	6.27	.880
CRIS	Introjected religious beliefs	I attend church because by going to church I learn new things.	99	5.76	1.673
		I share my faith with others because I would feel bad about myself if I didn't.	99	4.05	2.052
		I share my faith with others because I want other Christians to approve of me.	98	2.35	1.783
		I turn to God because I would feel guilty if I didn't.	98	4.33	2.035
		I pray because if I don't, God will disapprove of me.	98	2.46	1.879
		I attend church because one is supposed to go to church.	98	2.89	2.224
		I attend church because others would disapprove of me if I didn't.	98	2.04	1.637

## Appendix F – Descriptive Statistics for Comparison Samples

Table 15

*Sample sizes, Means and Standard Deviations of Comparison Samples for Vitality (One study from Tassell's (2009) Appendix I on Comparison Samples)*

Study	Sample	N	Vitality	
			Mean (SD)	
Present study (2012)	Humanitarian workers	99	5.38 (1.37)	
Calarco (2011)	Nurses	373	3.83 (1.01)	
Mageau, Vallerand, Rousseau, Ratelle, & Provancher (2005)	Gamblers	271	5.32 (1.45)	
Tassell (2009)	Humanitarian health workers	82	4.45 (0.72)	
Taylor & Lonsdale (2010)	Sports students	715	4.07(1.29)	



Table 16

Sample sizes, Means and Standard Deviations of Comparison Samples for Burnout (Two studies from Tassell's (2009) Appendix I on Comparison Samples)

Study	Sample	N	EE	D	PA
Present study (2012)	Humanitarian workers	99	3.00 (1.83)	2.64 (1.70)	5.09 (1.73)
Leiter & Laschinger (2006)	Nurses	8597	2.51(1.25)	1.26(1.13)	4.67 (0.89)
Rupert & Kent (2007)	Psychologists	595	1.97(1.01)	0.96 (0.75)	5.20 (0.61)
Tassell (2009)	Humanitarian health workers	82	2.64 (1.09)	1.95 (1.02)	2.15 (0.81)

Note: EE = Emotional Exhaustion, D = Depersonalisation, PA= (diminished) Personal Accomplishment.

Table 17

Sample sizes, Means and Standard Deviations of Comparison Samples for Basic Need Satisfaction at Work

Study	Sample	N	BNS as a whole	Autonomy	Competence	Relatedness
Present study (2012)	Humanitarian workers	99	5.08 (1.59)	4.83 (1.67)	5.22 (1.58)	5.19 (1.52)
Edmunds, Ntoumanis, & Duda (2006)	Sports participants	369	5.20 (0.97)	5.49 (0.82)	5.02 (0.95)	5.10 ( 1.15)

<b>Greguras, &amp; Diefendorff (2009)</b>	Workers in Singapore – diff industries & diff ethnicities	163	4.91 (0.90)	4.54 (0.85)	5.02 (0.90)	5.16 (0.96)
<b>Greguras, &amp; Diefendorff (2010)</b>	Workers in Singapore across different industries.	165	4.81 (0.73)	(not given)	(not given)	(not given)
<b>Sørebø, Halvari, Gullia, &amp; Kristiansena, (2009)</b>	Teachers	124	5.11 (1.46)	5.38 (1.48)	4.55 (1.61)	5.41 ( 1.28)

Table 18

*Sample sizes, Means and Standard Deviations of Comparison Samples for Christian Religious Internalisation Scale*

<b>Study (CRIS)</b>	<b>Sample</b>	<b>N</b>	<b>Identified</b>	<b>Introjected</b>
<b>Present study (2012)</b>	Humanitarian workers	99	6.09 (1.21)	3.02 (1.94)
<b>Tamas, Aniko, &amp; Katalin (2011)</b>	Hungarian adults	158	5.00 (1.22)	2.68 (1.06)

Ryan, Rigby, & King's (1993) study was not included because that used a 1-4 scale rather than a 1-7 scale making it difficult to compare scores.

Table 19

*Sample sizes, Means and Standard Deviations of Comparison Samples for Religious Coping*

Study (RCOPE)	Sample	N	Positive coping	Negative coping
Present Study (2012)	Humanitarian workers	99	17.37 (2.80)	7.02 (5.14)
Hills, Paice, Cameron, & Shott (2005)	Palliative care patients	29	11.3 (7.7)	3.2 (4.3)
Phelps, Maciejewski, Nilsson, Balboni, Wright, Paulk, Trice, Schrag, Peteet, Block, & Prigerson (2009)	Cancer patients	345	11.1 (6.4)	2.0 (3.5)
Van Dyke, Glenwick, Cecero, & Kim, 2009	Urban adolescents	76	13.49 (4.29)	8.53 (4.45)
Yi, Mrus, Wade, Ho, Hornung, Cotton, Peterman, Puchaiski, & Tsevat (2006)	People living with HIV	450	10.7 (6.4)	3.7 (4.3)

Table 20

*Sample sizes, Means and Standard Deviations of Comparison Samples for General Causality Orientations*

Study (GCOS)	Sample	N	Autonomous	Controlled	Impersonal
<b>Present study (2012)</b>	Humanitarian workers	99	65.66 (8.39)	48.75 (9.37)	39.60 (12.02)
<b>Keiner, M (2006)</b>	College students	230	67.00 (8.9)	55.50 (7.4)	40.60 (10.2)
<b>Ryan &amp; Deci (1985b)</b>	Students	636	70.54 (6.62)	49.05(8.13)	39.03 (8.99)
<b>Vallerand, Blais, LaCouture, &amp; Deci, (1987)</b>	Students	165	67.31 (8.23)	51.17 (8.67)	39.18 (9.76)