Person-Job Fit and its Relationship with Work Attitudes: A Study of Christian Missionaries from Australasia

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Jennifer Margaret Manson
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ABSTRACT

Do Christian missionaries who exhibit good person-job fit, ('aligned' with host nation colleagues and 'in harmony' with expatriate colleagues), experience more positive work attitudes? Person-job fit was conceptualized in terms of competencies. Perspectives on what competencies the role of missionary requires were obtained from 3 groups of subject matter experts: host nation colleagues, missionaries, and mission agency leaders. In Study I, subject matter experts (host nation colleagues, *n*=22, missionaries, *n*=25, and agency leaders, *n*=23) rated the 'Universal Competency Framework' (SHL) 20-level competencies. Host nation colleagues differed significantly on 3 of the competencies, suggesting that in this sample, the perspective of expatriates on the role of a missionary was not fully aligned with that of host nation colleagues.

In Study 2, a sample of 130 current overseas missionaries self-assessed their performance and provided their own ratings of the importance of the competencies used in Study 1. Measures of Person-Job fit (Demands-Abilities fit, Supplies-Values fit and Perceived Performance) were regressed against outcome variables (job satisfaction, work engagement and satisfaction with life). Results indicated that a person's fit with the job as described by both host nation colleagues (Alignment) and other expatriates (Harmonization) is positively associated with job satisfaction, work engagement and satisfaction with life. These results offer support for competencies as an effective method of describing missionary roles. Possible implications for enhancing the effectiveness and well-being of missionaries, and other aid and development workers, are discussed.

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CHAPTER 1- INTRODUCTION

1.1 Study Rationale

In Industrial/Organizational psychology practice, reliance on competencies is increasingly replacing reliance on more abstract constructs, chiefly personality traits, for predicting work performance. In 2000, 75-80% of American companies surveyed used competencies to support some aspect of their human resources practice (Schippmann et al., 2000). The American Psychological Association uses competencies to define performance in their code of ethics for professional psychologists (Rubin et al., 2007). An example of a competency is 'creating and innovating', which may be a requirement of a role and is also an ability that an individual may possess in varying degrees. Personality traits, experience, skills and motivations all contribute to an individual's repertoire of competencies, although not necessarily directly to work performance itself. The domain of aid and development has yet to test the usefulness of competencies to match role requirements with individual skills and abilities.

Poor performance and early return for aid and development workers may be due in part to lack of the needed competencies. Rates of early return are high across expatriate roles in general, including aid and development workers (Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006). Early return and poor performance of expatriates incur financial costs, work costs and human costs (Black, Mendenhall, & Oddou, 1991). The tardiness in identifying competencies which predict likely work performance in the aid and development sector is surprising in view of their growing use in the domestic sector. It is important to discover as soon as possible whether benefits might be gained from identifying the competencies which are most important in aid and development roles.

Missionary work is one form of aid and development work. 'Missionaries' are defined as those who leave their home country to contribute to "the fulfillment of God's plan for people of all cultures to be part of His redeemed family" (Missions-Interlink, Purpose statement). Missionaries aim to strengthen the health, education or agricultural services available in under-resourced countries, by training local counterparts. Missionaries, like other expatriates, suffer

from early return and variable performance. Study I in the present project seeks to explore which competencies are most relevant for missionary work.

The underlying objectives and overseas context (Borman & Motowidlo, 1993) may give rise to a core set of competencies for missionary roles, even though there is variety in the tasks performed. In fact, competencies are increasingly being used to specify 'role family' requirements (Schippmann et al., 2000).

In mission work, there is a range of perspectives, from different stakeholders, on what the family of roles of a 'missionary' requires. These perspectives include:-

1) the host nation colleagues of mission workers
2) mission workers themselves
3) the employing agency that selects and sends the individuals
4) the 'recipients' of mission initiatives, host nation citizens

Because of language and practical constraints, the fourth group, local 'recipients' in the host nation, has not been included in this study. This project has sought the perspectives of groups 1, 2 and 3.

1.2 A Global Context

Respecting different perspectives is currently a development priority. In 2000, the United Nations met to develop a plan to address the needs of the world's poor and as a result, established what have become known as the Millennium Development Goals for the year 2015 (Annan, 2000). These goals have aimed to bring together governments, aid agencies and individuals in efforts to improve the plight of the world's poorest people. Halfway to the 2015 deadline, there has been limited progress towards implementing these eight goals, which are:

- eradicate extreme poverty and hunger
- achieve universal primary education
- promote gender equality and empower women
- reduce child mortality
- improve maternal health

- combat HIV/AIDS, malaria and other diseases
- ensure environmental sustainability
- develop a global partnership for development

The overall success of the Millennium Development Goals is still far from assured, especially when reducing extreme poverty is used as the criterion of success (Easterly, 2006). The 2007 progress report by the United Nations argues that attaining the goals will largely depend on whether developed countries make good on their aid commitments (United-Nations, 2007). Critics such as Easterly argue that financial aid on a large scale is not always most useful, and that smaller 'piecemeal interventions' and more feedback and input from the recipients of aid, would be optimal. Organizational psychologists and aid workers would agree with Easterly that large-scale financial aid is not enough, and that it needs to be delivered in appropriate ways (MacLachlan & Carr, 2004). Host nation perspectives are needed to know what these 'appropriate ways' are.

The 2005 Paris Declaration on Aid Effectiveness (OECD, 2005) resulted from the combined resolve of the delegates to reform the ways in which aid is developed and managed, to enable greater effectiveness. The key tenets of the Paris Declaration were: ownership and leadership of development programmes by the host nations; alignment of programmes with the host nation's priorities; harmonization of aid efforts for efficiency; managing for results; and mutual accountability. Thus it is essential for their effectiveness that missionaries, like other aid workers, should respect the perspectives of host nation colleagues and align their efforts with host nation priorities. This project aimed to show this respect by obtaining host nation perspectives on the role of missionary.

In 2007 a survey (of self-selected countries and 37% of aid agencies worldwide) monitoring progress on the key tenets of the Paris Declaration (OECD, 2007) found that only 17% of countries met criteria for local ownership of projects. The report concludes that it is important that donors build up local leadership capacity by designing programmes that create space for host countries to exercise ownership.

It is important to know what host country citizens see as an `effective missionary'. Selecting missionaries for their potential to be effective according to the judgment of the host country, and training missionaries in the skills and abilities required by the host nation are important ways of respecting the ownership and leadership of the host nation. This research aimed to explore what an effective missionary is, from the perspectives of host nation colleagues, missionaries and agency leaders, in terms of competencies. The antecedents of effectiveness for missionaries are shown below in Figure 1, which is the conceptual model which has been developed for this thesis.

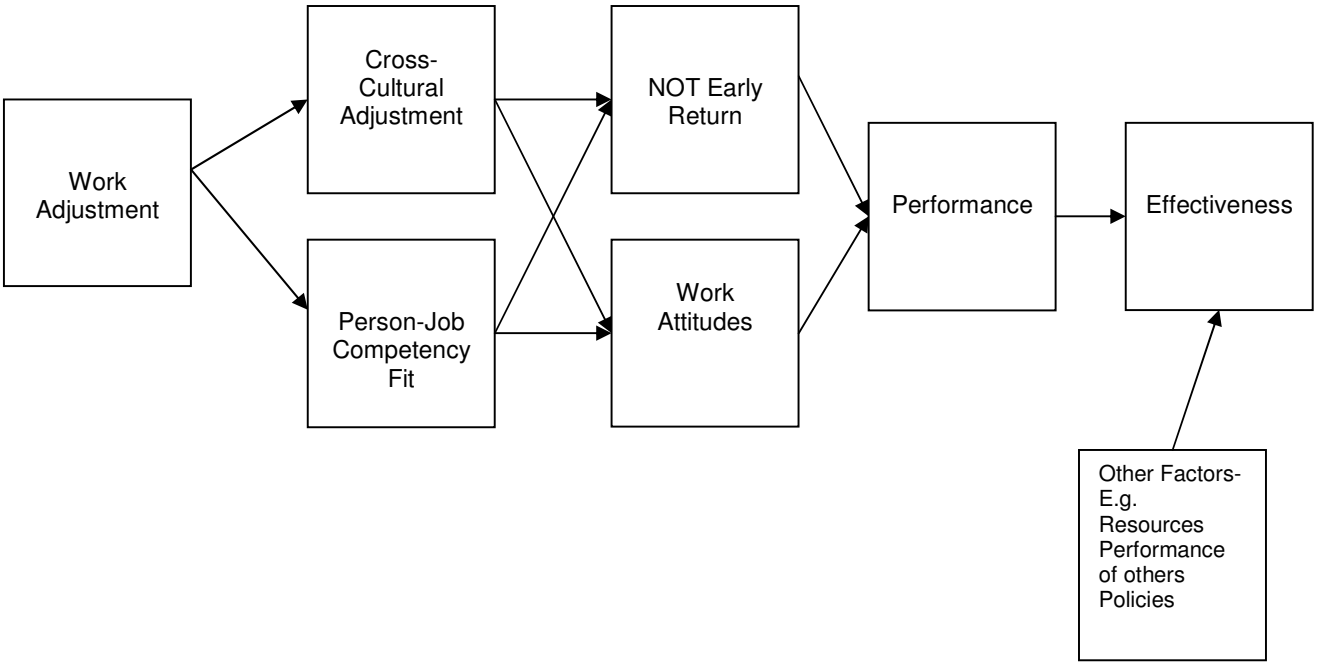

Figure 1*: A Model of Missionary Effectiveness, and its Antecedents.*

1.3 Effectiveness in Expatriate Roles

Figure 1 is derived from the wider literature on expatriate effectiveness. Mission and aid workers are part of a large and diverse set called 'Expatriates', which include commercial and business personnel in multinational companies, development workers in aid agencies, and missionaries. Some aspects of these jobs do not have much in common with each other- the actual tasks, the levels of remuneration, the living conditions, the motivations, or the amount of pre-assignment training given. However, significant commonalities are the task of adapting to living in another culture, the lack of accustomed resources and support networks, new physical and logistical challenges, different languages, and a range of expectations from different 'stakeholders' (Kealey, 1989). Because of the common requirements shared by all expatriate roles, the general expatriate literature may be useful in the search for the skills and abilities which predict mission or aid worker effectiveness.

Unfortunately, the expatriate literature as a whole still does not offer much insight on 'effectiveness'. Effectiveness is influenced by many factors and is difficult to measure. Logically, 'Early Return' (in Figure 1) is one form of ineffectiveness. On the other hand, persevering, not returning early, is necessary but not sufficient for effectiveness. According to Campbell, McHenry & Wise (1990), effectiveness is a function of both 'Performance', what the employee does, and a range of 'Other Factors' beyond employee control, and shown in Figure 1. To clarify, an expatriate might be engaged in community programmes to educate about AIDS and to reduce its prevalence. 'Performance' is what the expatriate aid worker does and how well. 'Effectiveness' is the actual reduction in AIDS prevalence. This depends in part on the aid worker's performance, but also on 'other factors' such as peer and environmental pressures and poverty, over which the aid worker has no control.

Like effectiveness, performance has received little attention in the expatriate literature. In his survey review of research published in top management journals from 1996-2000, Werner found that few studies tested expatriates' actual performance (Werner, 2002, p. 290). It is apparent from reading the expatriate literature that an understanding of desired performance in the cross-cultural context in which an expatriate role is carried out, is lacking. This lack has been

highlighted over the last decade (Arthur & Bennett, 1995; Mol, Born, & Van der Molen, 2005), following these authors' reviews of the expatriate literature. Instead, the focus has been on one pre-requisite of performance, 'staying'.

For missionaries, the same lack of articulation of what desired performance is remains a salient concern to researchers into missionary effectiveness (Hall & Sweatman, 2002; Lindquist, 1983). The lack of research and articulation of what performance dimensions contribute to effectiveness for expatriate employees, including mission and aid workers, is surprising in view of the numbers of expatriates and the financial outlay involved.

One factor in effectiveness that is relatively accessible to scrutiny in both mission and aid work and the wider expatriate population is 'early return'. Early return is documented because it can be and because of its logical links to employee dissatisfaction and company profitability. It is estimated that more than 100,000 executives are relocated to the United States each year, and in 1997 there were approximately 3.3 million United States expatriates around the world (Hechanova, Beehr, & Christiansen, 2003). Relocating a family of four from the US to an overseas assignment has been estimated at three times the expatriate employee's annual salary (Wederspahn, 1992). McGoldrick (1997) found that employers in North America spend two and a half times as much to send an expatriate overseas as they would to hire locally (Hechanova et al., 2003). In addition, employers seek to protect their investment by offering extensive training to expatriates. A worldwide industry survey in 2001 found that Multi-National Companies averaged US$4,200 per expatriate on cross-cultural preparation (Mol, Born, & Van der Molen, 2005). With these high costs of sending employees overseas and training them, even low rates of early return hurt the budget of an employer when employees do not remain to complete their assignments.

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1.4 Early Return in Expatriate Roles

One of the lower findings on early return figures comes from a study (*N*= 1824) of international managers in 36 UK based companies. It found 8% annually returned home early (Forster, 1997). In New Zealand, a small survey of 12 local mission agencies found that 9.5%

return home early each year (Deane, 2007). In an extensive study of the factors which influence longevity of missionary service, 4.5% of missionaries each year were found to terminate their assignment earlier than anticipated (Hay, Lim, Blocher, Ketelaar, & Hay, 2007). Hay et al gathered data from 22 countries, 600 mission agencies, and from almost 40,000 mission workers. Even at this comparatively low rate of early return, 4.5% of 40,000 mission workers represents 1,800 per year who return home before completing their assignment. These high numbers are costly for organizations, both multinationals and mission and aid agencies. Mission and aid agencies typically work with very limited resources, and the financial wastage resulting from early return has serious implications for their ability to engage in development activities with the world's poorest people and to help address the Millennium Development Goals. Finding out what competencies are important for good person-job fit in Figure 1 could be important in helping to reduce waste of resources.

Besides the considerable financial losses an organization incurs through early return, there are also significant non-monetary costs to the organization. So-called 'soft costs' include damage to the reputation of the employer, and to the culture of the organization and the morale of others (Heron, 2005). Other interests are also adversely affected: the projects, host nation citizens, and work colleagues. In the contexts of mission/aid work, and of the UN Millennium goals, the costs of early return include disruption to projects, time delays, and damage to credibility with local partner organizations. Another cost to the organization of early return is damage to efforts to recruit more workers when stories of difficulties and struggles become public. The negative impact of early return is concerning, but its high profile in the literature may have served to divert attention away from studies of effectiveness. For instance, the international missions community has commissioned two large studies on causes of and prevention of 'attrition' (Hay et al., 2007; Taylor, 1997). The same attention has not been given to the study of 'effectiveness'. The focus on early return in the wider expatriate literature, as well as in the missionary literature may in fact have overshadowed the need to understand other links in Figure 1, particularly the part played by person-job fit.

Poorly suited workers, who do not 'fit' well with the job, may place high demands on supervisors to deal with difficulties they are experiencing, or complaints made by others, and

they may fail to accomplish the purposes for which they were sent (MacLachlan & Carr, 1999). When they do not have the inter-personal skills to manage cross-cultural relationships, colleagues may incur high costs in terms of work relationship difficulties. They may do more harm than good, by damaging relationships with local government, businesses and host nation colleagues (Shay & Baack, 2006).

A survey on Global Relocation Trends (GMAC, 2004) in multinational companies found that the most widely cited response (by 81% of respondents), to the question on how to improve return on the investment of expatriate business assignments, was 'better candidate selection'. Successful selection processes depend upon using predictors of performance, or things people have to do at work (Hogan, 2005). This thesis argues that good person-job fit is an important antecedent of performance, as shown in Figure 1. Industrial/Organizational psychologists can make a significant contribution to the selection of high performing mission and aid workers, by assessing person-job fit. This project will focus specifically on person-job fit for missionaries.

1.5 Facets of Performance

Person-Job fit cannot be assessed without a thorough understanding of what is required for good performance in the job. 'Performance' has tended to be a criterion of interest in much personnel research over the years (J. P. Campbell, McCloy, Oppler, & Sager, 1993), as if it could be treated as a unitary construct. In fact, the work of Campbell et al and of Borman and Motowidlo (1993) has contributed to understanding performance as a multi-faceted domain. Borman and Motiwidlo argued that 'performance' in any job includes organizational citizenship behaviours as well as role specific tasks. In mission work, a person has to perform the tasks associated with their job, but also has to perform appropriately in the new cultural context. This involves acquiring cultural knowledge and skills, a process which can be difficult and disconcerting, and can give rise to what has become known as 'culture shock' (see page 22). The acquisition process is part of what is shown in Figure 1 as 'cross-cultural adjustment' and contributes to 'Performance' in a mission role.

The partitioning up of 'performance' into different aspects took another step forward with the development of a model of performance by Campbell et al (J. P. Campbell, 1999). This model was developed from data obtained during a research project with the US Army ('Project A'), which entailed empirical job analysis of 275 entry-level skilled army jobs. Campbell et al's model was of historical importance as it set a precedent for further work to develop ways of partitioning up 'performance' which can be applied to a wide range of jobs. The model conceptualizes performance as being made up of two groups of components. One group are job specific components, and the other group are across jobs within an organization (or in this case, the Armed services)(J. P. Campbell, McHenry, & Wise, 1990). Three of the components below were offered as being central to any job (job-specific task proficiency, demonstrated effort and maintaining personal discipline), whereas others may or may not be relevant for a particular job. Campbell's eight components were:

- job-specific task proficiency
- non-job-specific-task proficiency
- written and oral communication
- demonstrating effort
- maintaining personal discipline
- maintaining peer and team performance
- supervision/leadership
- management/administration (J. P. Campbell et al., 1993)

Others have continued to develop models of performance, which cover the domain with parsimony. Adaptive performance was proposed in recognition of its importance in the context of increasing globalization where individuals often work in and with different cultures (Pulakos, Arad, Donovan, & Plamondon, 2000). Models such as these offer the potential for 'performance' in any job to be expressed as prioritised components of the model. Prioritising a set of performance components in a model is a method which can be used to describe ideal performance for mission workers. A search of the literature revealed no incidence to date where ideal performance for mission workers has been described by prioritized performance components.

Knowing what ideal performance is for mission workers also requires the perspectives of different subject matter experts. People in a role ('incumbents') are one important source of information on what a job entails. But research reported by Morgeson and Campion (1997) in the field of performance appraisal suggests that incumbents may be prone to impression management in presenting the requirements of a job, especially when there is ambiguity about what the job entails (Morgenson & Campion, 1997). The lack of identified performance criteria in mission work indicates that some ambiguity about the role is present. Impression management theory also suggests that the respondents' desire for social approval and acceptance may lead them to emphasize the aspects of a role which are more complex and high-ability, and to minimize the less skilled parts of the role. Because of the possibilities of a self-serving bias in information reported by job incumbents, it is important to seek the perspectives of other subject matter experts also on what a job entails. In this study, the perspectives of host nation colleagues and agency leaders will be obtained in addition to that of missionaries themselves.

Using multiple subject matter experts from different perspectives is a methodology also used in another human resource process (in addition to identifying ideal performance in a role): performance appraisal based on 360-degree feedback. Multiple perspectives are sought in the 360-degree feedback process because different aspects of performance are seen by people at different levels in the organization, whether supervisor, peer or subordinate (Furnham & Stringfield, 1998). In the context of mission work, different aspects of the performance of a mission worker are likely to be observed by people in different relationships to the worker, whether supervisor, donor, colleague or host nation citizen.

Multiple perspectives are also valuable because actor-observer theory suggests that how people attribute causation depends on the role they play, whether an actor or an observer. 'Actor-observer bias' is the tendency for individuals to attribute their own behavior to external situational factors, while observers attribute the same actions to the choices or dispositions of the actors (D. Campbell, Carr, & Maclachlan, 2001). Actor-observer theory would suggest that mission workers (the actors) are likely to see aspects of their performance as being mandated by the situation or the environment, while host nation colleagues, (observers of missionaries), may attribute those same aspects of mission worker performance to the missionaries. Because of

likely differences in perspectives on what aspects of performance are within the control of the mission workers themselves, different perspectives are useful in understanding ideal performance in mission roles.

Historically, local perspectives have been overlooked, as development projects have been based on expatriate control and management (Porter, Allen, & Thompson, 1991, p.xviii.). Three tenets in particular of the Paris Declaration on aid effectiveness (2005) (see page 9) seek to redress this oversight: Ownership, Alignment and Harmonization (Cedergren, 2007). Host nation citizens, work colleagues or recipients of projects, have an important voice in defining what should be done by mission workers and how it should be done. It is important to know what the gaps are between the perspectives of host nation citizens, of mission workers and of the expatriate agency leaders who select and train workers, so that changes can be made towards achieving the above 'ownership' and 'alignment' tenets of aid effectiveness. Therefore this study will make use of a range of perspectives from different stakeholders, in order to gain wide input, and particularly host nation input, on what ideal performance is for a mission worker.

The process of specifying what ideal performance is, in any role, is job analysis. Job analysis can be based on 'competencies' for a role and will be used in this study, so that 'person-job competency fit' shown in Figure 1, can be measured. Job analysis has been described as the foundation upon which all other human resource management processes are built (Morgenson & Campion, 1997), because selection, training, performance appraisal, organizational restructuring, and other processes all require as accurate as possible an understanding or what a job requires. However, any job analysis task has the potential for inaccuracy and particularly those which are based on peoples' opinions rather than on observations of tasks performed. Morgenson and Campion have identified a range of sources of inaccuracy in job analysis and recommended that the collection of data from multiple sources is significant in reducing error. Obtaining information from multiple sources on what ideal performance is for mission workers thus has the added benefit of minimizing inaccuracy in the job analysis process.

1.6 Job Analysis

Job analysis methods have historically been classified by practitioners as focused either on tasks, or on worker attributes (Morgenson & Campion, 1997). Methods focusing on tasks answer the question 'What tasks do people in this job do?', and while they may adequately describe prescribed and predictable roles, they are less successful in describing roles which include unexpected demands or which take place in a changing environment (Brannick & Levine, 2002). In effect, any role which involves considerable people contact (such as aid or mission work) cannot be adequately described by tasks alone. Methods focusing on worker attributes are on a more abstract level and go directly to the question 'What does it take to be good at the job?' They offer more flexibility to encompass the demands that an aid or mission worker typically meets in their role.

In the last 25 years, a method of job analysis has emerged which does not focus on concrete tasks, but on competencies. The rise to prominence of this method in human resource practice prompted the call from a committee of the American Society for Industrial and Organizational Psychology for a comprehensive review of the practice, which was conducted by Schippmann et al (2000). This review was a two-year investigation which drew on the expertise of the 10 members of the task force and on an extensive literature search, and interviewed 37 subject matter experts from varying backgrounds. A wide range of different definitions of a 'competency' was found in the literature and through asking the subject matter experts. The lack of clarity about the definition of a 'competency' is one of the concerns raised by Schippmann et al about the use of competencies in job analysis. Competencies have been defined as 'occupationally relevant capabilities' (Prien, Schippmann, & Prien, 2003). A competency is a capacity or a capability on the individual's part which is closely aligned to performance requirements of the job. A similar definition of competencies was offered by Kurz and Bartram: 'sets of behaviour patterns that the incumbent needs to bring to a position in order to perform its tasks and functions with competence' (Kurz & Bartram, 2002, p.229). Competencies do not equate directly to behaviours, as they are potential rather than actuality. The competencies an individual possesses are not 'performance', but they are behavioural dispositions, made up of abilities, traits, interest, values, motivations, training and experience (Prien et al., 2003). Whether

or not job analysis using competencies is an acceptable alternative to more traditional methods was the subject of the review by Schippmann et al.

Schippmann et al note that job analysis using competencies is often conducted with less rigour than traditional job analysis. At the least rigorous end of the scale, a 'job analysis' can be performed by having a practitioner generate a group of broad 'competencies' without definitions, and without prioritizing them. The speed and low cost of this very inadequate process may be one of the reasons why competency-based 'job analysis' has been widely embraced in practice. More defensibly, a carefully executed competency-based job analysis has face validity and value in that this method is more clearly linked to organizational goals and strategies than other methods (Schippmann et al., 2000).

While job analysis using competencies is common in commercial 'domestic' practice (meaning for roles within country as opposed to sending people overseas), competencies have not yet been systematically applied to describe expatriate roles (Mol, Born, & Van der Molen, 2005), for example the job of a mission worker. Hence this study will be the first investigation of work competencies in mission work, to the best of the author's knowledge. The evidence to support the validity of this method is scant (Markus, Cooper-Thomas, & Allpress, 2005), and trialing it in this specific situation may add in a small way to knowledge about the method's validity as a means to describe ideal performance in a specific context.

Schippman et al's review concluded with a series of recommendations to improve the rigour of any job analysis, including those that use competencies. Any job analysis process is subject to error and the 10-member task force identified variables which contribute to the amount of error in the process and which can be 'managed'. One of these variables was whether or not a structured protocol is used to develop the descriptor content for the job. They recommend that a structured protocol be used to gather information on the content of a job from content experts, which is then prioritized. The many sets of competencies that have been developed for use in job analysis (Bartram, Kurz, & Baron, 2003; Prien et al., 2003; Tett, Guterman, Bleier, & Murphy, 2000) are forms of a 'structured protocol' which, on the basis of Schippmann et al's review, help to manage the error in the results of a job analysis. Thus while job analysis using

competencies (like any job analysis) can be poorly conceived and executed, and of questionable value, methods which use a structured protocol for gathering information were recommended by this expert task force as preferable to those that do not.

The development of the structured protocol used in this study to gather information about the job of a missionary followed the method used by Tett et al (2000) of developing sets of competencies to describe managerial roles. This method created a precedent followed by others (Bartram et al., 2003; Prien et al., 2003). Tett et al took 12 lists of components of managerial performance, such as Campbell's (J. P. Campbell et al., 1990), which were published in peer-reviewed journals, and used all the 141 components of performance they found to form a 'master list' as their starting point. Their purpose was not factor analysis, but deriving a list of competencies which did not overlap with each other, and were more specific and fine-grained than Campbell's eight factors of performance (listed on p.14). Rules for deriving a set of competencies from the master list were applied individually by Tett et al, then consensus was reached in discussion together, and their results checked with a wider group of experts, resulting in 47 competencies. While these 47 were organized for convenience into nine general categories, (e.g. 'Communication' included 'Listening Skills' and 'Oral Communication'), the intention was not parsimony, but enough specificity for roles to be distinguished from others by their competencies.

A similar method to Tett's was followed by Bartram and colleagues (Bartram, 2005; Bartram et al., 2003), in deriving a set of competencies under the brand of SHL (Saville and Holdsworth, www.shl.com/shl/nz) for the commercial market. Through content analysis of previous work in both peer-reviewed journals and commercial practice, Bartram et al derived 112 'fine-grained' competencies, which SHL, perhaps a little over-confidently, called the 'Universal Competency Framework.' Exploratory factor analysis of the 112 reduced the set to just eight factors, which they named the "Great Eight". These Eight are:

- Leading and Deciding
- Supporting and Co-operating
- Interacting and Presenting
- Analysing and Interpreting

- Creating and Conceptualizing
- Organising and Executing
- Adapting and Coping
- Enterprising and Performing

The name 'Great Eight' is a marketing strategy, chosen to suggest that these eight factors would come to hold the same place in the domain of performance as the Big Five hold in the domain of personality. While commercially driven by SHL, the eight factors have been validated through a meta-analysis of 29 studies, with more than 4,800 participants in nine different countries, although still using SHL data (Bartram, 2005). Commercially driven sets of competencies have been criticized (Markus et al., 2005) on the basis that the more a competency model is designed to be generic, the less relevant is becomes to specific jobs. Because mission work is a different work context from that in which the 'Universal Competency Framework' was developed and tested, it may prove to be inadequate to represent the whole performance domain for mission work.

Competencies relating to the Christian basis common to mission work are lacking in the Universal Competency Framework. For this study, specific competencies relating to Christian practice were added to the model of performance being tested. There may be other ways in which the 'Universal Competency Framework' is inadequate in a particular context like mission work. For example, it is likely that SHL's Universal Competency Framework over-emphasizes competencies which are important for business, but which may be irrelevant in extreme situations where survival and enduring physical hardship may be first priorities. Because it has been developed in a primarily business context, and yet claims to be a 'Universal' competency framework, a test in the very different and perhaps relatively demanding context of mission work is warranted.

Mission work can become somewhat isolated from the wider world of work, as evidenced by the fact that competencies, used widely in mainstream work, are not generally used in mission or aid work (Mol, Born, & Van der Molen, 2005). The use of a competency framework in commercial use as the basis for this study allowed the three subject matter expert groups to

consider which of a range of competencies used to describe general work roles were most relevant for mission work. Multiple perspectives can reveal gaps between what host nation citizens think and what expatriate members of the mission community think. Gap analysis is an essential step in moving towards alignment, a foundational tenet of effectiveness in any development work (Cedergren, 2007). The first step of this research project is to survey different groups of stakeholders and to use competencies to explore whether host nation colleagues of missionaries had different perspectives from expatriate missionaries and from sending country agency leaders on the most important competencies for the role of missionary (Study 1). This will then permit testing the validity of the Universal Competency Framework in this population, via 'person-job fit' and its hypothesized outcomes.

1.7 Cross-Cultural Adjustment

In the absence to date of a clear understanding of 'performance' for mission workers, such as a job analysis would provide, there has been confusion over what selection processes should be based on (Mol, Born, Willemsen, & Van der Molen, 2005). Into this vacuum, 'adjustment' has emerged as a default criterion for selection processes (Hall & Sweatman, 2002). In the mission and aid literatures, 'adjustment' is the state of well-being presumed to be present when a person does not return early and remains psychologically well (Dillon, 1983; Foyle, Beer, & Watson, 1998). Adjustment has been defined as 'the degree of comfort, or absence of stress associated with being an expatriate' (Bhaskar-Shrinivas, Harrison, & Luk, 2005, p.257). This definition tends to obscure the fact that cross-cultural 'adjustment' encompasses two related but distinct concepts. One is psychological adjustment which is part of the stress and coping framework, and the other is socio-cultural adjustment, the learning of relevant social skills and cultural competence (Ward, Leong, & Low, 2004). Lack of cross-cultural adjustment can lead to 'Early Return' in Figure 1 (Hechanova et al., 2003), The difficulties inherent in the process of cross-cultural adjustment have been highlighted through the concept of 'culture shock'.

Culture shock has been defined as a stress reaction due to uncertainty, loss of the familiar, confusion, surprise and impotence (Furnham, 1990). If the individual learns new skills, culture shock and the stress associated with it diminish and cross-cultural adjustment in Figure 1

increases. On the other hand, to the extent that the individual does not learn new skills, culture shock and stress do not diminish and can result in an 'adjustment disorder' (Foyle et al., 1998). Psychological adjustment and socio-cultural adjustment both contribute to cross-cultural adjustment in Figure 1, and are both important in minimizing early return (Hechanova et al., 2003) and in contributing to performance (Kraimer, Wayne, & Jaworski, 2001). Poor adjustment can lead to cognitive fatigue which can deplete the energy required to perform well (Shay & Baack, 2006). Cross-cultural adjustment is important for an expatriate's performance (and effectiveness), as shown in Figure 1. However, its prominence in the expatriate literature may have tended to divert attention away from a more conventional form of adjustment, which is adjustment to the job.

1.8 Adjustment to the job

Adjustment to the job is the central concept in Work Adjustment Theory. Work Adjustment (shown in Figure 1) is defined as a continuous process by which an individual seeks to achieve and maintain a level of 'fit' between the self and the work environment, which in the case of missionaries is both 'person-job competency fit' and 'cross-cultural adjustment'.

1.9 Work adjustment and cross-cultural adjustment

Because it is defined as a process, work adjustment takes time, and this is no less true in expatriate populations, where this normal process is compounded by the additional task of cross-cultural adjustment. In a meta-analysis of 66 empirical studies involving 8,474 participants in expatriate assignments, evidence was found that psychological stress, the way 'adjustment' was operationalised in this meta-analysis, does vary over time in expatriate populations `(Bhaskar-Shrinivas et al., 2005). A period of psychological stress, which is often known as culture shock, seems to often accompany the transition phase of adjustment to a new job in a cross-cultural setting. However, adjustment, successfully achieved, has positive outcomes of cross-cultural adjustment and improving person-job competency fit, as shown in Figure 1.

In any role, whether overseas or not, Work Adjustment has often been conceptualized as taking place in three main areas: to the non-work facets of life in the new environment (e.g. the

organizational culture), to the new work itself (tasks, equipment etc), and to the requirements of interactions with different people (new colleagues and 'clients') (Black & Stephens, 1989). However, Black and Stephens suggested this rather than substantiating it empirically, and it is possible that the three dimensions overlap in their cover of the construct. It is argued here that adjusting to the new environment and to interactions with different people are not necessarily distinct areas of adjustment, because many aspects of the environment, such as the organizational culture, are experienced through people. They are both parts of 'cross-cultural adjustment'. This study focuses on 'Person-Job competency fit' as a neglected aspect of work adjustment for missionaries. Figure 1 shows links between work adjustment and work attitudes, early return (which is being equated to 'not tenure'), and performance, via the above two facets of work adjustment (cross-cultural adjustment and person-job fit).

1.10 Work Adjustment and Person-Job Fit

Logically, the better a person 'fits' with their job, the less adjusting they have to do (Roberts & Robins, 2004). In the 'domestic' literature (business literature in the home country), fit and adjustment are frequently used interchangeably (Bretz & Judge, 1994). Just as adjustment to work itself is one part of the broader concept of work adjustment, so person-job fit is part of a broader concept, person-environment fit. Person-environment fit can be understood as a measure of the degree of overall work adjustment that an individual has attained at a point in time. Measuring any kind of person-environment fit implies measuring the match between the individual and the environment, and measures of this match have been noticeably absent to date in work on expatriate roles, including mission roles. Possibly this oversight is in part a reflection of a relatively Westernised individualistic worldview, where personal qualities are seen as the cause of behaviour in isolation, rather than in interaction with the environment (Walsh, 2006).

1.11 Person-Environment Fit

Fit is a complex construct with at least three definitions.

(i) Demands-Abilities fit is the extent to which the needs of the environment are met by the individual.

(ii) Supplies-Values fit is the extent to which the values of the person are met by the environment.

(iii) Supplementary fit is the degree to which the individual is like other people in the environment.

Optimum fit is achieved when all these types of fit occur simultaneously. Following an extensive review of the person-organization fit literature (including 42 empirical studies and theoretical and conceptual work, from 1972-1996) Kristof concludes that it is possible and acceptable for multiple perspectives on fit to be operationalised together (Kristof, 1996, p.6). This is the approach taken in this study, where the ideal is for optimum fit to be achieved between the individual and a mission role. What the mission role is, is defined from the different perspectives of host nation colleagues, a peer group of active missionaries, and mission agency leaders.

'Fit' can refer to the individual's fit with their organization, with the work team they are a member of, with the physical and cultural environment they work in, and with the actual work they are required to do. The literature and research on person-environment fit is grouped around two major themes, 1) person-organization fit and 2) person-job fit.

1.11.1. Person-organization fit. The fit of a mission worker with their organization is typically worked through prior to an assignment. In mission work there are many more opportunities than there are individuals who are available. In New Zealand there are 74 mission agencies, registered with the NZ umbrella body, Missions Interlink, which send personnel overseas. With this number of agencies to choose from, individuals are able to identify an organization which is compatible with their values, and which supplies the structures and opportunities they need. Mission organizations use multiple interviews, referees and questionnaires to select those who share their values, particularly their religious values, and who provide needed skills. As a result there is often a good fit, on Demands-Abilities, Supplies-Values and Supplementary fit dimensions, in that fundamental characteristics, such as values, are shared by the person and the mission organization they have chosen. Fit between the person and the organization is an aspect of person-environment fit which is relatively well considered by

both parties and the needed adjustments to achieve fit are able to take place over the months of acquaintance and working together before departure. It is the opinion of the (mission experienced) author that lack of person-organization fit is not usually a significant source of person-environment misfit for mission workers, because the 'mutual self-selection' that takes place before a commitment is made is typically lengthy and thorough. Person-Organization fit is therefore not included in Figure 1.

1.11.2. Person-job fit. Mutual selection based on person-job fit depends on having an understanding of the job. In mission work this is often partial at best (Hall & Sweatman, 2002), because a search of the literature reveals no attempts to perform a job analysis of a missionary. Mission workers are selected and sent to do specific tasks or jobs (such as engineering or medical work), and they need the appropriate skills. However a mission job cannot be considered in isolation from the community and culture within which it takes place. Nor can it be considered in isolation from the underlying purpose of missionary work, which was articulated by Missions Interlink NZ as 'the fulfillment of God's plan for people of all cultures to be part of His redeemed family'. A job may be different in many ways in a different country, e.g., the hours of work, the physical conditions and the expectations of others. In addition, the ethos of missionary work and the underlying purpose adds further, often unspecified, requirements. Whatever competencies are required to perform well as a missionary in a cross-cultural environment needs to be investigated and articulated, before person-job fit can be assessed.

Fitting with a job, as with any aspect of an environment, is a process. Individuals approach the task of 'fitting in' by changing themselves, by changing the environment, by both, or by neither. Where they are a clear minority group and where a job contains a high degree of novelty for the individual, the focus will be more on changing the self (Black et al., 1991). Because of the novelty of many aspects of the job in a mission role, it is likely that individuals may need to be willing and able to change themselves in some ways in order to perform well. This adjusting process is an essential part of the job, in addition to the more obvious technical or task requirements, and adjusting is likely to be one of the competencies which is a prominent requirement of the job, and on which individuals can be measured. A positive match between the

person and the job on this competency is an example of person-job fit which could contribute to effectiveness as modeled in Figure 1.

While inadequate attention has been paid to understanding 'the job' for missionaries and for expatriates in general, more attention has been paid to 'the person'. An empirical study was conducted by Arthur and Bennett to seek to identify the personal factors which are important to expatriate success and job performance (Arthur & Bennett, 1995). The participants in their study were 338 managers from 26 countries, who worked as expatriates in multinational companies. Arthur and Bennett found that family situation, flexibility/adaptability, job-related skills and motivation, relational skills, and extra-cultural openness in that order, were judged by the expatriates as most important for success and job performance. There have been many other efforts to identify important personal qualities for those working in overseas roles (Barnett, Duvall, Edwards, & Hall, 2005; Britt, 1983; MacLachlan & Carr, 1999). These will be more valuable as equal attention is paid to the criterion domain of the 'the job' so that 'person-job fit' can be measured objectively.

To sum up, it appears that much of the work on expatriate effectiveness in general falls into one of two potential errors. Error one, which appears to be more prevalent in the business expatriate sector, is to ignore the complexity of the expatriate job, and emphasizes technical competence as the basis for expatriate selection decisions (Arthur & Bennett, 1995). This error focuses on the technical or professional part of the person-job fit box in Figure 1, to the neglect of other parts of person-job fit. Error two is for missionaries and their agency leaders to focus on cross-cultural adjustment more than on performance (and effectiveness). This error was highlighted by Thomas and Lazarove in their historical review of the literature on the relationship between the adjustment of expatriates and their effectiveness (Thomas & Lazarova, 2006). Both of these errors appear to over-emphasize some qualities or abilities of the individual at the expense of others. However, lack of job analysis inhibits efforts to prioritise those 'qualities' or competencies which are most important for the job. A study of what the job is and if good 'person-job competency fit' results in positive outcomes (such as job satisfaction), is the empirical focus of this study. 'Fit' may offer a fruitful approach to the study of performance and may lead to greater understanding of the antecedents of effectiveness for mission workers.

The usefulness of ‘person-job competency fit’ in understanding effectiveness for mission workers, and its place in the model shown in Figure 1, remains hypothetical unless ‘fit’ can be measured. A feasible and appropriate form of measurement of person-job fit in the mission context must be offered in support of the model in Figure1. Figure 2 which follows expands the ‘person-job competency fit’ box in Figure 1, by depicting how person-job competency fit measures are derived, and what the expected outcomes are, if an individual demonstrates good person-job. The derivation of the person-job fit measures will be explained in the Method section.

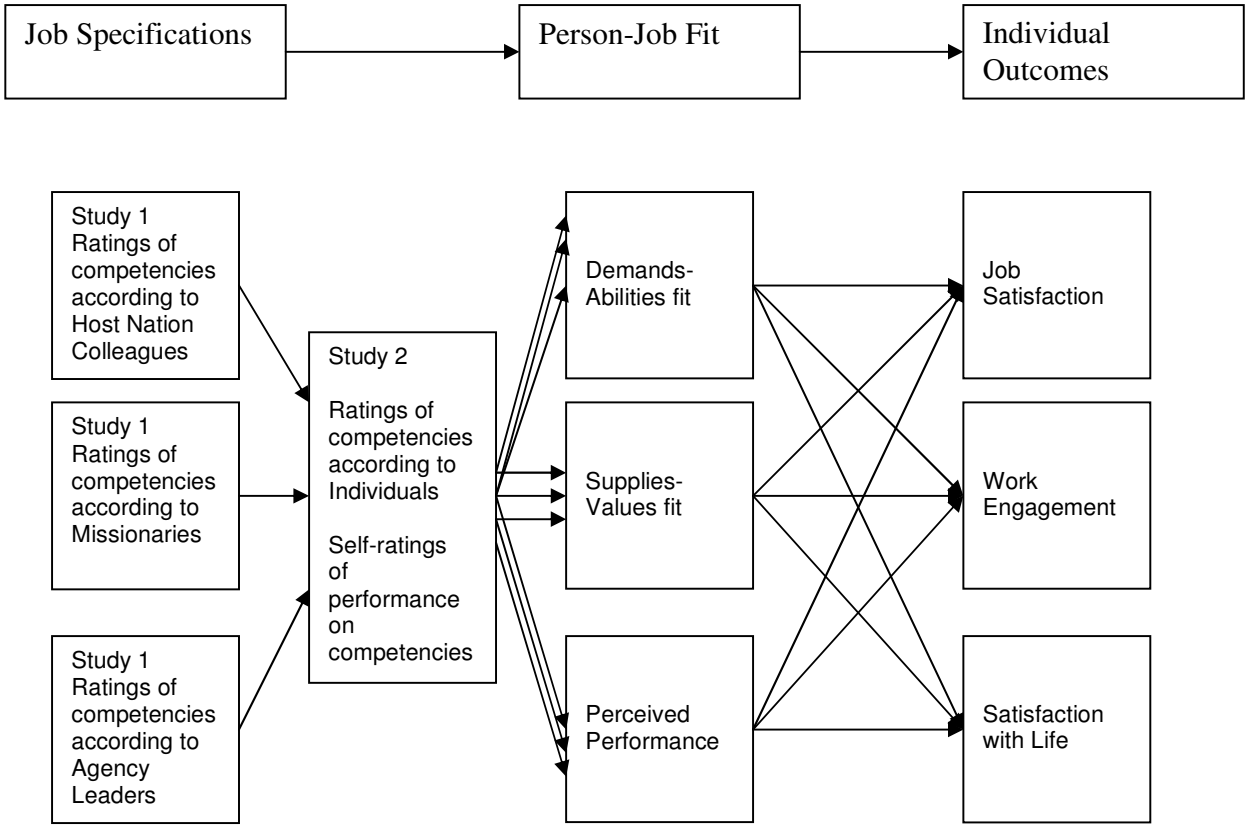

Figure 2: *Proposed relationships between measures of Person-Job fit and individual outcomes.*

The three measures of person-job fit shown in Figure 2 are derived from relationships between the subject matter expert perspectives (on the left), from Study 1, and individual participants' perspectives, from Study 2. In Study 2, participants self-assessed their ability on all the competencies in the set, and also rated each of them by Relevance and Frequency. These responses were compared with the 'benchmarks' obtained from each panel of subject matter experts in Study 1, to give measures of 'fit' for each individual. The outcomes on the right hand side of the figure, job satisfaction, work engagement and satisfaction with life were measured for the participants in Study 2 so that links between measures of person-job fit and outcome variables could be examined. Positive links, if found, would offer validation of the proposed measures, and would offer support to the use of competencies as a way of measuring person-job fit in mission roles.

1.12. Measurement of Person-Job Fit

Discussions on the measurement of fit have generated some confusion, with 'objective' and 'subjective' fit being confused with 'direct' and 'indirect' measurement methods (Kristof-Brown, Zimmerman, & Johnson, 2005). In this study, the term 'subjective fit' will be used where a person judges whether or not a good fit exists between them and the job. This direct assessment of fit has also been equated with 'perceived fit' (Kristof-Brown et al., 2005). The term 'objective fit' will be used where aspects of both the individual and the job are measured separately, and the degree of fit is calculated as a function of these two measurements.

Person-environment fit research has found that subjective fit is a better predictor of attitudinal outcomes for the individual than other measures of fit (Kristof, 1996). One reason why subjective fit may show stronger predictive links with attitudinal outcomes than other forms of fit is because 'objective' fit may exist, but if it is not perceived by the individual, it may not influence the person's attitudes. Another reason why subjective fit may be a better predictor of attitudinal outcomes is that subjective 'fit' itself is an individual attitude, and attitudes appear to be affected by individual differences in personality. For example, a meta-analysis by Judge et al (T. Judge, Heller, & Mount, 2002) showed absolute correlations from .26 and .29 between personality traits of extraversion, conscientiousness and neuroticism, and job satisfaction. Because of this, Edwards (1991) advocated against the use of measures of subjective fit, in that

attributes of the person become compounded with ‘fit’, and this is a legitimate concern and a limitation of measures of subjective fit. Because of the confounding effect of other variables on the relationship between subjective fit and attitudinal outcomes, measurements of objective fit are included in this study.

However, the self’s perception of fit remains an important predictor of individual outcomes. Self-Discrepancy Theory (Higgins, 1987) suggests that discrepancies between the self and the ideal are associated with the absence of positive outcomes such as satisfaction. Higgins and colleagues found supporting evidence in a study of undergraduates in 1985, where discrepancy between the actual self and the ideal self was significantly associated with subjects' feeling disappointed, dissatisfied, not feeling effective, feeling blameworthy, and feeling ‘no interest in things’ (Higgins, 1987). This concept of discrepancy between the ideal self and the actual self was used to develop a measure of subjective person-job fit for this study, where the higher the individual’s self-assessed performance on the competencies that the individual thinks the job requires, the higher the degree of subjective fit. This measure is called ‘Perceived Performance’ in Figure 2.

Measures of objective fit have been defined as those which compare separate measures of the individual and the job. Because competencies use the same language to describe the requirements of a job and what the individual offers, they appear to have potential as a method of measuring person-job fit. For example, subject matter experts may agree that a competency called ‘following instructions and procedures’ is highly relevant for a job. An individual may also be rated, either by self or others, on the extent to which ‘following instructions and procedures’ is a personal strength. The way measures of objective fit were derived for this study was derived from a search of the literature.

The derivation of fit measures is an area of debate in the literature. The possibilities and the debates surrounding them have been often summarized, (Edwards, 1993; Kristof, 1996; Miley, 1980; Rounds et al., 1987). Edwards classifies many of the possible measures as Profile Similarity Indices, where information from both the person and the environment is combined into one measure.

Many Profile Similarity Indices are distance measures. The differences between individual scores and group mean scores on the elements of a profile (competencies) are summed to give an overall fit measure. A drawback of this overall fit measure is that positive and negative differences, added together, can 'disappear'. Either absolute or squared differences can avoid this drawback, but directionality of differences is lost (Edwards, 1993). Another difference score suggested is Pythagorean distance, or the distance between 2 points in *k*-dimensional space (Cronbach & Gleser, 1953), where *k* is the number of profile elements (in this study, 16). One point represents the individual and the other the group, and the greater the distance between the two points, the greater the dissimilarity in the profiles. Pythagorean distance is based on squared differences, and so this measure also loses directionality.

Other Profile Similarity Indices are based on the ranked data obtained from a Q-sort process. Participants are required to sort the given elements (e.g. a set of competencies) by putting a specified number of elements into each category. If elements are categorized by relevance from 1-5, they might be asked to place only 2 elements into the least relevant (1) and the most relevant (5) categories, 5 elements into categories 2 and 4, and 8 elements into category 3. It can be argued that asking subjects to rank instead of rate the elements in a questionnaire will result in forcing them to discern small differences (Klein, Dulmer, Ohr, Quamdt, & Rosar, 2004). However, in this study, the competencies deemed not relevant to the role were discarded as the result of a pilot study (see p.56). In their study of 1570 adults on the electoral role in Cologne, Germany, Klein et al found that subjects could not be forced to differentiate between values they considered highly important by being asked to rank them. Instead, order of presentation became an important factor in the obtained ranked values. Therefore a Q-sort was not used in this study.

Edwards (1993) argues in favour of a method based on a polynomial regression equation, where the effect of the measures of the person and of the environment on the outcome measures are accounted for, before observing what additional effect the interaction, or fit measure, adds to the outcome. This method is appropriate where measures of the job and of the individual alone have a meaningful relationship with the outcome measures. Measures of fit obtained according to Edwards' formula have resulted in higher correlations with outcome measures than have other methods of calculating fit. However, in this study, it is not clear that a set of competency ratings

in isolation has a meaningful relationship with the outcome variables. Measures abound, suggesting that none is ideal.

Methods based on squaring the differences on each element in the profile have the effect of magnifying larger differences and giving them more weight than smaller differences. For instance, a difference of 1 would add 1 to the total profile difference score, whereas a difference of 2 would add 4. Miley (1980) has criticized methods which square the differences, on the basis that flatter profiles, with less extreme scores, will always yield a higher measure of fit than profiles which include extreme scores. In a study (N=635) of 19 different ways of calculating fit, with job satisfaction as the outcome, Rounds et al (1990) found that distance-based measures showed overall non-significant correlations with job satisfaction. However, each of the distance measures used was based on squared differences.

Q-sorts and polynomial regression do not lend themselves well to this study. Distance measures based on squared differences have shown disappointing results. Therefore this study will use the fit measure described by Wohlers and London as the difference between individual ratings and group mean ratings on each element (competency) summed to yield a single score for each individual (Wohlers & London, 1989). This method has also been used more recently, by Bretz and Judge (1994). While positive and negative differences from the comparison group ratings may 'cancel each other out' in this sum, all competencies used in Study 2 have been judged in Study 1 as important for the role, and the focus of this study is on overall 'fit', not on identifying the particular competencies on which an individual's abilities or values differ from the importance given to the competency by the subject matter experts..

1.13. Aspects of Person-Job Fit

Demands-Abilities fit (between the demands of the job and the abilities of the person) is most often used to consider person-job fit. In this study, the argued lack of attention paid to the fit of the person with a mission job leads to inclusion of Demands-Abilities fit as one aspect of fit which will be measured. Supplies-Values fit (between values of the person and what the job supplies) is used for both person-job and person-organization fit. Supplementary fit (similarity

between individuals and others in the organization), is more often considered in relation to person-organization fit. As above, 'Perceived Performance', the individual's own perception of their fit with the demands of the role, is likely to be important for individual outcomes because it is a measure of subjective fit. The fit measures used in this study are obtained as follows:

a) Demands-Abilities fit is the difference between the 'Demands of the job' (the competency ratings assigned by the three panels of subject matter experts) and individual self-ratings of performance.
b) Supplies-Values fit is the difference between the ratings of competencies assigned by the three panels of subject matter experts, and the ratings of competencies given by each individual.
c) Perceived Performance is the relationship between the competency ratings assigned by individuals and individual self-ratings of performance.

Competencies offer a way to measure Demands-Abilities fit: the demands of a mission role can be described as a set of competencies rated on relevance to the role by the subject matter experts, and the abilities of the individual can be expressed as performance on those competencies. Less obviously, competencies are also linked to values in mission work. Values have been defined by Edwards as the person's conscious desires, including preferences, interests, motives and goals (Edwards, 1996, p.294). What individuals see as important for effectiveness in the role is what they value as the way in which the work should be done. For example, whether a missionary chose 'Supporting and Co-operating' as more important than 'Leading and Deciding', would indicate the value the individual places on teamwork as the way to achieve goals. Whether an individual fits well with their organization and team involves congruence of values. Therefore a comparison between the individual's perceptions of what is important in the role and the priorities of the three groups of stakeholders on the same scale can provide a measure of Supplies-Values fit. Competencies offer a way to measure Perceived Performance. Individuals' self-rated performance on the competencies is compared with individuals' perceptions of the requirements of the role of missionary

1.14. Outcomes of Person-Job Fit

The classic outcome criteria that feature consistently in person-environment fit theory are job satisfaction, tenure (which logically has a strong negative relationship with 'early return' in Figure 1), and performance (Bretz & Judge, 1994). More specifically, Kristof-Brown et al conducted a meta-analysis of studies on person-environment fit in general, searching PsychInfo and Dissertation Abstracts International from 1861 to 2003, and identifying a total of 172 studies with codable data. Their review found that person-job fit shows strong correlations with three outcomes: 0.56 with Job Satisfaction, 0.47 with Organizational Commitment, and -0.46 with Intent to Quit, and a moderate correlation with Performance, 0.20 (Kristof-Brown et al., 2005, p.299). These findings formed the basis of the process of identifying outcome criteria for this study which would be appropriate for missionaries.

Job satisfaction was found to be an outcome of all forms of person-environment fit (Kristof-Brown et al., 2005), in their thorough meta-analytic review. Moreover, Judge et al's review of the relationships between job satisfaction and performance concluded that job satisfaction is an effective predictor of performance (T. A. Judge, Thoresen, Bono, & Patton, 2001). Their study (N=54,417) found a correlation of 0.30, with slightly higher results for global measures of job performance as opposed to measures of satisfaction with specific aspects of the job. Job Satisfaction is a widely used psychological predictor of job performance and there are no major reasons why it is not suitable for the missionary population. Therefore a measure of job satisfaction was used for this study, as an outcome of person-job fit, and also because of its positive links with performance. It is shown in Figure 2.

'Organizational Commitment' is another individual outcome of fit that was assessed by Kristof- Brown et al (2005) and found to have positive links with person-job fit. However, it is not so appropriate for this population. It has already been argued that person-organization fit is usually well worked through before a person signs up. Organizational commitment may also be difficult to measure reliably for missionaries because of the differences that individuals often perceive between the organization in their home country and the international face of the organization they experience in their country of assignment. Their sense of commitment may

vary accordingly. Therefore 'Organizational Commitment' was not used in this study as an outcome measure.

'Intention to Quit' was also found (by Kristof-Brown at al, 2005) to have a moderate (negative) correlation with person-job fit, but is also not a measure that lends itself well to this population. It is likely to suffer from a ceiling effect and to return an artificially low range of results because missionaries have psychological contracts with donors and supporting churches in addition to their actual contract with the organization. The combined effect of these contracts and the relatively greater implications of a decision to quit which involves relocating as well as resigning from a job, combine to exert pressures on missionaries to stay such that leaving is a last resort. 'Wishing I could quit' might be a useful measure, Therefore 'Intent to Quit' was not used as an individual outcome measure with the missionary sample, but other appropriate measures were sought.

A suggested outcome measure for person-job fit in this population is Work Engagement. Employees who exhibit work engagement are those who have 'a sense of energetic and effective connection with their work activities and they see themselves as able to deal well with the demands of their job' (Schaufeli, Bakker, & Salmon, 2006). An early precedent for this outcome criterion is found in the work of Blau (1987) who found fit was associated with higher job involvement (Bretz & Judge, 1994) It is therefore suggested that increased levels of work engagement are an outcome of good person-job fit in mission roles. Like job satisfaction and satisfaction with life, links have also been found for work engagement with performance (Schaufeli & Bakker, 2003), and Work Engagement is shown in Figure 2 , on page 35, as an outcome of person-job fit.

In missionary work, the job is inextricably linked to the whole of life. Living in another country affects the whole of daily life for the individual and their immediate family. The 'job' has implications for dimensions of the individual's life which in a domestic work role are not necessarily related to work, such as leisure, friendships, time with extended family, opportunities for vacations, children's education, etc. For missionaries, the 'job' is also an expression of their religious beliefs and practice. Therefore, a measure of more general life satisfaction is

appropriate as an outcome measure of person-job fit in missionary work. 'Satisfaction with life' is a construct which does not relate to separate domains, such as work, health, social support or finances but allows all these aspects to be considered as part of an integrated whole (Pavot & Diener, 1993). This holistic concept is also related to personal well-being and more generally still, to 'happiness' (Wright, Cropanzano, & Bonett, 2007). Fredrickson's 'Broaden and Build' theory suggests that positive emotions (such as satisfaction with life) allow a person to build their personal resources, from physical and intellectual resources to social and psychological resources (Fredrickson, 2001). Wright et al conducted a small study (N=109) to test Fredrickson's 'Broaden and Build' theory in a management population, with Performance as a dependent variable. Wright et al's results found support for positive emotions as a predictor of performance, and as a mediator between job satisfaction and performance. This is too small a study to offer strong support for these relationships, but is consistent with a number of other studies they quote in support. Because of the pervasive nature of mission work in its implications for workers' whole lifestyle, Satisfaction with Life is appropriate as an additional outcome measure for person-job fit, and is shown in Figure 2. In addition, Fredrickson's 'broaden-and-build' theory offers theoretical support for positive links between Satisfaction with Life and performance.

Ideally, 'effectiveness', on the right in Figure 1 on page 7, would be the focus of interest in this study of mission workers. The measurement of individual effectiveness is difficult in any context because of the 'other factors' which affect the outcomes of a person's performance. Like effectiveness, the measurement of performance poses difficulties, particularly in this population. Even when performance reviews are conducted, they are variable in quality, affected by a wide range of training, experience, cultural backgrounds, aptitude and interest in the task on the part of often busy field supervisors (H. Cowie, personal communication, March 2007). On the other hand Early Return (or attrition) has often been measured in mission roles (Deane, 1994, 2007; Hay et al., 2007). Although early return is concerning, these studies suggest that compared with figures from the wider expatriate population, rates of early return for missionaries are not high. While 'staying there' is necessary for effectiveness, it is not sufficient. This study recognises the important part that cross-cultural adjustment plays in minimizing expatriate early return and in contributing to performance and effectiveness. In addition to that however, the present research,

focuses on ‘Person-Job Competency Fit’, as an important, but often over-looked part of the model in Figure 1. A competency based approach to measuring person-job fit was trialed in this study of missionaries. Higher levels of person-job fit are expected to correlate with increased job satisfaction, work engagement, and satisfaction with life.

HYPOTHESES

Hypothesis 1a). Competencies rated as most relevant by expatriate missionaries will not be aligned with competencies rated as most relevant by host nation workers.

Hypothesis 1b) Competencies rated as most relevant by agency leaders will not be harmonized with competencies rated as most relevant by mission workers.

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Hypothesis 2a). Aligned Demands-Abilities Fit (with host nation colleagues) will predict work attitudes (job satisfaction, work engagement and satisfaction with life).

Hypothesis 2b). Harmonized Demands-Abilities Fit (with expatriates) will predict work attitudes (job satisfaction, work engagement and satisfaction with life).

Hypothesis 3a) Aligned Supplies-Values Fit (with host nation colleagues) will predict work attitudes (job satisfaction, work engagement and satisfaction with life).

Hypothesis 3b). Harmonized Supplies-Values Fit (with expatriates) will predict work attitudes (job satisfaction, work engagement and satisfaction with life).

Hypothesis 4 Perceived Performance, a measure of subjective fit, will predict work attitudes (job satisfaction, work engagement and satisfaction with life).

Hypothesis 5a) Alignment (fit with host nation colleagues) on both Demands-Abilities fit and Supplies-Values fit will predict more variance in the outcome variables (job satisfaction, work engagement and satisfaction with life), than one measure of fit alone.

Hypothesis 5b) Harmonization (fit with expatriates' perspectives) on both Demands-Abilities fit and Supplies-Values fit will predict more variance in the outcome variables (job satisfaction, work engagement and satisfaction with life), than one measure of fit alone.

Hypothesis 5c) Which comparison panel, (host nation colleagues, or the expatriate panel) is most informative for each outcome variable?

CHAPTER 2 - STUDY I

Method

2.1 Participants

There were 70 respondents in Study 1, comprising:

- 22 host nation colleagues of New Zealand missionaries in "developing countries."
- 25 New Zealand missionaries, on home assignment in NZ.
- 23 agency leaders in New Zealand.

The sample was based on convenience and networking. Participants were accessed through Missions Interlink, a New Zealand network of Christian mission agencies, and through direct contacts of the author. Agency leaders and missionaries distributed the project information sheet containing a request for participants (Appendix v). It is not known how many people were invited to participate, so return rates are not able to be estimated reliably. An Information Sheet included information on the confidentiality of the information, and contact details for any queries or problems that might arise. Participation was voluntary and with informed consent.

The criteria for participation were:

- Host nation colleagues: "English speaking host nation colleagues of NZ missionaries". The stipulation that they be English-speaking was made for practical reasons (translation and comprehension) and methodological reasons (minimizing within-group variance that might result from language differences).
- Missionaries: "Missionaries currently in NZ who have served overseas for at least 12 months and have returned in the last 9 months". The stipulation that they have worked as missionaries for at least 12 months was to avoid any artifact due to input from missionaries who had not remained long enough in the role to understand what it entailed. The stipulation that they be currently in NZ was to leave as many currently on-site overseas missionaries as possible for Study 2.
- Agency personnel: "Involved in the selection and training of missionaries who serve for 12 months or more." The agency leaders had experience of working in and/or visiting a wide variety of countries and were based in NZ. They had been in their roles for at least

12 months. They are therefore valued reflectors of the organizational perspective on the competencies for the role.

Overall, the majority of the host nation colleague respondents came from the African continent (20 from Africa and two from Asia). Of the missionary group respondents eight worked in Africa, eight in Asia, three in the Pacific region, one in South America and five had experience of working in more than one continent. One unexpected feature of the spread of host nation colleagues was that 14 of the 22 were part of a single educational project in one African country. This cluster happened because one missionary made particular efforts to help source participants. Therefore because of the small overall sample size, a project cluster group exists within the host nation colleague group. Having an educational perspective within the 'host nation colleague group' and a predominantly African perspective from the host nation colleagues overall may potentially contribute to any differences obtained between the groups on the competencies important for missionaries. The implications of these possibilities will be discussed in the Discussion section.

A further unanticipated feature of the participants was uneven gender distribution (as shown in Table 1. Gender would therefore be taken into account as a covariate in analyzing the results.

Table 1. *Gender composition of the 3Subject Matter Expert groups in Study 1.*

Variables		**N**	**%**
Host Nation Colleagues	**Male bias**	16	73
	Female	6	27
	Total	22	100
Missionaries	Male	10	40
	Female bias	15	60
	Total	25	100
Agency Leaders	**Male bias (slight)**	13	57
	Female	10	43
	Total	23	100

2.2.Measures

Competency ratings: The SHL Universal Competency Framework consist of 112 competencies, each of which loads onto one of eight factors. For example, 14 competencies load onto the factor 'Leading and Deciding' (Bartram, 2005). Focus groups of experienced consultants took the competencies under each factor and organized them into two or three competencies under each of the eight factors. This resulted in a set of 20 competencies which are more general than the 112 but more specific than the eight factors (Bartram & Brown, 2005). The 20-level was designed for use commercially to represent the range of competencies that might be required in any role. In practice 112 competencies are too unwieldy to work with and the eight general factors lose information. For example, a factor such as 'Leading and Deciding' includes two 20-level competencies 'Leading and Supervising' and 'Deciding and Initiating Action'. The broad factor 'Leading and Deciding' may be rated as highly relevant for a role, when if more specific options were available, only one of the two at the more specific level might be rated highly.

The process of 'decomposing' global competencies into component parts is recommended (Morgenson, Delaney-Klinger, Mayfield, Ferrara, & Campion, 2004) because it decreases the coarseness of the judgments being made. Further, the use of very broad competency definitions is one of the flaws identified by Shippmann et al (2000) as compromising the validity of a job analysis. This study uses the 20-level competencies on the practical basis that they are more specific than the eight broad factors, but are not as cumbersome as 112 competencies. The Universal Competency Framework 20-level card sort was made available by SHL New Zealand without charge for this research (See Appendix i).

Mission work is specialist aid and development work in that it focuses on religious values. Hence two competencies specific to missionary work, *Living a Christ-like Life* and *Following God,* were added to the 20 Universal Competency Framework competencies, and the full 22 competencies are shown in Table 2.

A pilot project (explained below, under Procedure) was used to eliminate any of the 22 competencies shown in Table 2 which were not relevant to the role of missionary. As a result of the pilot project, 16 competencies, asterixed in Table 2, were retained. The competencies discarded are shown in grey in Table 2. Table 2 shows the relationship of each competency to the theoretical eight factor structure. The eight broad factors, plus a ninth factor relating to Christian faith and values are shown on the left, and each of the 22 competencies is next to the factor it relates to. The 22 competencies are presented in order of importance, (where most important is the top of the table) in which the subject matter experts in the pilot project, on average, rated the 22 competencies.

Table 2. C*ompetencies used for study, in order of relevance according to pilot project.*

Great Eight Competencies	SHL Universal Competency Framework (20-level)
Practicing Christian faith	*Living a Christ-like life** *Demonstrating love, compassion and servanthood in dealings with others,*
Supporting and Co-operating	*Adhering to principles and values *Acting with integrity and ethics..*
Practicing Christian faith	*Following and Trusting God ** *Exercising faith and trust in difficult times.*
Adapting and Coping	*Adapting and responding to change *Adapting to change, accepting new ideas, adapting interpersonal style.*
Supporting and Co-operating	*Working with people *Understanding others, listening, consulting, supporting, caring.*
Adapting and Coping	*Coping with pressures and setbacks *Coping with pressure, keeping emotions under control, handling criticism*
Interacting and presenting	*Relating and networking *Building relationships, networking, relating to all levels*
Leading and Deciding	*Deciding and initiating action *Deciding, taking responsibility, generating activity.*
Organizing and executing	*Planning and organizing *Setting objectives, planning,, monitoring progress.*
Creating and Conceptualizing	*Learning and researching *Learning, gathering information.*
Enterprising and Performing	*Achieving personal work goals and objectives *Accepting and tackling demanding goals, working hard*
Creating and Conceptualizing	*Formulating strategies and concepts *Working strategically, setting strategies, visioning broadly.*
Leading and Deciding	*Leading and supervising *Delegating, motivating, empowering others.*
Organizing and Executing	*Following instructions and procedures *Following procedures and instructions.*
Interacting and presenting	*Presenting and communicating information *Speaking clearly and fluently, expressing opinions, making presentations..*
Interacting and presenting	*Persuading and influencing *Making an impact, gaining agreement, negotiating, convincing.*
Creating and Conceptualizing	*Creating and innovating *Innovating, improving the organisation, devising change initiatives*
Analyzing and Interpreting	Applying expertise and technology *Developing and sharing specialist and detailed technical expertise,*
Analyzing and Interpreting	Analyzing *Analysing information, probing for clarity, producing solutions.*
Organizing and executing	Delivering results and meeting customer expectations *Focusing on customer needs and satisfaction.*
Analyzing and Interpreting	Writing and reporting *Writing clearly, succinctly and correctly, convincing through writing.*
Enterprising and Performing	Entrepreneurial and commercial thinking *Identifying business opportunities, controlling costs.*

**Competencies retained after the pilot project, explained below.*

***Competencies added to include the Christian faith dimension of Christian work.*

Relevance was scored 1-4 (1=non-relevant, 2=less relevant, 3=relevant, 4=essential)

2.3. Procedure

Permission for this study was sought and obtained from the Massey University Human Ethics Committee (Approval number: MUHECN 06/078, Appendix ii). Permission was obtained for two phases to Study 1, a pilot project and then Study 1 proper.

To conduct the pilot for Study 1, the 20 competencies in the SHL card sort were put into a word document with the 2 added competencies describing Christian faith and practice, to make up the pilot questionnaire (Appendix iv). This, with an information sheet (Appendix iii), was emailed to subject matter experts (host nation colleagues, missionaries and agency leaders), accessed through mission agencies in New Zealand or personally known to the author, and selected on the basis of their accessibility and experience. Thirteen responses were obtained, from 4 host nation colleagues, 4 missionaries, and 5 agency leaders. These were individuals well acquainted with the subject matter as all of them had been missionaries or had worked with missionaries for at least five years. These subject matter experts were asked to rate the relevance of each of the 22 competencies on a scale of 1-4 (1=non-relevant, 2=less relevant, 3=relevant, 4=essential). Participation was voluntary, with informed consent, and all communication was by email. Any competency with a mean rating of less than 3 (*Relevant*) across all subject matter experts was discarded from the rest of the study (see results of pilot, Appendix ix). Twin competencies *Living a Christ-like Life* (mean= 4.0 and SD= 0.00) and *Following God* (mean= 3.9 and SD= 0.28) were two of the three highest rating competencies. On the basis that it was redundant to have both, these two similar competencies were combined into one general competency to describe Christian faith and practice, *Living a Christ-like Life.*

From Table 2, five competencies were discarded. They were *Applying Expertise*, *Analysing, Delivering Results, Writing & Reporting*, and *Entrepreneurial Thinking*. The full results of the pilot project, are shown in Appendix ix. Generally high levels of agreement across the subject matter experts was found on the relevance of the competencies for the role, with the highest standard deviation = 0.8 on a range of 1-4. Thus a total of 16 competencies were retained for Study 1

The pilot had returned a relatively low spread on the ratings given for the competencies. Seventeen out of the original 22 competencies received a mean rating of at least 3 ('relevant') out of 4 (see Appendix ix). Therefore a procedural refinement was added to Study 1 following in that participants were asked to rate each competency by frequency as well as by relevance. Frequency was rated on a scale of 1-4, where 1= occasionally, 2= sometimes, 3=much of the time, 4=all the time. Both relevance and frequency ratings are used in job analysis practice (Morgenson et al., 2004). In this case, Frequency was used to weight Relevance, by multiplying Relevance (1-4) by Frequency (1-4), giving a total scale range of 1-16.

Turning now to Study 1 itself, an Information Sheet (Appendix v), with the Study 1 questionnaire attached (Appendix vi) was emailed to the NZ Missions Interlink Director, and to agency leaders and missionaries known to the researcher, who then forward emailed it to more potential participants. Host nation colleagues were all overseas, and all questionnaires were transmitted from person to person, and then returned by email. The information sheet made it clear that participants should email completed questionnaires directly to the researcher. In order to encourage participation, and with the approval of the Massey Human Ethics Committee, the information sheet offered $200 to a project of choice for one participant from any of the 3 groups, to be drawn at the close of Study 1. The project chosen by the winner of the draw was an orphanage in India.

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Results

Table 3 below contains mean ratings and standard deviations for each competency, as supplied by each of the three groups, host nation colleagues, missionaries, and agency leaders. Kurtosis was high on two of the 16 competencies, *Living a Christ-like Life* (13.60) and *Adapting and Responding to Change* (1.49), increasing the risk of Type 1 error. Neither of these competencies were ones on which the subject matter experts differed significantly, so this kurtosis is not damaging to this study. High levels of skew were found on four competencies, *Living a Christ-like Life* (-3.90), *Adapting and Responding to Change* (-1.47), *Working with people* (-1.40) and *Adhering to Principles and Values* (-1.11). While these non-normal distributions are likely to have a detrimental effect on the analysis, the effect is somewhat lessened because they are all skewed in the same direction (Tabachnik & Fidell, 2007). The skewed results show a high level of within-group agreement that these competencies are very important for the role.

Table 3*: Mean ratings (Relevance x Frequency) and Standard Deviation by group and Univariate F-test results for differences between groups.*

Competency	Host nation colleagues		Missionaries		Agency leaders			
	Group 1, *n*=22		Group 2, *n* =25		Group 3, *n* =23		*F (df=2)*	*p*
	Mean	SD	Mean	SD	Mean	SD		
Living a Christ-like Life	15.82	.85	15.68	1.11	15.83	.83	.29	.75
Adhering to Principles	13.09	3.92	13.20	3.51	14.17	2.74	.68	.51
Adapting to change	11.36	5.49	14.04	2.61	14.30	2.25	3.66	.03*
Working with People	12.59	3.32	15.08	1.20	15.30	1.55	8.67	.00***
Coping with pressure	12.41	3.79	12.32	2.46	12.39	3.63	.07	.93
Relating & Networking	10.82	3.96	11.96	3.42	12.91	2.92	.70	.50
Deciding & Initiating	10.41	4.31	8.08	3.11	7.87	2.67	3.25	.045*
Planning & Organising	9.86	4.41	6.60	2.83	7.00	2.28	6.89	.002**
Learning & Researching	9.77	4.43	6.96	3.48	6.72	3.84	4.03	.02*
Achieving Goals	7.59	5.37	7.64	3.00	7.17	3.03	.10	.90
Formulating Strategies	9.18	5.22	5.12	3.71	5.39	2.66	7.18	.002**
Leading & Supervising	8.41	4.90	7.08	4.25	7.74	2.45	.57	.57
Following Instructions	10.91	5.41	8.12	3.37	9.09	3.19	2.67	.08
Presenting & Communicating	10.77	3.93	5.92	3.45	6.52	3.38	10.96	.00***
Persuading & Influencing	8.86	3.76	7.96	3.56	7.30	2.78	1.23	.30
Creating & Innovating	7.23	3.89	4.48	3.31	4.83	2.92	3.45	.04*

*p<.05, ** p<.01, ***p<.001 Scale=1-16, Relevance 1-4 weighted by Frequency, 1-4

In order to test whether the fluctuations shown in Table 3 across the panels (host nation colleagues, missionaries and agency leaders) are random or non-random, a Multiple Analysis of Variance (MANOVA) was conducted. The independent variable in this analysis was group (host nation colleagues, missionaries and agency leaders), and the dependent variables were the 16 competencies. A covariate was gender. The number of participants (N=70) is slightly less than an ideal of 30 per group, or 90 (Brace, Kemp, & Snelgar, 2006). Thirty participants per group would have given confidence that the high skew and kurtosis results on some competencies, as above, did not threaten the normality of the distributions. However, the minimal requirement for multiple analysis of variance is groups of similar size, and that each group must have more cases than there are DVs (Brace et al., 2006). In that the groups in Table 3 are of similar size and there are 16 DVs, these minimal sample size requirements for MANOVA are satisfied.

A further requirement for multivariate analysis of variance is that the variance and covariance scores of the dependent variables (competency ratings) are approximately equal across the groups. Box's M, which tests for violation of this assumption, produced a result of F (272, 11529) =1.19, p=.018. Box's M is a highly sensitive test, and should be used with caution (Spicer, 2005). As a precaution, Spicer recommends a significance level of p<.001 to determine violation of Box's M. At this more stringent alpha, p=.018 is not significant. Hence the variance and covariance scores for the dependent variables satisfy the requirements for MANOVA.

Because of the unexpected uneven gender distribution in the three groups (e.g. Host nation colleagues 73% male, 27% female), the effect of gender as a covariate was analysed. Results were not significant for gender on the multivariate analysis (Wilks's Lambda of .86, F (16, 51) =0.56, p=.88). The results of the one-way multivariate analysis of variance test by group, (with gender as covariate), showed that Wilks's Lambda of .44 was significant, F (32, 102) =1.63, p=.035, <.05. The multivariate η^2 =.34 indicates that a high 34% of the variance in the means for each competency is accounted for by group (host nation colleague, missionary or agency leader), after the competency ratings have been adjusted by MANCOVA in SPSS for gender.

Having established a likely multivariate effect of group on the ratings of competencies, even after gender is controlled, univariate F-tests were conducted on each competency, to detect between-subjects effects, with gender as covariate, and the results are summarised in Table 3. From Table 3, eight competencies showed significant differences, at p=.05, across the three groups. These eight with statistically significant differences by group are boldfaced in Table 3. The difference between the 3 groups on *Working with People* and *Presenting and Communicating Information* was significant at p<.001. *Planning and Organising* and *Formulating Strategies* were significantly different between the groups at p<.01, and *Adapting to Change, Deciding and Initiating, Learning and Researching* and *Creating and Innovating* were significant at p<.05.

To pinpoint which group differed from the other two on each of the competencies, post-hoc univariate analyses of variance were conducted, using Scheffe and Dunnett's T3 tests. To safeguard against inflating Type I error with 3 between-group comparisons, a Bonferroni correction was employed, dividing p (.05*)* by 3, to obtain an alpha of p=0.018. Of the eight competencies where there was a significant difference between the groups (boldfaced in Table 3), host nation colleagues differed from the two expatriate groups (at a significant level) on four of the eight competencies. On the other four competencies, no one group was different, at a significant level, from the other two. Host nation colleagues judged that *Working with People* is less important to the role than missionaries (p=.003) and agency leaders (p=.001). Host nation colleagues judged the following 3 competencies as more important than the 2 expatriate groups: *Planning and Organising*, missionaries (p=.005), agency leaders (p=.017), *Formulating Strategies*, missionaries (p=.004), agency leaders (p=.009), and *Presenting and Communicating Information,* missionaries (p=.000) and agency leaders (p =.001).

The above results assume that the host nation colleague group (N==22) can be treated as one group. However, it was made up of 14 participants from one educational setting and eight others from a variety of locations and projects. Therefore separate means and SDs for the two sub-groups (those from the education setting, and the rest of the host nation colleague group) were calculated. The means are shown in Table 4.

Table 4: *Mean ratings (Relevance x Frequency) for 4 groups, with host nation colleagues group split into 2 groups.*

Competency	Host nation colleagues, N=8 Mean	Project Group of HNCs N=14 Mean	Missionaries Group 2, N=25 Mean	Agency leaders Group 3, N=23 Mean
Living a Christ-like Life	16	15.71	15.68	15.83
Adhering to Principles	13.38	12.93	13.20	14.17
Adapting to change	12.63	10.64	14.04	14.30
Working with People	14.00	11.79	15.08	15.30
Coping with pressure	12.75	12.21	12.32	12.39
Relating & Networking	11.13	10.64	11.96	12.91
Deciding & Initiating	10.25	10.50	8.08	7.87
Planning & Organising	7.38	11.29	6.60	7.00
Learning & Researching	6.49	11.36	6.96	6.72
Achieving Goals	7.50	7.64	7.64	7.17
Formulating Strategies	6.50	10.71	5.12	5.39
Leading & Supervising	7.75	8.79	7.08	7.74
Following Instructions	9.75	11.57	8.12	9.09
Presenting & Communicating	9.13	11.71	5.92	6.52
Persuading & Influencing	8.88	8.86	7.96	7.30
Creating & Innovating	5.25	8.36	4.48	4.83

*p<.05, ** p<.01, ***p<.001

T-tests were conducted between the means of the 2 sub-groups of host nation colleagues (education setting, *n*=14, other host nation colleagues, *n*=8) to identify any competencies on which there were significant differences. Two competencies had significantly different means, *Planning and Organising* (*p*=0.02) and *Learning and Researching* (*p*=0.02). These, boldfaced in Table 4, are both more valued by the project group, who are from an educational setting. It seems likely that those in the education setting put greater emphasis on competencies relevant to their occupation. This possibility was raised in some comments from study participants, that what was important would vary depending on the specific job (E.g. "The challenge in answering . . . is that the tasks and ways of involvements of what is referred to as a missionary vary so widely -

from simply serving in a task to capacity building to leadership roles"). It appears that the education setting group of host nation colleagues has reflected competencies which are a priority for their work. In the small sample of 22, these 14 cases have the potential to bias the competency ratings of the overall host nation colleague group.

Discussion

Study 1 showed significant differences between the perspectives of the three groups of subject matter experts on what competencies are most important for the role of missionary. With gender as covariate, 34% of the variance in ratings for the competencies was accounted for by the panel groups (host nation colleagues, missionaries and agency leaders).

The host nation colleague group gave mean ratings which were significantly different from the other two groups on four competencies, *(Working with People, Planning and Organising*, *Formulating Strategies*, and *Presenting and Communicating Information).* Within the host nation group, significant differences of opinion were found between i) members of one educational project and ii) the remainder of the host nation group on the importance of two of the competencies: '*Planning & Organising',* and '*Learning & Researching'*. These two were accordingly dropped from the set of competencies, leaving 14 competencies on which 'fit' can be calculated in Study 2, between a) each individual sampled, and b) host nation subject matter experts (*N*==22).

Hypothesis 1a). The differences found between host nation colleagues and the two groups of expatriate subject matter experts are in support of Hypothesis 1a*): Competencies rated as most relevant by expatriate missionaries will not be aligned with competencies rated as most relevant by host nation workers*. The finding that significant differences were located between host nation colleagues and expatriate subject matter experts suggests that careful attention should be paid to the perspective of host nation colleagues. In this instance, host nation colleagues saw *Working with People* as less important to the role than expatriates did, and they saw *Formulating Strategies* and *Presenting and Communicating Information* as more important. It may be that missionaries are highly aware of the challenges posed by adapting to another culture and working with people who are different. However, host nation colleagues' perceptions may be that missionaries are less planned and strategic in what they do, and less skilled at passing their knowledge on to others, than they would like.

Hypothesis 1b). There were no significant between-group effects found between the two expatriate groups, missionaries and agency leaders. Hypothesis 1b): *Competencies rated as most relevant by agency leaders will not be harmonized with competencies rated as most relevant by mission workers*, was therefore not supported. The fact that missionaries and agency leaders did not differ on their competency ratings for the role of missionary, suggests that between missionaries and agency leaders in this sample, Harmonization was achieved.

The findings for Hypotheses 1a) and b) are consistent with Actor-Observe Theory, in that the 'actors', missionaries and agency leaders, all expatriates, had one perspective on what competencies were most important for missionaries, and the 'Observers', host nation colleagues, had a different perspective.

Because differences between missionaries and agency leaders were not significant on any competency, in Study 2 these two groups will be amalgamated. This amalgamation results in two 'panel' perspectives on important competencies for missionaries: host nation colleagues (N=22) and expatriates (N=48). The revised model for Study 2 is shown below as Figure 3. Further discussion of the results from Study 1 follows in the Discussion section after Study 2.

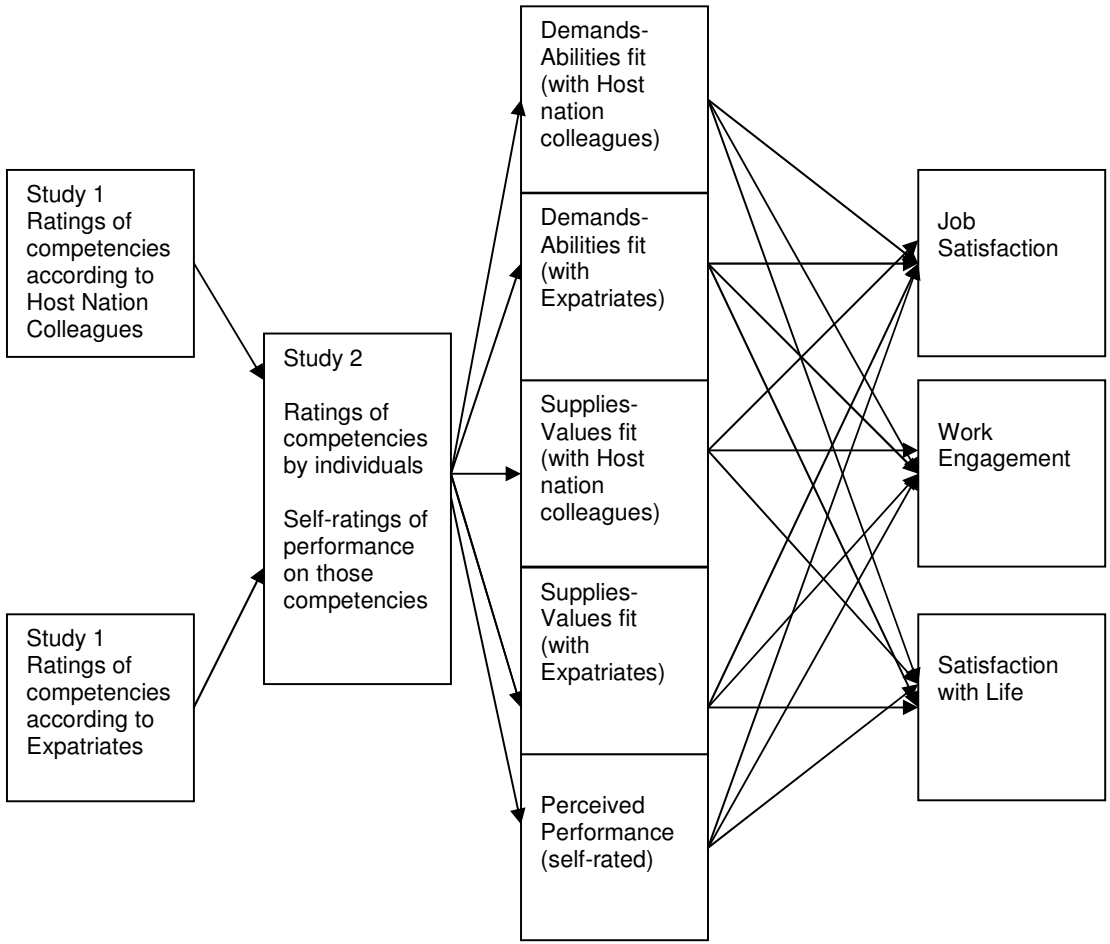

Figure 3: *Person-Job fit for missionaries- proposed relationships between measures of Person-Job fit and individual outcomes.*

CHAPTER 3 - STUDY 2: METHODOLOGY

3.1 Participants

There were 130 responses, of which four were discarded due to missing data, leaving *N*=126 usable responses. Participants were sought who were current missionaries in their overseas role, and as in Study 1, who had been in an overseas role for at least 12 months. This was a convenience sample, based on networking. Participation was voluntary and with informed consent. In order to achieve this sample, missionaries from Australia were also invited to participate in Study 2. Australian and New Zealand mission agencies often share resources such as training programmes and administrative structures. In most cases, the mission agencies are the same, and operate as branch offices of the same international groups, so share objectives, organizational cultures and fields of operation. Hence they are considered one group, Australasian missionaries. Agency leaders and missionaries distributed the project information sheet containing a request for participants (Appendix vii). Since it is not known how many people were invited to participate, return rates are not able to be calculated.

Of the 126 usable respondents, there were 58 males and 68 females. 95 were married and accompanied by their spouse, 30 were not (1 did not reply). Full details of the demographic composition of the participants are shown in Appendix x- Study 2 participant information.

3.2. Measures

3.2.1. Competency ratings: The 16 competencies used in Study 1 were also used in Study 2. Individual missionaries were asked to do the same rating exercise as the three panels of subject matter experts, scoring each competency 1-4 on Relevance (1= non-relevant, 2= less relevant, 3= relevant, 4=essential) and 1-4 on Frequency (1=occasionally, 2=sometimes, 3=much of the time, 4=all the time).

3.2.2. Performance. Participants in Study 2 rated their own performance on the 16 competencies, following the instructions in the on-line questionnaire: "Please click on the box 'Select one' next to each behaviour below and choose by clicking on one of the following 5 options: Definitely a strength-This is definitely a strength, and I do this well; Above Average-My performance is above average in this area; Average-My performance is average in this area, and meets requirements of role; Below average- Below average in this area, it is not a personal strength; Generally weak- Generally weak in this area, I consistently struggle with this." Responses were scored on a scale of 1-5, where 1=generally weak and 5=definitely a strength.

Observer or supervisor assessments of individuals' performance are not available in this study and are hard to obtain in missionary work. Supervisors and team mates can assess whether the individual's performance meets the demands of the role, but the individual's own perception of their adequacy determines the degree of fit they feel, their level of tension and ultimately their propensity to resign (Maynard, Joseph, & Maynard, 2006). Self-assessment of performance is therefore used in this study, because it is feasible and it is also relevant.

3.2.3. Person-job fit measures. The three person-job fit measures shown in Figure 3 (Demands-Abilities fit, Supplies-Values fit and Perceived Performance) were derived from measures of the job, obtained from panels of subject matter experts in Study 1. Measures of the person, obtained from individual ratings of competencies and self assessment of performance in Study 2, were gauged for 'fit' with the panel judgments. The fit measures are represented in Figure 4 and described below.

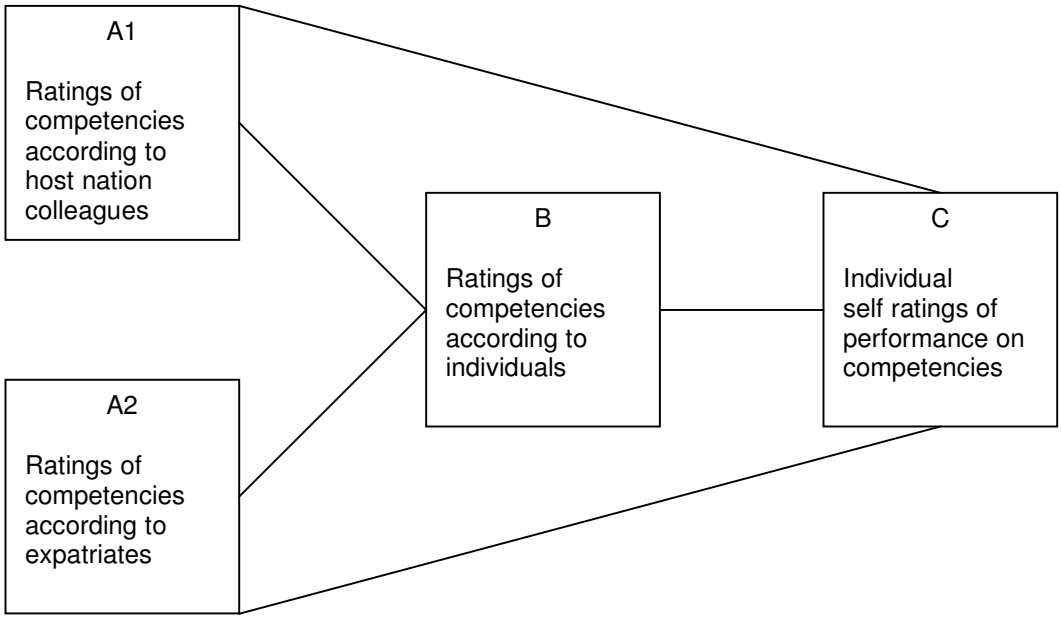

Figure 4*: Person-job fit measures. Lines represent the comparisons which gave measures of fit.*

Demands-Abilities Fit: This measure is represented in Figure 4 by lines between boxes A and box C. Demands-Abilities fit in this study is an objective measure, according to the definitions discussed previously. It is 'objective' in the sense that it is a comparison between 2 sets of measures, one of the job and one of the person, and derived separately. 'Demands' are the ratings of the competencies for the job of missionary given by the subject matter expert groups in Study 1. 'Abilities' are the individuals' self-ratings on the competencies. The subject matter experts' ratings of competencies ranged from 1-16 and individuals' self-rated abilities ranged from 1-5. Demands-Abilities fit measures are used to test Hypotheses 2a)-b).

Supplies-Values Fit: This measure is represented in Figure 4 by the lines between boxes A and box B. It is a comparison between the individual's perceptions of what is important

in the role and the perceptions of the panels of subject matter experts. Supplies-Values fit in this study is a measure of objective fit, being a comparison between two sets of measures from different sources.

As a comparison of opinions about what the role entails, it could be considered either a measure of conventional Supplies-Values fit or of Supplementary fit (similarity). The role of missionary is different from many other roles in that individuals bring to it a strong sense of what they want to do. They are not working for their agency so much as joining an agency with congruent values which will enable them to fulfil their personal sense of calling. In this sense, what individuals think are the most important competencies for the job is a set of 'Values,' and what is valued as the most important competencies by two groups of individuals who contribute to the occupational environment (other expatriates and host nation colleagues) are the 'Supplies'.

The comparison between perspectives on what the role entails may not be an obvious measure of Supplies-Values fit in the workforce in general, as the employer often has 'sole rights' to determine what competencies are most important. In the broader work context, the comparison between perspectives might be better understood as a measure of Supplementary fit, or the degree to which an individual is like others in the organization. In this missionary population, the comparison between perspectives on what is important for the job will be considered as a measure of Supplies-Values fit, and whether this is justifiable or not will be further discussed in the context of the findings. Supplies-Values fit was used to test Hypotheses 3a)-b).

Perceived Performance: This measure is represented in Figure 4 by the line between Boxes B and C. It is obtained from individuals' self-ratings of their performance on the competencies which they judge to be the most important for the role. This is another measure of Demands-Abilities fit, as individuals are rating their 'Abilities' against what they see as the 'Demands' of the role. This is a measure of the discrepancy between what participants judge as the ideal competencies for the role, and how they perceive their own performance, and tests Hypothesis 4. This measure is 'indirect' in the sense that it

compares two different measures, one of the job and one of the person. However, it is also subjective in that both measurements come from the same person. Comparisons between two measures from the same source have limitations because of common method variance and potential social desirability (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Despite that, it is an appropriate measure in this context where individuals' perceptions of their ability to meet the demands of their role and the environment are of interest.

3.2.4. Job satisfaction. The Job-Related Affective Well-Being Scale, or JAWS, was used to measure job satisfaction. The JAWS-20 measures affect in a job, as opposed to affect in life in general. It consists of 10 items for positive emotions (e.g. 'My job made me feel at ease') and 10 items for negative emotions (e.g. 'My job made me feel angry'). Participants were asked to indicate the amount which any part of their job made them feel each of 20 emotions during the last 30 days. The options offered range from 1-5, where 1=never, and 5=extremely often. In a US population the JAWS-20 has high reliability co-efficients ranging from 0.88 for Negative emotions (10 items) and 0.90 for Positive emotions (10 items) (Van Katwyk, Fox, Spector, & Kelloway, 2000). Scores for each participant were total scores on each scale (Positive and Negative emotions). Negative emotion items were reverse scored as indicated in the on-line instructions (Spector, 2007).

3.2.5. Work Engagement. The Utrecht Work Engagement Schedule was used to measure work engagement (Schaufeli & Bakker, 2003), which is described by Schaufeli as a positive work-related state of fulfillment that is characterized by vigor, dedication, and absorption. The short form of this scale has 9 items which are scaled from 0-6, where 0=Never, 1=a few times a year or less, 2= once a month or less, 3= a few times a month, 4=once a week, 5= a few times a week, 6=every day. Participants respond to items such as; "At my work, I feel bursting with energy". The short form was developed from the original 17-item scale, and the 9 items are made up of 3 items each on the factors of vigour, dedication and absorption. The statistical properties of the short form were tested on data gathered from over 14,000 participants in 10 countries (Schaufeli, Bakker, &

Salanova, 2006). The 9-item scale was tested for fit against both a one-factor model and the 3 factor model of the 17-item scale, and the 3 factor model showed a slightly better fit. Cronbach's Alpha for the total 9 item scale was between 0.85-0.92, a result that is well above acceptable levels of .7. For the 3 factors, α =0.60-0.88 across 10 countries for Vigour (3 items), α = 0.75-0.90 for Dedication (3 items) and α = 0.66-0.86 for Absorption (3 items).

3.2.6 Satisfaction with life. The Satisfaction with Life Scale (SWLS) was chosen as a measure of satisfaction with life as a whole. This supplements the JAWS by measuring global satisfaction with life, which in missionary work, includes many aspects that are important in, and inseparable from, a mission role. This 5-item scale is scored 1-7, where 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neither agree nor disagree, 5=slightly agree, 6=agree, 7=strongly agree. The items are statements such as "In most ways my life is close to my ideal." Diener conducted a principal-axis factor analysis on the SWLS, and found one factor which accounted for 66% of the variance. The SWLS has strong internal consistency results ranging from 0.79-0.89, and its test-retest reliability shows both stability over time and sensitivity to life events (Diener, 1993).

3.2.7. Social desirability. A five-item short form of the Marlowe-Crown Social Desirability Scale (Hays, Hayashi, & Stewart, 1989), was used. The data for Study 2 of this project is entirely self-reported, (as above), raising a possibility of response bias. The full 33 item Marlowe-Crown SDS would have been unwieldy in this context. The short form has an internal consistency of 0.66-0.68 and test-retest reliability, after one month, of 0.75. These statistics are marginal, but border on acceptable (Barger, 2002), especially where response fatigue could be an issue. Due to the need to make the on-line survey manageable for participants in some countries with poor internet access, brevity was an unavoidable consideration.

3.3.Demographic data.

The Study 2 questionnaire included items on demographic characteristics of participants. A number of demographic predictor variables, (age, gender, family size, education, length of tenure, birth order and father absence), have been identified over the years for mission workers as correlates with various dependent variables (Britt, 1983; Dillon, 1983; Navara & James, 2005; Schubert & Gantner, 1996; Suedfeld, 1967). They were included so that their contribution to the outcome measures in this study could be evaluated.

3.4. Procedure

An information sheet, including the link to access the survey, was emailed to the NZ and Australian Missions Interlink Directors, to agency leaders listed on the Missions Interlink website and to agency leaders and missionaries known to the researcher. From there the information sheet (Appendix vii) was emailed on to other potential participants. As participants in Study 2 were based in various countries overseas, all communication was electronic. Participation was voluntary and with informed consent. The information sheet explained the background and aims of the study, and what participation involved. It included information on the confidentiality of the information, the rights of participants and contact details for any queries or problems that might arise.

All participants responded electronically. The questionnaire was accessed and completed on-line by 116 of the 130 respondents. In recognition of the limits and costs of internet access experienced in some countries, the option was also offered of downloading the questionnaire as a word document (Appendix viii), completing it and sending it back as an attachment to the Webmaster in the Massey University School of Psychology. Fourteen of 130 made use of this option. The researcher did not have any contact with participants, or know who they were, except in two cases where individuals chose to email the attachment back to the researcher. Confidentiality of the participants was further protected by not requesting information on what country they worked in, or the agency which they are associated. While this sets some limits on the demographic

information available, it was considered an ethical imperative to protect anonymity, as an agency may only have one worker in a particular country.

CHAPTER 4 - STUDY 2: RESULTS

The analysis for Study 2 is split into two main components, i) data reduction, and ii) regression analyses. The goal of data reduction is to explore the factor structure of the instruments, in the context of a missionary population. Hence exploratory factor analysis was used rather than confirmatory factor analysis. In conducting ii) regression analysis, the goal was to determine which measures of fit best predict the work outcomes used in this study: job satisfaction (JAWS Positive Emotion and JAWS Negative Emotion scales), work engagement, and satisfaction with life.

4.1 Data Reduction

The internal reliability of each measure was tested initially, and any item whose item-corrected total correlation was <0.3, and whose deletion raised the value of Cronbach's Alpha for the measure, was removed. On each measure, inter-item correlation matrices were inspected to verify the presence of correlations >0.30 (Tabachnik & Fidell, 2007, p.435). The size of the sample, N=126, is 'poor to fair' for factor analysis, but justified as an exploratory process where the theoretical structure of the instruments is being explored in a relatively novel population (missionaries). The decision to proceed with factor analysis was dependent on satisfactory results of Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy, (at least 0.68), and on significant results for Bartlett's test of Sphericity (p<.05).

4.1.1 Job-Affective Wellbeing Scale (JAWS). Two factors (positive emotions and negative emotions) are well-supported in the literature for this instrument (Van Katwyk et al., 2000), and reliabilities in this sample were strong for these two factors (α = 0.89, 0.75). However, one item on the negative emotions scale, ("My job made me feel bored") had a very low item-corrected total correlation with the rest of the negative emotions scale, at 0.15. Cronbach's Alpha was increased to 0.76 by its exclusion, and so this item was deleted from further analysis, leaving a 10-item positive emotions scale and a 9-item negative emotions scale. Principal Components Analysis was indicated, with KMO>0.68

at 0.82, and Bartlett's test of Sphericity significant at *p*=.000. PCA with Varimax rotation was conducted to test the 2 factor structure of the 19 retained items of the JAWS.

While there were 4 factors with eigenvalues>1, inspection of the scree diagram (Appendix xi) shows a clear break after 2 factors and offers support for the 2 factor structure. The two factors accounted for 45.17% of the variance, with component one accounting for 27.69% and component two accounting for 17.53%. All 10 positive items loaded onto component one and the nine negative items loaded onto component two, as shown in Appendix xi. The highest loading item for the positive emotions scale was "My job made me feel excited" at 0.83, and the highest loading item for the negative emotions scale was "My job made me feel furious" at 0.66. All items had loadings >0.42. Scale scores were obtained by summing the scores for each item, with possible scores ranging from 10-50 for the JAWS Positive Emotions scale and 10-45 for the JAWS Negative Emotions scale.

4.1.2 Utrecht Work Engagement Schedule. Internal consistency for the 9-item UWES in this sample was high at α = 0.86 and there was no item with a item-corrected total correlation <0.47, or whose deletion resulted in an increased value of Cronbach's Alpha. Therefore all items were retained and Principal Components Analysis was appropriate, with KMO=0.80, and Bartlett's test of Sphericity significant at p=.000. The published statistical properties of this short form support a three-factor structure, with three items each, Vigour, Dedication and Absorption (Schaufeli & Bakker, 2003). Principal Components Analysis indicated only two components with eigenvalues >1. However, inspection of the scree plot (Appendix xi 2) shows a very clear break between the first component and subsequent components. One factor accounted for 47.90% of the variance, with all items loading on this one factor with loadings ranging from 0.57-0.80. This result supports one general factor for work engagement, and the scale score was obtained by adding the item scores, to give a range of possible values of 0-54.

4.1.3 Satisfaction with Life Scale. Internal consistency for the 5-item SWLS in this sample was satisfactory at α = 0.73, and there was no item with a item-corrected total

correlation <0.39, or whose deletion resulted in an increased value of Cronbach's Alpha. Therefore all items were retained. Principal Components Analysis was justifiable, with KMO =0.68. Bartlett's test of Sphericity was significant at *p*=.000. Inspection of the scree diagram (Appendix xi 3) shows a break after one factor and offers support for a one factor structure as is generally supported in the literature (Diener, 1993). A one factor model was tested in this sample, and the results are shown in full in Appendix xi 3. All 5 items loaded clearly onto one factor with loadings from 0.84- 0.56. The item which was highest loading was "I am satisfied with Life" at 0.84 and the one factor accounted for 50.39% of the total variance. Scores for each item were summed to obtain a scale score, with possible values ranging from 5-35.

4.1.4 The Marlowe-Crown Social Desirability Scale Internal consistency for this five-item scale in this sample was acceptable α = 0.64, in view of the small number of items which tends to result in lower alpha. This was slightly below the 0.66-0.68 reported in the literature. There was no item with a item-corrected total correlation <0.36, or whose deletion resulted in an increased value of Cronbach's Alpha, and all items were retained. Principal Components Analysis was a marginal proposition, with KMO=0.66, although Bartlett's test of Sphericity was significant at *p*=.000. One component accounted for 41.28% of the total variance of the measure and all five items loaded onto it at 0.59 or more (see Appendix xi 4). This tends to support a single factor for socially desirable responding. Items were reversed according to the instructions by the developers of this short form (Hays et al., 1989). A 'scale score' was obtained by scoring 1 for each item which was given the highest 'socially desirable' response, (on a scale of 1-7) and 0 for all other responses. Thus "I am always courteous even to people who are disagreeable" was scored 1 for the response 'Strongly Agree' and 0 for all other responses. Results obtained ranged from 0-3 out of a possible 5.

4.1.5. Competency ratings. Individuals rated each of the 16 competencies by Relevance (1-4) and by Frequency (1-4). The Relevance of each competency was weighted by Frequency by calculating the product. An inter-item correlation matrix, shown in Appendix xii, indicates that the 16 competencies do not overlap to the point of

redundancy, i.e. each may make a unique contribution to describing the role of missionary.

Some high levels of skew and kurtosis were found in the SPSS Descriptives for each competency. Kurtosis was >1 for 2 competencies, (Living a Christ-like Life (30.05) and Adhering to Principles and Values (2.29)). Three competencies were negatively skewed, (Living a Christ-like Life (-5.05), Adhering to Principles and Values (-1.70) and Working with People (-1.32)). As in Study 1, these non-normal distributions may have a detrimental effect on the analysis, but any such effect is lessened because they are all skewed in the same direction (Tabachnik & Fidell, 2007).

4.1.6. Self-rated performance. Individuals rated their own performance on each of the 16 competencies on a scale of 1-5. There were no high levels of skew or kurtosis, which if present, would suggest non-normality of this variable.

4.2 Person-Job Fit Measures

4.2.1. Demands-abilities fit: 'Demands' are the demands of the job, operationalised as ratings given to competencies on a scale of 1-16 (Relevance, 1-4 by Frequency, 1-4) by the two groups of subject matter experts in Study 1 (host nation colleagues and expatriates). 'Abilities' are the self-ratings individuals in Study 2 gave to their performance on the 16 competencies, on a scale of 1-5. This scale of 1-5 was re-calibrated to be on a 1-16 scale, (1=1; 2=4.75; 3=8.5; 4=12.25; 5=16) so that differences could be more easily calculated between the 'demands' of the job and the 'abilities' of the individuals. Demands-abilities fit in this study is derived from difference scores. For each competency, the mean competency rating obtained from each group of experts was subtracted from the individual's self-rated ability score on that competency (re-calibrated as above). Thus a negative score on a competency meant that an individual's self-assessed ability was less than the role demanded. For host nation colleagues, the mean

ratings for competencies ranged from 7.59 to 15.82 out of a possible 16. For expatriates, the means ranged from 4.65 to 15.75, again out of 16.

Two competencies had been dropped from the host nation colleague group because of potential inflation of ratings due to the large educational project group. Therefore two measures of Demands-Abilities fit were obtained for each individual, one the sum of 14 difference scores between individuals and host nation means, (Host Nation Demands-Abilities fit in Table 5) and the other the sum of 16 difference scores between individuals and expatriate means (Expatriate Demands-Abilities fit in Table 5). Higher scores equal better 'fit' with the demands of the job, where individuals have more of the abilities the job requires.

*4.2.2. Supplies-values fit***.** This was operationalised as the difference between the competency ratings given by each panel of subject matter experts in Study 1 (host nation colleagues versus expatriates) and the ratings each missionary in Study 2 gave to the 16 competencies. The mean rating for each competency given by each panel was subtracted from the individuals' ratings for each competency. For example, the host nation colleagues' mean for 'Adhering to Principles and Values' was 13.09. If an individual rated this competency as 12 out of a possible 16, the difference score on that competency was -1.09. A negative result indicates that an individual judges a competency as being less important than did the comparison panel. As above, two competencies had been dropped from the host nation colleague group. Therefore 14 difference scores between individual's ratings and host nation means were summed to give a measure of Supplies-Values fit with host nation colleagues (Host Nation Supplies-Values fit in Table 5), and 16 difference scores between individual ratings and expatriate means were summed, to give a measure of Supplies-Values fit with expatriates (Expatriate Supplies-Values fit in Table 5). The competencies used in Study 2 were those which had already been identified as important for the job in Study 1. High Supplies-Values fit scores indicated individuals who gave more value to the competencies overall than the comparison panels. Valuing desirable competencies more highly is taken as a 'plus' while valuing them less than the panel judges, is considered a 'minus'. Therefore individuals with high Supplies-Values fit

scores are assumed in this study to be those individuals who exhibit better Supplies-Values fit with the job of missionary.

4.2.3. Perceived performance. This is a measure taken from the perspective of the individual, of how well participants judged that their abilities met the demands of the role. Whether or not individuals judged that they had the abilities required by the role was operationalised as difference scores. Individuals' self-ratings of performance on each competency were on a scale of 1-5, where 1= *generally weak* and 5= *definitely a strength*. This scale was recalibrated as above to a scale of 1-16 (1=1; 2=4.75; 3=8.5; 4=12.25; 5=16). The ratings individuals in Study 2 gave to each competency, also on a scale of 1-16, were subtracted from their self-ratings of performance on each competency. Any difference which was negative indicated (self-assessed) inadequate ability for the demands of the job. The 16 difference scores obtained were summed to give a measure of Perceived Performance for each individual, where higher scores indicate a higher degree of perceived fit with the job.

4.2.4. Data screening: Both predictor and outcome variable measures were checked for normality, linearity and the presence of outliers. Skew and kurtosis were satisfactory, at <1 for most of the variables. Marginally acceptable were Supplies-Values fit against both host nation colleagues (skew = -1.11 and kurtosis = 1.45) and the expatriate group (skew = -1.23 and kurtosis = 1.71). A further exception was the Marlowe-Crown Scale of Social Desirability which had skew=1.86 and kurtosis= 2.77. The method of scoring this scale accounts for these results, as explained in section 4.1.4 on page 68. Only items which were answered with the most 'socially desirable' response of 7 on a 1-7 Likert scale contributed to an individual's score, so 91 out of 125 usable responses were 0 and the highest score obtained, by 3 participants, was 3 out of 5. Possible underestimation of variance is an effect associated with positive kurtosis, but this problem tends to disappear with samples of >100 (Tabachnik & Fidell, 2007, p.80.). Hence in this study with *N*=126, kurtosis is not likely to be problematic.

The outcome measures (job satisfaction (measured by the JAWS Positive emotions scale and the JAWS Negative emotions scale), work engagement and satisfaction with life) were checked for univariate outliers. Most of the outcome measures had between 1-4 cases with scores, which were noticeably low on the box plots. These low scores indicated less job satisfaction, work engagement and satisfaction with life thatn the rest of the sample. Three cases had a high score on the Social Desirability scale. For the fit measures, four and three cases respectively had high scores on Supplies-Values fit with host nation colleagues, and Supplies-Values fit with expatriates, equating to giving much higher ratings to some competencies than did the panel groups. Rather than delete any of these cases outright, it was decided to monitor their influence in the following analyses.

4.2.5 Inter-measure correlations. Correlations between all variables, both predictors and outcomes, with their means and standard deviations are shown in Table 5 below. Correlations between the outcome variables are positive (the JAWS Negative emotions scale was reverse scored so that a higher score indicated less experience of negative emotions). No significant correlations were found between the JAWS negative emotions measure and any person-job fit measure. Correlations between Perceived Performance and the outcome measures were not significant.

High correlations were noted between the two Demands-Abilities fit measures (with host nation colleagues and with expatriates) (0.98), and between the two Supplies-Values fit measures (with host nation colleagues and with expatriates) (0.99). The 'Abilities' component of both Demands-Abilities fit with host nation colleagues and with expatriates is the same: individuals estimates of their abilities. The two sets of means which make up the 'demands' of the job are also highly correlated, r=.84**. It is therefore not surprising that these composite measures have produced such inflated correlations (Tabachnik & Fidell, 2007, p.61.). The two Supplies-Values fit measures are composed in the same way with the same result. Highly correlated variables, such as these pairs of measures of 'fit' cannot be entered into the same multiple regression analysis.

Table 5: *Correlation Matrix for all variables, showing Pearson Correlation Coefficients, and Means, Standard Deviations, Minimum and Maximum values for all Variables*

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1.	JAWS Pos	-									
2.	JAWS Neg	.30**	-								
3.	Work Engagement	.69**	.33**	-							
4.	Satisfaction with Life	.54**	.31**	.42**	-						
5.	MC Social Desirability Scale			.19*		-					
6.	Host Nation Demands-Abilities Fit	.29**		.30**	.29**	.20*	-				
7.	Expatriate Demands-Abilities Fit	.28**		.32**	.28**	.19*	.98**	-			
8.	Host Nation Supplies-Values Fit	.32**		.34**			.48**	.47**	-		
9.	Expatriate Supplies-Values Fit	.31**		.33**		.15*	.49**	.48**	.99**	-	
10.	Perceived Performance						.49**	.51**	.52**	.52**	-
	Mean	34.97	35.44	41.42	26.57	.40	.5	16.42	-5.53	6.73	8.35
	SD	5.53	4.01	6.36	4.73	.74	23.84	27.30	24.02	27.15	28.63
	Minimum value	17.00	22.00	20.00	12.00	0	-59.55	-84.93	-59.55	-85.28	-78.30
	Maximum Value	48.00	45.00	52.00	35.00	3.00	52.95	42.57	61.45	52.32	53.75

Note. *p<0.05, **p<0.01, ***p<.001

Note: Non significant correlations have been omitted.

4.2.6. Social Desirability Of the 126 cases with complete sets of data, 3 had highly socially desirable responding, as measured by the Marlowe-Crown Social Desirability Scale 5-item scale described in the method section. The protocol recommends a cut-off of 2 or 3 to determine those individuals with a high 'social desirability' bias. In this study the less stringent cut-off of 3 out of a possible 5 was used, because a missionary population, made up of individuals who are highly motivated by selflessness and altruism, is one where it is more likely than with a normal population that responses which might be considered extreme are in fact true. The correlation between the Marlowe-Crown Social Desirability Scale and the measure of Perceived Performance was not significant at r=.05 (Table 5). Modesty and humility are qualities that Christians aspire to, and so in this population, responses that are 'socially desirable' would not necessarily be those which are boastful or very confident of one's own abilities. While the Marlowe-Crown Social Desirability Scale may successfully identify those who are biased towards socially desirable responding, these cases are not outliers on the measure of Perceived Performance. In this study, with anonymous responses, there is no reason to assume that individuals had anything to gain by socially desirable responding, and in this population these behaviours are more likely than not to be genuine and not an artifice. Therefore no adjustment was made to the data as a result of the MCSDS.

4.3 Results for Hypotheses 2-4

Separate regression analyses were conducted to explore the amount of variance in each of the outcome measures that was accounted for by each measure of fit.

Hypothesis 2. Hypothesis 2 proposed that Demands-Abilities fit would predict job satisfaction, work engagement and satisfaction with life. The variance accounted for by Aligned fit (Demands-Abilities fit with host nation colleagues) and Harmonized fit (Demands-Abilities fit with other expatriate missionaries and agency leaders) for each of the outcome variables is shown below in Tables 6a and 6b. The criterion was set to each outcome variable in turn (Jaws positive emotions, JAWS negative emotions, work engagement and satisfaction with life) The predictor was set to each of Host Nation

Demands-Abilities fit and Expatriate Demands-Abilities fit, in turn. Each variable was entered into a bivariate regression analysis. Assumptions were checked by inspection of scatter plots and no concerns over non-linearity or heteroscedasticity were identified. The positive β co-efficients indicate associations in the expected direction, in that Demands-Abilities fit is positively associated with the outcome variables.

Hypothesis 2a) received support in that Aligned Demands-Abilities Fit (with host nation colleagues) was a significant predictor of job satisfaction (as measured by the positive emotions scale of the JAWS), of work engagement and of satisfaction with life, as in Table 6a. Significant associations were not found with the JAWS negative emotions scale.

Hypothesis 2b) received support in that Harmonized Demands-Abilities Fit (with expatriates) was a significant predictor of job satisfaction (measured by the positive emotions scale of the JAWS), of work engagement and of satisfaction with life, as in Table 6b. Significant associations were not found with the JAWS negative emotions scale.

Table 6a: *Hypothesis 2a: Bivariate regression analyses, showing variance in the outcome variables accounted for by measures of Aligned* ***Demands-Abilities Fit.***

Criterion variable	Predictor variable	R^2	Adjusted R^2	β	F(df)	*p*
1. Job Satisfaction Positive emotions	Host Nation Fit	.08	.07	.28	10.647 (1, 125)	.001**
2. Job Satisfaction Negative emotions	Host Nation Fit	.00	-.08	-.02	.032 (1,125)	.86
3. Work Engagement Scale	Host Nation Fit	.10	.09	.30	13.898 (1, 125)	.000***
4. Satisfaction With Life Scale	Host Nation Fit	.09	.09	.31	13.103 (1, 125)	.000***

Note. *p<0.05 **p<0.01 ***p=.001

Table 6b: *Hypothesis 2b: Bivariate regression analyses, showing variance in the outcome variables accounted for by measures of Harmonized* ***Demands-Abilities Fit.***

Criterion variable	Predictor variable	R^2	Adjusted R^2	β	F(df)	*p*
1. Job Satisfaction Positive emotions	Expatriate Fit	.07	.07	.27	9.859 (1,125)	.002**
2. Job Satisfaction Negative emotions	Expatriate Fit	.00	-.01	-.01	.011 (1,125)	.92
3. Work Engagement Scale	Expatriate Fit	.11	.10	.33	15.468 (1,125)	.000***
4. Satisfaction With Life Scale	Expatriate Fit	.08	.08	.29	11.432 (1,125)	.001**

Note. *p<0.05 **p<0.01 ***p=.001

Hypothesis 3. Hypothesis 3 proposed that Supplies-Values fit would predict job satisfaction, work engagement and satisfaction with life. The variance accounted for by Aligned fit (Supplies-Values fit with host nation colleagues) and Harmonized fit (Supplies-Values fit with other expatriate missionaries and agency leaders) for each of the outcome variables is shown below in Tables 7a and 7b. Separate bivariate regression analyses were carried out for each measure of fit with each outcome variable**.**

Hypothesis 3a) received support in that Aligned Supplies-Values Fit (with host nation colleagues) was a significant predictor of job satisfaction as measured by the positive emotions scale of the JAWS, and of work engagement, as in Table 7a. Significant associations were not found with the JAWS negative emotions scale or with satisfaction with life.

Hypothesis 3b) received support in that Harmonized Supplies-Values Fit (with expatriates) was a significant predictor of job satisfaction as measured by the positive emotions scale of the JAWS, and of work engagement, as in Table 7b. Significant

associations were not found with the JAWS negative emotions scale or with satisfaction with life.

Table 7a: *Hypothesis 3a: Bivariate regression analyses, showing variance in the outcome variables accounted for by measures of Aligned Supplies-Values* ***Fit.***

Criterion variable	Predictor variable	R^2	Adjusted R^2	β	F(df)	*p*
1. Job Satisfaction Positive emotions	Host Nation Fit	.10	.10	.32	14.231 (1, 125)	.000***
2. Job Satisfaction Negative emotions	Host Nation Fit	.00	-.01	-.01	.022 (1,125)	.88
3. Work Engagement Scale	Host Nation Fit	.12	.11	.34	16.104 (1, 125)	.000***
4. Satisfaction With Life Scale	Host Nation Fit	.03	.02	.16	3.181 (1, 125)	.08

Note. *p<0.05 **p<0.01 ***p=.001

Table 7b: *Hypothesis 3b: Bivariate regression analyses, showing variance in the outcome variables accounted for by measures of Harmonized Supplies-Values* ***Fit.***

Criterion variable	Predictor variable	R^2	Adjusted R^2	β	F(df)	*p*
1. Job Satisfaction Positive emotions	Expatriate Fit	.10	.09	.31	13.247 (1,125)	.000***
2. Job Satisfaction Negative emotions	Expatriate Fit	.00	-.01	.00	.001 (1,125)	.98
3. Work Engagement Scale	Expatriate Fit	.11	.10	.33	15.168 (1,125)	.000***
4. Satisfaction With Life Scale	Expatriate Fit	.02	.01	.12	2.335 (1,125)	.13

Note. *p<0.05 **p<0.01 ***p=.001

Hypothesis 4 Hypothesis 4 proposed that Perceived Performance would predict the outcome variables. The variance accounted for by Perceived Performance for each of the outcome variables is shown below in Table 8. Separate bivariate regression analyses were carried out for Perceived Performance with each outcome variable, a total of 4 bivariate regressions, shown below in Table 8. No significant β co-efficients were found. Self-Discrepancy, the gap between the person's ideal of what they should be doing and their perceptions of their own performance, was not predictive of the outcome measures in this study.

Hypothesis 4a) did not receive support in that Perceived Performance was not significantly associated with job satisfaction, as measured by the positive or negative emotions scales of the JAWS, or with work engagement or with satisfaction with life.

Table 8: *Hypothesis 4:8 bivariate regression analyses, showing variance in the outcome variables accounted for by Perceived Performance.*

Criterion variable	Predictor variable	R^2	Adjusted R^2	B	SEB	β	F(df)	*p*
1. Job Satisfaction Positive emotions	Perceived Performance	.00	-.01	-.01	.02	-.04	.148 (1,125)	.70
2. Job Satisfaction Negative emotions	Perceived Performance	.00	-.01	.00	.01	-.01	.005 (1,125)	.94
3. Work Engagement Scale	Perceived Performance	.00	-.08	.00	.02	.00	.000 (1,125)	.99
4. Satisfaction With Life Scale	Perceived Performance	.02	.01	-.02	.02	.14	2.584 (1,125)	.11

Note. *p<0.05 **p<0.01 ***p=.001

4.4 Multivariate Regression

Multivariate regression analyses were carried out to explore Hypothesis 5, that combinations of different fit measures will account for more variance in the outcome measures than one measure of fit alone. 'Fit' has been conceptualized in different ways in the literature and in this study, and person-environment fit theory suggests that better overall fit is obtained when an individual fits in all of the ways fit is conceptualized, rather than in one way (Kristof-Brown et al., 2005). Therefore, to explore Hypothesis 5, those fit measures which proved significant in the previous analyses for Hypotheses 2-4 were entered in combination into regressions against the outcome measures as below. The standard entry method was used in SPSS so each predictor variable is evaluated in terms of its contribution to the variance in the outcome variable(s) that is different from the variance accounted for by the other predictor variables(s) (Tabachnik & Fidell, 2007, p.136). The unique contribution of each predictor is shown by the squared semi-partial correlations, R^2_{sp}, in Tables 9 and 10 below.

4.4.1 Assumptions for multiple regression. The number of cases (126) is adequate for multiple regression analysis. The rule of thumb, that $N>(50+ 8(\text{number of IVs}))$ (Tabachnik & Fidell, 2007, p.123) is comfortably satisfied. Bivariate scatter plots between each pair of variables were inspected, and no concerns over non-linearity or heteroscedasticity were identified. Before each regression below was carried out, any multivariate outliers were identified and the models tested without them to assess their impact on the results.

4.4.2 Hypothesis 5a). The contribution that the two measures of Aligned Fit, (Demands-Abilities Fit and Supplies-Values Fit with the host nation panel), entered together, makes to each of the surviving outcome variables (JAWS positive, Work Engagement and Satisfaction with Life) was tested using separate multiple regression, one for each DV. The data was screened for potential multivariate outliers. Where outliers were identified and their removal led to smaller effect sizes, these smaller effect sizes are shown in Table 9.

Table 9: *Hypothesis 5a)-Fit with the Host Nation Colleague Panel, multiple regression results (standard entry method).*

Criterion variable	Predictor variable	R^2	Adjusted R^2	β	R^2_{sp}	F(df)	*p*
1. Job Satisfaction (JAWS Pos)	Supplies-Values fit with Host nation colleagues	.12	.11	.24	.05	8.256 (2,124)	.000***
	Demands-Abilities fit with Host Nation colleagues			.17	.02		
2. Work Engagement Scale	Supplies-Values fit with Host nation colleagues	.13	.12	.24	.05	8.968 (2,122)	.000***
	Demands-Abilities fit with Host Nation colleagues			.19	.03		
3. Satisfaction With Life Scale	Supplies-Values fit with Host nation colleagues	.10	.08	.01	.00	6.507 (2, 124)	.002**
	Demands-Abilities fit with Host Nation colleagues			.30	07		

Note. *p<0.05 **p<0.01 ***p=.001

Hypothesis 5a) received support in that models entering two different measures of Aligned Fit, (Demands-Abilities fit and Supplies-Values fit with Host Nation colleagues) into multiple regression analyses accounted for more variance in two of the three outcome variables (shown in Table 9), than measures of Aligned Supplies-Values or Demands-Abilities fit alone (see Table 6a and 7a).

Supplies-Values fit and Demands-Abilities fit with the host nation colleague group accounted for 11% of the variance in job satisfaction when combined, more than either one alone. Supplies-Values fit accounted for 10% and Demands-Abilities accounted for 7% (Adjusted R^2).

Supplies-Values fit and Demands-Abilities fit with the host nation colleague group accounted for 12% of the variance in work engagement when combined, more than either one alone. Supplies-Values fit accounted for 11% and Demands-Abilities fit accounted for 9% (Adjusted R^2).

Combined Supplies-Values fit and Demands-Abilities fit with the host nation colleague group did not account for more variance in satisfaction with life when combined.

Hypothesis 5b). Following the same procedure, the contribution that the two measures of Harmonized Fit (Demands-Abilities Fit and Supplies-Values Fit with the expatriate panel), entered together, makes to each of the surviving outcome variables (JAWS positive, Work Engagement and Satisfaction with Life) was tested using separate multiple regression, one for each DV. The data was screened for potential multivariate outliers. Where outliers were identified and their removal led to smaller effect sizes, these smaller effect sizes are shown in Table10.

Table 10: *Hypothesis 5b)-Fit with the Expatriate panel, multiple regression results (standard entry method).*

Criterion variable	Predictor variable	R^2	Adjusted R^2	β	R^2_{sp}	F(df)	*p*
JAWS Pos	Supplies-Values fit with Expatriates	.11	.10	.23	.05	7.614 (2,123)	.001**
	Demands-Abilities fit with Expatriates			.16	.03		
Work Engagement Scale	Supplies-Values fit with Expatriates	.13	.12	.21	.04	9.036 (2,122)	.000***
	Demands-Abilities fit with Expatriates			.22	.04		
Satisfaction With Life Scale	Supplies-Values fit with Expatriates	.08	.07	.00	.00	5.175 (2,118)	.007**
	Demands-Abilities fit with Expatriates			.29	07		

Note. *p<0.05 **p<0.01 ***p=.001

Hypothesis 5b) received support in that models entering two different measures of Harmonized Fit, (Demands-Abilities fit and Supplies-Values fit with expatriates) into multiple regression analyses accounted for more variance in two of the three outcome variables (shown in Table 10), than measures of Harmonized Supplies-Values or Demands-Abilities fit alone (see Table 6b and 7b).

Supplies-Values fit and Demands-Abilities fit with the expatriate group accounted for 10% of the variance in job satisfaction when combined, more than either one alone. Supplies-Values fit accounted for 9% and Demands-Abilities accounted for 7% (Adjusted R^2).

Supplies-Values fit and Demands-Abilities fit with the expatriate group accounted for 12% of the variance in work engagement when combined, more than either one alone. Supplies-Values fit accounted for 10% and Demands-Abilities fit accounted for 10% (Adjusted R^2).

Combined Supplies-Values fit and Demands-Abilities fit with the expatriate did not account for more variance in satisfaction with life when combined.

Information on the unique contribution of each measure of fit to each outcome variable, from Tables 9 and 10, is summarized in Table 11.

Table 11: *Unique contributions to the variance in the outcome measures accounted for by Demands-Abilities fit and Supplies-Values fit, with a) host nation colleagues and b) expatriate missionaries.*

Outcome variable	a) Host Nation colleagues			b) Expatriate Missionaries		
	Supplies-Values Fit	Demands-Abilities Fit	Total Adjusted R^2	Supplies-Values Fit	Demands-Abilities Fit	Total Adjusted R^2
JAWS Positive Emotions Scale	.05	.02	.11***	.05	.03	.10**
Work Engagement Scale	.05	.03	.12***	.04	.04	.12***
Satisfaction With Life Scale	.00	.07	.08**	.00	.07	.07**

Note. *p<0.05 **p<0.01 ***p=.001

Hypothesis 5c) Which comparison panel, (host nation colleagues, or the expatriate panel) is most informative for each outcome variable?

The amount of unique variance that each measure of fit contributed to the outcome variables is shown in Table 11.

For job satisfaction, as measured by the positive emotions scale of the Job Affective Well-being scale, slightly more variance was accounted for by Aligned measures of fit (11%) than by Harmonized measures of fit (10%). Supplies-Values fit was the conceptualization of fit which was the best predictor.

For work engagement, measured by the Utrecht Work Engagement Schedule, an equal amount of variance (12%) was accounted for by Aligned measures of fit and Harmonized

measures of fit. Supplies-Values fit with host nation colleagues was the conceptualization of fit which was the marginally better predictor.

For satisfaction with life, measured by the Satisfaction with Life Scale, slightly more variance was accounted for by Aligned Demands-Abilities Fit (8%) than by Harmonized Demands-Abilities Fit (7%). Supplies-Values Fit did not predict Satisfaction with Life.

4.5 Demographic Data

A number of previous studies have found associations for missionaries and other expatriates between demographic data such as age or marital status, and outcomes. In view of this, multiple regression analyses of the data were conducted to determine whether demographic variables accounted for variance in the outcome measures in addition to the person-job fit measures.

Multiple regressions were conducted for each demographic variable in turn. The method of entry was hierarchical, adding in the demographic variable after the fit measures which accounted for significant variance in each outcome measure. After the fit measures which contributed significantly to each outcome variable (shown in Table 11) were entered, any additional variance accounted for by the demographic variables is shown below in Table 12. Only one of these demographic variables accounted for a significant amount of additional variance. This was 'Level of Education' contributing 4% of the additional variance in job satisfaction after Demands-Abilities fit and Supplies-Values fit with the expatriate panel were already in the multiple regression. The only other result approaching significance was Marital Status, contributing 1.4% additional variance (p= .17), also to Job Satisfaction, after Demands-Abilities fit and Supplies-Values fit with the expatriate subject matter experts were already in the multiple regression.

Table 12: *Multiple regression results for added variance accounted for by demographic variables added (hierarchical entry method) after person-job fit measures.*

	JAWS Positive Emotions				Work Engagement				Satisfaction with Life			
	Host Nation Colleagues		Expatriate missionaries		Host Nation Colleagues		Expatriate missionaries		Host Nation Colleagues		Expatriate missionaries	
	R^2 change	*P*	R^2 change	*p*	R^2 change	*p*	R^2 change	*P*	R^2 change	*p*	R^2 change	*p*
Gender	00	.825	00	.812	.00	.803	.00	.848	.010	.244	.009	.280
Marital status	.012	.198	.014	.173	.010	.234	.013	.192	.004	.463	.005	.410
No. of children accompanying	.001	.765	.001	.674	.004	.440	.004	.445	.001	.714	.001	.786
Age now	.008	.291	.011	.212	.00	.919	.00	.986	.006	.388	.006	.387
Age missionary work started	00	.992	.00	.981	.002	.651	.00	.846	.006	.362	.007	.348
Birth order	00	.983	.00	.980	.007	.334	.006	.360	.000	.892	.001	.709
Father present in childhood	00	.845	.00	.922	.002	.628	.001	.703	.000	.936	.00	.964
Previous psychological distress	.003	.559	.003	.534	.009	.285	.005	.392	.003	.536	.002	.581
Previous psych help sought	.00	.839	.00	.972	.006	.389	.005	.412	.002	.590	.002	.627
Education	.027	.055	.029	.044**	.004	.470	.007	.331	.007	.326	.009	.287

Note. *p<0.05 **p<0.01 ***p=.001

CHAPTER 5: DISCUSSION

This section discusses the findings of this study in more detail. The findings are placed within both the context of organizational psychology, (focusing on the relationships between person-job fit and work attitudes in a missionary population), and the context of development theory (focusing on the need to respect the perspectives of both host nation colleagues and expatriate colleagues on what the role of a missionary is). Support for the hypotheses of the present study is discussed with reference to the results from previous research. The implications of these findings are discussed and this section concludes with the limitations of the present study, suggestions for future research and the overall conclusions of the study.

5.1 Competencies to describe the role of missionary

Overall, the results indicate that competencies can effectively describe the role of missionary and can be used to measure person-job fit in this specialized population. Competencies have been criticized for being ill-defined entities (Schippmann et al., 2000), and for being a marketing strategy more than a reliable method of job analysis (Markus et al., 2005). Nevertheless, in this study, competencies have elicited descriptions of the role requirements for missionaries which show a high level of consistency across different subject matter expert panels. The lack of work done on what the role of missionary requires (Hall & Sweatman, 2002; Lindquist, 1983) has hindered the development of valid selection criteria for missionaries, but it appears that competencies may be one method that could be used to articulate role requirements.

5.2 Validity of the 'Universal Competency Framework' in a missionary population

Generic competency models (such as the Universal Competency Framework used in this study) have been questioned on the basis of their construct and content validity and the lack of supporting research (Markus et al., 2005). In the development of competency frameworks, the balance between generality (so as to cover the whole range of possible competencies roles might require) and specificity (so as to describe the requirements of a role in a way that distinguishes it from other roles) has been an important consideration (Bartram & Brown, 2005; Tett et al.,

2000). The construct validity of the 20-level of the Universal Competency Framework was supported in this population by the high level of agreement between subject matter experts on the most important competencies.

The face validity of the 20-level competencies in the Universal Competency Framework was also demonstrated in this study, in a population very different from the business populations for which it was developed. In Study 1, subject matter experts identified 15 out of the 20 competencies as being highly relevant for the role of missionary. Content validity, or whether the competencies used adequately sampled the requirements of the role of missionary, is demonstrated by the fact that significant results were obtained in support of most of the hypotheses.

5.3 Perspectives of different subject matter experts.

In the Study 1 sample, harmonization was achieved in that missionaries and agency leaders exhibited a high level of congruence in their perspectives on which competencies are important. On the other hand, the significant differences in ratings given to some competencies between host nation colleagues and expatriates supported the hypothesis that 'alignment' is not fully achieved between host nation colleagues and missionaries on the competencies most important for missionaries. When host nation colleagues ascribe to a competency a significantly different value than expatriates, missionaries can learn about possible 'gaps' in their ability to meet the needs of the host country they work in. Selection processes, training, strategies and methods of work which reflect host nation perspectives, would align missionary work with their host country's development strategies and systems and would potentially lead to greater effectiveness (Cedergren, 2007).

In this study, host nation colleagues gave greater emphasis to 'Presenting and Communicating' and to 'Formulating Strategies' than did expatriates. This suggests that host nation colleagues may have a higher level of expectation than expatriates, that work will be strategic and that communication and training will be key activities. The task of cross-cultural adjustment often looms large for missionaries, and the effort they need to expend to adjust, learn

language and learn how to live differently, may focus their attention on their personal well-being. Overall, much of the literature and research to date on missionaries has had this individual well-being focus. This present study suggests in a small way, that those missionaries who are able to maintain the big picture of why they are there, may experience more work engagement, job satisfaction and satisfaction with life through being aligned with host nation colleagues' expectations.

5.4 Measuring person-job fit using competencies

The central thesis of this study was that person-job fit will predict work attitudes in a missionary population. An appropriate form of measurement of person-job fit in the mission context needed to be developed in order to test this thesis, and competencies were suggested as a tool for deriving measures of person-job fit. Fit measures based on competencies were predictors of the outcome variables (job satisfaction, work engagement and satisfaction with life). This lends support to the thesis that competencies can be used to develop effective measures of person-job fit.

Kristof (Kristof, 1996) argued that in order for any kind of person-environment fit to be measured, there needs to be a high level of agreement between respondents who are contributing information about the environment, or else the environment cannot be considered as an entity. The high level of concordance in both the pilot study and Study 1 about which competencies are important for missionaries indicates that this is the case, and that measuring person-job fit based on the information gathered from subject matter experts about the job, is feasible.

5.5 Objective versus subjective measures of fit

Both Demands-Abilities fit and Supplies-Values fit in this study are measures of objective fit, with different sources providing measures of the person and of the job. Person-environment fit theory suggests that measures of subjective fit are more predictive of work attitudes (such as job satisfaction) than measures of objective fit. In their meta-analysis of the

relationships between different kinds of fit, and a range of outcomes, Kristof-Brown et al (Kristof-Brown et al., 2005) reported that the evidence pointed to stronger effects for subjective fit, as opposed to objective fit, on attitudes such as job satisfaction. However, the usefulness of measures of subjective fit has been queried on the basis that they may be measuring a person's general attitudes and personality, (T A Judge, Bono, & Locke, 2000) more than actual person-job fit, and they are susceptible to common methods bias. The fact that significant variance in the outcome measures was predicted by measures of objective fit in this study is a useful outcome because it bypasses the difficulties of interpretation which arise with measures of subjective fit.

The mechanism by which objective fit is perceived by the individual, so as to produce increased job satisfaction, work engagement and satisfaction with life, needs to be explored. Expectancy based theories of motivation (Naylor, Pritchard, & Ilgen, 1980, in T. A. Judge et al., 2001) suggest that satisfaction follows from rewards which follow from performance. These rewards may be the extrinsic rewards of approval from others, or the intrinsic rewards of goals accomplished. Studies to support performance as cause of satisfaction are inconsistent in their findings (T. A. Judge et al., 2001) . However, if performance is the mechanism by which fit produces outcomes such as job satisfaction, the possibility is raised that 'fit' can be used to predict performance directly, rather than via positive work attitudes as was suggested in Figure 1 (page 9).

5.6 Person-Job fit measures

5.6.1 Demands-Abilities fit. The Demands-Abilities fit measures relied on self-assessment of performance on the competencies. There is therefore the potential that individual differences, such as modesty, might impact on the Demands-Abilities fit measures. This potential contamination of the fit measure, while unavoidable within the constraints of this study, may have reduced the effectiveness of the Demands-Abilities fit measures developed for this study to measure objective Demands-Abilities fit.

The Demands-Abilities fit measures, with the host nation colleague group and the expatriate missionary group both showed that 'Persuading and Influencing' was the competency

which had the highest item-corrected total correlation with the rest of the scales. This competency could well be considered 'the core business' of missionaries, and this outcome tends to offer further validation of the set of competencies used in this study as adequate to represent the role of missionary.

5.6.2 Supplies-Values fit. Supplies-Values fit was a comparison between the importance that subject matter experts in Study 1 and individuals in Study 2 gave to each competency. Supplies-Values fit measures suffer from some confusion in the literature as to whether they are based on psychological needs fulfillment theory or on values congruence theory (Cable & Edwards, 2004). The process underlying psychological needs fulfillment is that the individual makes a cognitive comparison between how much of something that they value is supplied by the environment, and how much they want. If they perceive deficits, these will negatively impact on work attitudes such as job satisfaction. In values congruence theory, a comparison is made between the importance that individuals give to a set of values and the importance that other individuals in the organization give to a set of values. Supplies-Values fit in this study is more akin to values congruence. The distinction is important for the discussion of the outcome measures and in order to be able to place the results of this study in the context of results from previous research on fit measures and their outcomes.

5.6.3. Perceived Performance. Perceived Performance calculated from individuals' ratings of the importance of each competency and their self-assessed performance on that competency was not successful as a predictor of the outcome measures. Person-environment fit theory would suggest it should have produced stronger effects on the outcome measures than the measures of objective fit used above (Kristof-Brown et al., 2005). This was an 'indirect' measure of subjective fit, where fit is assessed by comparing measurements of the person and of the environment, both from the same person (Kristof-Brown et al., 2005). Indirect measures of subjective fit were found in the meta-analysis by Kristof-Brown et al, to be highly correlated with job satisfaction and with markedly greater effect sizes than measures of objective fit. Self-discrepancy theory also suggested that individuals who perceived they fell short of the demands of the job would experience less job satisfaction and other positive work outcomes. The failure

of the 'perceived performance' measure in this study to produce effect sizes in the outcome variables is suggests that the way perceived fit was measured in this study was problematic.

A possible explanation may be that 'Perceived Performance' was calculated as the sum of differences on all the competencies, so that (self-assessed) abilities in excess of demands of the role on some competencies balanced abilities in deficit of the demands of the role on other competencies. As a post-hoc analysis, 'Perceived Performance' was calculated by adding only the deficits individuals see in themselves compared to the role. Perceived performance correlated (r=.21**) with Satisfaction with Life, although not significantly with the other outcome measures. While this is the expected result, it does not produce a greater effect size than the measures of objective fit.

This result highlights two things. One is that the way 'fit' is measured is crucial and complex. The other is that although 'perceived fit' measured using competencies has failed to produce the expected results, measures of objective fit have predicted the outcome variables. Many reservations have been expressed about the value of perceived fit. Even though it is generally the best predictor of the outcomes suggested by person-environment fit theory, its practical application to the world of work is limited. Those who think they fit well with the demands of a job and with the values of their colleagues may experience more job satisfaction and work engagement, which have been shown to contribute to performance (T. A. Judge et al., 2001; Schaufeli & Bakker, 2003). However, those with an optimistic personality, or lack of sensitivity to cues in their environment could conceivably think that their fit with the job is better than their colleagues would judge. On the other hand, if measures of objective fit are shown to be predictive of person-job fit, as they are in this study, more possibilities result for selecting, training and evaluating the performance of individuals against objective criteria which are independent of how the individual perceives their fit.

5.7 Person-job fit and outcome measures

Job satisfaction was measured by two scales, the positive and negative emotions scales of the Job Affective Well-being Scale. The negative emotions scale was not predicted by any of the

person-job fit measures, although it did correlate as expected with the other outcome measures (see Table 5). The three items with the strongest loadings on the negative emotions scale (see Appendix xi) were 'My job made me feel furious', 'angry' and 'depressed'. That this scale did not correlate with any measure of person-job fit suggests that experiencing negative emotions does not preclude fitting well with the job of missionary. This is a potentially encouraging result for individuals who may be more emotionally responsive than others to poverty, injustice or suffering.

Demands-Abilities fit accounted for significant variance in the outcome measures of job satisfaction (positive emotions), work engagement, and satisfaction with life. Because Demands-Abilities fit is an objective measure, the individual may be depending on cues from others in the environment and from their own sense of achievement, generated by good performance in the job, to produce the positive work attitudes predicted by Demands-Abilities fit in this study. Demands-Abilities fit with both host nation colleagues and expatriates was also predictive of satisfaction with life (see Table 6). The Satisfaction with Life Scale is a global measure of satisfaction with the whole of life rather than the job in isolation. For instance, one of the five items is 'If I could live my life over, I would change almost nothing'. This finding suggests that for missionaries, positive outcomes of their work, or positive feedback from others about their work is affirming not only of their job performance but also of the life choices they have made. Demands-Abilities fit produced smaller effect sizes than Supplies-Values fit, in job satisfaction and work engagement. This is consistent with previous findings (Kristof-Brown et al., 2005).

This study found that Supplies-Values fit accounted for significant variance in the outcome measures of job satisfaction and work engagement. This is consistent with person-organization fit theory, where those with value and goal congruence with others in the organization experience more job satisfaction (Kristof, 1996). Kristof quoted a range of research findings which supported links between supplies-values fit and self-assessed performance, and this study also found this with the correlation between supplies-values fit and perceived performance at 0.52**. According to a multidimensional theory of person-environment fit (Jansen & Kristof-Brown, 2006), 'fit' will be more salient for outcomes when the norms and values of a part of the environment are strong. In mission work, the norms and values of the

other people who make up the work environment, including missionaries, agency leaders and host nation colleagues, are strong and so fit with these values should be salient for the outcome measures in this study, as it was.

The importance of values congruence for individual outcomes such as job satisfaction is based in social identity theory. Being a missionary is a public statement about a person's deeply held values. Therefore the values held by other missionaries send messages to the world at large about the person's self (Cable & Edwards, 2004). Differences in values can therefore impact strongly on an individual's job attitudes. In addition, friendships are harder when disparate values are held and this also impacts strongly on individuals' job attitudes because for missionaries, the location of the job defines available friendships. Supplies-Values was the most important predictor of job satisfaction and work engagement.

Supplies-Values fit was not predictive of Satisfaction with Life. As a measure which taps into satisfaction with the whole span of a person's life over time, (e.g. 'If I could live my life over, I would change almost nothing') it appears not to be predicted by the perhaps temporary satisfaction that can be gained from sharing values with colleagues in a particular situation.

5.8 Predictive power of measures of fit in combination

Hypothesis 5 for this study was based on the expectation that combining measures of fit would result in stronger effects that individual fit measures alone, because more fit is 'captured' by using different types of fit together (Kristof-Brown et al., 2005). This hypothesis was supported. Thus even if an individual fits well according to one conceptualization of fit, such as Supplies-Values fit, a poor fit on another dimension will negatively impact the outcome variables (Bretz & Judge, 1994). In this population, missionaries appear to experience more job satisfaction and work engagement if they both share values and goals with their colleagues and they have the abilities the job requires, than if only one of these types of fit and sources of satisfaction is present.

5.9 Traditional 'predictors' of missionary success

Demographic predictors have been suggested for positive missionary outcomes, such as tenure, performance and well-being. All but one of those that featured in the questionnaire for Study 2, shown in Appendix x) did not receive support as predictors of variance in the outcome measures, when person-job fit was already in the multiple regression. There are problems associated with these historic suggestions, such as father absence during childhood, and birth order (Britt, 1983). They tend to be outdated as they were attempts to solve the problem of how to select successful missionaries without a rigorous understanding of the criterion variables. That most of these so called demographic predictors do not add to the variance in the outcome measures in this model is therefore not surprising and is instead confirmatory of the inadequacy of approaches which have sought predictors without positioning them within the job analysis process.

The exception was level of education, which, when the job of missionary was described by the expatriate panel, added 4% of the variance in job satisfaction after person-job fit measures were in the regression (see Table 12). Higher level of education was predictive of job satisfaction, but not other outcome variables. This result was only found when the job was described by the expatriate panel. There may therefore be an academic emphasis in expatriate understanding of the role which is not present in host nation understanding.

Of practical interest is that 'age when started missionary service' did not add to the predictive power for the outcome variables. The general trend in missionary recruitment over the last 20 years is towards shorter terms of service, at any stage of life, rather than for a life-time commitment to be made as a career choice earlier in life (personal knowledge of the sector). This result suggests that age is not a factor in outcomes when person-job fit is present.

5.10 Alignment and Harmonization and outcome measures

'Fit' is a psychological equivalent of the 'Alignment' and 'Harmonization' at a macro level, recommended by the Paris Declaration of Aid Effectiveness. When there is good fit between missionaries and Host Nation colleagues, there is Alignment. That is so say, that

missionaries are aligned, both in their abilities and their values, with the priorities of their host nation colleagues for their work. When the fit is between individuals and their missionary colleagues and supervisors, there is Harmonization in the sense that all parties are working together for efficiency. The hypotheses for this thesis allow investigation of whether Alignment and Harmonization, operationalised as person-job fit, will result in positive outcomes (work attitudes) for individual missionaries, just as on a macro level, Alignment and Harmonization result in increased effectiveness of aid and development programmes.

Schneider (Schneider, 2001) challenged researchers to focus on the outcomes for the environment of good person-environment fit, as well as on outcomes for the individual. While this study uses individual outcomes as the criteria by which person-job fit is assessed, conceptualising person-job fit as the 'alignment' and 'harmonization' of development theory does focus attention on the positive outcomes for the environment when 'fit' is achieved.

Both Alignment and Harmonization were predictive of the outcome variables for this study (see Table 11). When types of fit measures (Demands-Abilities and Supplies-Values) are combined together, Alignment accounted for 11% of the variance in Job satisfaction, as opposed to 10% accounted for by Harmonization. Alignment and Harmonization each accounted for 12% of the variance in Work engagement. Alignment accounted for 8% of the variance in Job satisfaction, as opposed to 7% accounted for by Harmonization.

The slightly stronger results for Alignment over Harmonization suggest that local host nation colleagues may be a more salient source of reinforcement for missionaries than expatriate colleagues. This may be because of proximity. Missionaries may not work with (m)any expatriate colleagues, but they all have host nation colleagues, whose day to day company and shared goals, and appreciation of the work they do, may be more influential on missionaries' satisfaction and engagement than expatriate colleagues seen less often. This is consistent with person-organization fit theory (Jansen & Kristof-Brown, 2006), that fit with a smaller subgroup may be more salient than fit with a large organization. Another explanation of the finding that Alignment may have more impact on missionary outcomes than Harmonization, is the motivation that missionaries have, to serve and work with host nation people. It is therefore not

surprising that aligning with host nation goals and values and having the abilities that are valued by host nation colleagues should offer more 'rewards' to the missionary.

However, Harmonization was also significant as a predictor of all three work attitudes in this study. Sharing goals and values with other expatriate missionaries predicts job satisfaction and work engagement. Self-assessment of performance on the competencies which expatriates value for the role, also predicted job satisfaction, work engagement and satisfaction with life. 'Harmonization' is a recommendation for aid effectiveness issuing from the Paris Declaration (OECD, 2005), that development activities will be more effective as efforts are 'harmonized' rather than in isolation from each other. The results in this study suggest that Harmonization with other expatriates also predicts positive individual work attitudes.

Both groups of colleagues and observers of missionaries, host nation colleagues and expatriate missionaries, In this population, those who share the values and ethos of their expatriate missionary colleagues have shown higher levels of positive work-related outcomes (positive job-related emotions, and higher work engagement). These positive work-related measures are the outcomes expected from good person-job fit, and are often used as a proxy for measures of performance. As explained in the introductory review of the literature, (see page 38), good person-job fit is generally associated with higher productivity. These outcome measures, as well as having positive implications for performance and productivity, clearly also have positive implications for the well-being of missionaries.

5.11 Limitations of the study

It was difficult to obtain data from host nation colleagues of missionaries from which to build the mean ratings of competencies from the host nation colleague perspective. This was due to logistical difficulties, such as language and computer access, but primarily to the 'distance' the request had to travel. By email, the request traveled large physical distances. It traveled large relational distances in that the request was passed from the researcher, to agency leaders, to on-site missionaries, to their host nation colleagues. Not surprisingly, only 22 participants responded. Clearly this study would be strengthened by a larger group of respondents, and from a larger cross-section of missionary projects and countries.

Related to the above difficulty, 20 of the 22 host nation colleague respondents were from the African continent. Their perspective may have reflected needs of that large continent in general. While Africa is richly varied in cultures and local needs and development priorities, the possibility remains, in the absence of a more evenly spread sample, that there is a bias in the results and they may not generalize to missionary or development work in other continents.

The results obtained offered support for the usefulness of a generic competency framework, such as SHL's Universal Competency Framework (at the 20-level, rather than the most general level available) as a method to describe role requirements and to measure person-job fit in a population as different from the business world as cross-cultural Christian missions. Nevertheless, it is also a limitation of this study that the Universal Competency Framework used is general in nature, and the person-job fit measures may have produced greater effect sizes with a set of competencies that had been designed for this population.

'Intent to quit' was not used as an outcome measure in this study because of the factors which tend to keep missionaries in their roles even if they are dissatisfied. However, in hindsight, a question asking if participants 'wished they could quit' would have investigated, in this population, what is a standard outcome of person-job fit according to Work Adjustment theory (Dawes & Lofquist, 1984). This might have shed more light on the consequences of person-job fit in this population where turnover or attrition has high financial, organizational and personal costs.

5.12 Suggestions for future research and practice

This study has found support for competencies as an effective method of job analysis for missionaries. It is possible that the set of competencies used for job analysis could be refined for this population. Such methods might include critical incident analysis, and could result in a set of competencies which form the basis for measures of person-job fit which account for more of the variance in the measures of work attitudes used. It is also possible that a tailored set of competencies might better distinguish between the perspectives of the different groups of subject matter experts on the competencies important for the role of missionary. If so, this would enable

more information to be gathered on whether missionaries who are aligned with the host nation perspective or those who are harmonized with their expatriate colleagues experience more positive work attitudes.

Most importantly, the set of competencies offered to the subject matter expert groups was derived from a Western culture. It is more than likely that other competencies, which might not occur in a competency framework derived in a Western culture, would be high on the list of important competencies for host nation colleagues. People are generally ethnocentric, and the phenomenon of 'false consensus' (Triandis, 1995) would indicate that people generally believe that the way they see the world is the way most others see the world. Triandis specifically mentions a tendency to construct psychological theories from a Western point of view while believing that they are universal theories. The name given to the generic competency framework used in this study ('The Universal Competency Framework') suggests that ethnocentrism may be present. Therefore, in the interest of increasing Alignment for missionaries, surveying host nation colleagues to develop competencies generated from their perspective, would be essential.

The very small number of females in the study 1 sample of host nation colleagues means that reliable results could not be ascertained for differences by gender on host nation perspectives of competencies. In view of the Millennium Development Goal to 'promote gender equality and empower women'(Annan, 2000), it would be important in the future to investigate whether female host nation colleagues of missionaries have different priorities for what makes for effective mission/aid work and if their voice is heard in this sector.

The education setting group within the host nation colleague group provided evidence that competencies seen as relevant vary across settings and projects. Therefore it is important in the future to recognize that the perspectives of host nation colleagues in specific settings may be more different from the perspective of the general expatriate missionary community than has been the case in this sample. Knowing what competencies are seen as important by host nation colleagues in a specific project setting, and using these to inform selection and training of expatriates may lead to increased positive personal outcomes such as job satisfaction and work engagement and to increased effectiveness of expatriates. Locating projects or work contexts

where host nation colleagues saw a very different set of competencies as most important for missionaries would enable more to be discovered about the relative impact of alignment and harmonization on work attitudes than was possible in this study.

This population has some special features, one of which is strong religious beliefs and values. The host nation colleagues sampled in this study share these religious beliefs. It may be easier for missionaries to achieve Supplies-Values fit with host nation colleagues in this population, than it is in more general aid and development work. Therefore, further studies in different aid and development populations are warranted to investigate the predictive power of different types of person-job fit in different contexts.

Finally a practical implication of this study may be that feedback is important for missionaries for their job satisfaction and other work attitudes. This depends on further work to verify the mechanism by which 'objective fit' results in job satisfaction and engagement. If this mechanism is through the feedback of others, then those who are performing well stand to reap the benefits of positive work attitudes if they are given that feedback. This study suggests that positive feedback from host nation colleagues may be marginally more productive of positive work attitudes than feedback from other expatriates.

5.13 Conclusions

Competencies show some promise as a method of articulating role requirements for missionaries, and potentially for other aid and development populations as well. A generic competency framework, developed in the Western business context, proved able to define the job of missionary such that person-job fit predicted the expected work attitudes. Measures of objective person- job fit were predictors of job satisfaction, work engagement and satisfaction with life, while a measure of subjective fit was not. Missionaries who 'fitted' with the job as defined by host nation colleagues experienced marginally more positive work attitudes than those who fitted with the job as defined by expatriates. However, both Alignment and Harmonization appear to produce positive outcomes for missionaries, just as Alignment and Harmonization are recommended for effective aid and development work.

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APPENDICES

Appendix i) . . . . . .SHL Permission letter

Appendix ii) . . . . . .Massey Human Ethics Committee permission

Appendix iii) . . . . . Information letter for Pilot Study

Appendix iv) . . . . . Pilot Study Questionnaire

Appendix v) . . . .Information letter for Study 1

Appendix vi) . . . . . .Study 1 Questionnaire

Appendix vii) . . . . . Information letter for Study 2

Appendix viii) . . . . . Questionnaire for Study 2

Appendix ix) . . . . . Pilot Study Results

Appendix x) . . . . . Demographic information for participants, Study 2

Appendix xi) . . . . . .Factor analysis results for outcome variables

Appendix xii) . . . . . Inter-item correlation matrix for ratings of competencies (Study 2)

Appendix i - SHL Permission letter

From: Jenny Cowan [jenny.cowan@shl.co.nz]
Sent: Friday, November 03, 2006 12:46 PM
To: Jenny Manson Limited
Cc: John Bradbury (John Bradbury)
Subject: RE: SHL Competency Cards

Hi Jenny,

Your research topic sounds very interesting. We're happy for you to use the SHL UCF Competency Cards to assist in the profiling of overseas based missionary roles. Once your thesis is completed, could you send a copy for us to read?

Best of luck!

Kind regards,
Jenny

Jenny Cowan
Consultant

Direct: +64 (09) 3075908
Main: +64 (09) 3075919
Fax: +64 (09) 3735486
Mobile: +64 (021) 624819

Email: jenny.cowan@shl.co.nz
Web: www.shl.com

SHL Auckland, Level 8, 34 Shortland St, Auckland, New Zealand.

From: Jenny Manson Limited [mailto:pprofiles@maxnet.co.nz]
Sent: Thursday, 2 November 2006 3:36 p.m.
To: 'Jenny Cowan'
Subject: RE: SHL Competency Cards

Hi Jenny,
I am planning my research project for my Masters Thesis through Massey University.
My topic is:
Links between the core competencies and well-being in the performance of cross-cultural development work: A study of overseas based missionaries from New Zealand.

I would like to be able to use the SHL competency framework to assist in identifying the core competencies for this role and population. My request is solely for research purposes and not for any commercial use. I would acknowledge the source of the competency framework in my thesis.
Kind regards,
Jenny

Appendix ii – Massey Human Ethics Committee Approval

Massey University
AUCKLAND

OFFICE OF THE DEPUTY VICE-CHANCELLOR
(Auckland & International)
Private Bag 102 904
North Shore MSC
Auckland
New Zealand
Deputy Vice-Chancellor (Auckland & International)
T 64 9 414 0800 extn 9517
Regional Registrar (Auckland)
T 64 9 414 0800 extn 9516
F 64 9 414 0814
www.massey.ac.nz

18 December 2006

Jennifer Manson
c/- Associate-Professor S Carr
College of Humanities and Social Sciences
Massey University
Albany

Dear Jennifer

HUMAN ETHICS APPROVAL APPLICATION – MUHECN 06/078
"A study of overseas based missionaries from New Zealand"

Thank you for your application. It has been fully considered, and approved by the Massey University Human Ethics Committee: Northern.

Approval is for three years. If this project has not been completed within three years from the date of this letter, a reapproval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

Ann Dupuis

Associate-Professor Anri Dupuis
Acting Chair,
Human Ethics Committee: Northern

cc Associate-Professor S Carr
College of Humanities and Social Sciences

Appendix iii- Information sheet for Pilot study

Massey University School of Psychology

My name is Jenny Manson, based in Auckland, New Zealand and I am doing a research project as part of my study through Massey University towards a MA (Psychology).

The purpose of my research is to identify what a missionary needs to be able to do well, and to investigate links between having the skills for being a good missionary and missionary well-being.

You have been sent this because I am asking you if you would give approximately 15 minutes to help me by participating in my research.

One of my aims is to contribute to helping missionaries to be as effective as possible and to adjust well to life in another culture. This is a real concern of mine as I am part of a group who provides psychological assessments for missionaries before they go overseas and debriefing when they return. This research project gives the opportunity to learn more about an area which is not as well understood as it could be.

My study has 3 stages. In Stage 1 I need to get a basic list of what are the essential things a missionary needs to be able to do. In Stage 2 I will seek the perspectives of three different groups: current missionaries, host nation co-workers and agency leaders, to rank in order of importance the skills identified in stage 1. Finally in stage 3 I will ask for 200 participants, current overseas missionaries, who will complete a survey anonymously where they will also rank the skills in stage 1, and will give a rating of their own performance on these and complete questionnaires of job satisfaction and well-being.
This will allow me to identify the key skills needed for the role of overseas missionary, and to look at links between how a missionary understands the job, how they rate their performance and their job satisfaction and personal well-being.

This is now Stage 1
For this I am asking for 10 volunteers who are experienced in missions through at least 5 years of personal involvement either as a missionary, as an agency leader or as a host-nation co-worker of missionaries. I have approached 3 NZ agencies to ask them to suggest suitable experienced people and to forward this information sheet and the Stage 1 questionnaire to you.

Project Procedures

- The questionnaire is attached
- Your input will be combined with others in the study and your name will not be used.
- Your emailed responses will be stored on computer under a password for 5 years after the completion of the project and then destroyed.

- I will at the completion of the project send you a summary of my findings if you request it by ticking a box at the end of the questionnaire.

- Completion of the questionnaire implies that you understand that you will not be identified and that completion and return of the questionnaire implies consent.

- It should take you approximately 15 minutes to complete the questionnaire.

- You are under no obligation to accept this invitation. If you decline, please could you advise me so I can find another person to do it

Thank you very much for your help with much-needed research in this area

I would be grateful if you could please respond within 2 weeks of receiving this email, **by 24 January 2007** to allow me to proceed with further data collection.

Support Processes
Any adverse effects of participation are very unlikely. However, should participation in this discussion bring to your attention something that needs further personal processing, then Roger Elley-Brown, an Auckland member of the missionary assessment and debriefing group, has made himself available for debriefing or counseling or will endeavour to refer you to an appropriate person depending on where you are.
He can be contacted on 09 623 4221 or at elleybro@ihug.co.nz

Project Contacts
Please contact me at pprofiles@maxnet.co.nz or my supervisor, Dr Stuart Carr, S.C.Carr@massey.ac.nz if you have any questions about the project.

Committee Approval Statement
This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 06/078. If you have any concerns about the conduct of this research, please contact Associate-Professor Ann Dupuis, Acting Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x 9054, email humanethicsnorth@massey.ac.nz.

Appendix iv – Pilot Questionnaire

Massey University School of Psychology
Pilot Questionnaire

You are asked to indicate the value you place on each of the 22 competencies below for missionary work. These are an established list of competencies developed by SHL to describe the requirements of a range of roles, plus two additional competencies reflective of the essential spiritual base to missionary work.

Competency Selection Form

Job Title: Missionary- the general role of a missionary, looking at the underlying purpose and goals of all missionary work

Please choose and mark one box next to each competency listed on the following pages.

Essential: Competencies that are Essential or Critical for success in the role of missionary. These distinguish between top and average performers.

Desirable: Competencies that are desirable for success in the role of missionary. These are important but not critical to job performance.

Less Relevant: Competencies that are less relevant for success in the role of missionary. These will influence job performance to some degree, but are not central to the job.

Non Relevant: Competencies that are not relevant for success in the role of missionary. These will influence job performance to a very limited degree.

Are you

- ☐ An agency leader
- ☐ A missionary
- ☐ A host nation co-worker of missionaries

☐ I would like to receive a summary of the results on completion of the study

My email address is: _____

Appendix iv – Pilot Questionnaire-page 2

Competency	Essential	Desirable	Less Relevant	Non Relevant
1.1 Deciding and initiating action *Deciding, taking responsibility, taking calculated risks, taking initiative, generating activity.*	☐	☐	☐	☐
1.2 Leading and supervising *Setting direction and standards, delegating, motivating, empowering, developing and recruiting others.*	☐	☐	☐	☐
2.1 Working with people *Understanding others, adapting to others, rewarding others, listening, consulting, supporting, caring.*	☐	☐	☐	☐
2.2 Adhering to principles and values *Acting with integrity and ethics, ensuring equal opportunities, using diversity, considering community and environment.*	☐	☐	☐	☐
3.1 Relating and networking *Building relationships, networking, relating to all levels.*	☐	☐	☐	☐
3.2 Persuading and influencing *Making an impact, gaining agreement, negotiating, persuading, convincing, promoting ideas, managing conflict.*	☐	☐	☐	☐
3.3 Presenting and communicating information *Speaking clearly and fluently, expressing opinions, making presentations, responding to an audience, showing credibility.*	☐	☐	☐	☐
4.1 Writing and reporting *Writing clearly, succinctly and correctly, convincing through writing, avoiding jargon, structuring information.*	☐	☐	☐	☐

Appendix iv – Pilot Questionnaire-page 3

Competency	Essential	Desirable	Less Relevant	Non Relevant
4.2 Applying expertise and technology *Applying, developing and sharing specialist and detailed technical expertise, understanding other organisational disciplines.*	☐	☐	☐	☐
4.3 Analysing *Analysing information, probing for clarity, producing solutions, making judgements, thinking systemically.*	☐	☐	☐	☐
5.1 Learning and researching *Learning, gathering information, understanding, managing knowledge, ensuring organisational learning approach.*	☐	☐	☐	☐
5.2 Creating and innovating *Innovating, improving the organisation, devising change initiatives.*	☐	☐	☐	☐
5.3 Formulating strategies and concepts *Working strategically, setting strategies, visioning, thinking broadly.*	☐	☐	☐	☐
6.1 Planning and organising *Setting objectives, planning, establishing contingencies, managing time, resources and people, monitoring progress.*	☐	☐	☐	☐
6.2 Delivering results and meeting customer expectations *Focusing on customer needs and satisfaction, setting high quality and quantity standards, working systematically, achieving project goals.*	☐	☐	☐	☐

Appendix iv – Pilot Questionnaire-page 4

Competency	Essential	Desirable	Less Relevant	Non Relevant
6.3 Following instructions and procedures *Following procedures and instructions, time keeping, showing commitment, keeping to safety and legal guidelines.*	☐	☐	☐	☐
7.1 Adapting and responding to change *Adapting to change, accepting new ideas, adapting interpersonal style, showing sensitivity to different cultures or backgrounds, dealing with ambiguity at work.*	☐	☐	☐	☐
7.2 Coping with pressures and setbacks *Coping with pressure, keeping emotions under control, balancing work and personal life, keeping optimistic, handling criticism.*	☐	☐	☐	☐
8.1 Achieving personal work goals and objectives *Accepting and tackling demanding goals, working hard, making the most of personal development opportunities.*	☐	☐	☐	☐
8.2 Entrepreneurial and commercial thinking *Keeping up to date with competitor information and market trends, identifying business opportunities, showing financial awareness, controlling costs.*	☐	☐	☐	☐
9.1 Following and Trusting God *Exercising faith and trust in difficult times, showing obedience, patience and courage.*	☐	☐	☐	☐
9.2 Living a Christ-like life *Demonstrating love, compassion and integrity in dealings with all others, exhibiting selfless servanthood and a priority on personal time with God.*	☐	☐	☐	☐

Appendix v – Information sheet for Study 1

Massey University School of Psychology

My name is Jenny Manson, based in Auckland, New Zealand and I am doing a research project as part of my study through Massey University towards a MA (Psychology).

The purpose of my research is to identify what a missionary needs to be able to do well, and to investigate links between having the skills for being a good missionary and missionary well-being.

You have been sent this because I am asking you if you would give approximately 15 minutes to help me by taking part in my research.

I work as part of a group who helps to prepare missionaries before they go overseas. One of my aims in doing this research is to help missionaries to be as effective as possible and to adjust well to life in another culture.

My study has 3 stages. Stage 1 is already completed. In Stage 2 I am asking for the opinions of three different groups: current missionaries, host nation co-workers of missionaries, and NZ-based mission agency leaders. I would like these people to rate the skills identified in stage 1 on "Relevance" and "Frequency of Use".
Finally in stage 3 I will ask 200 current overseas missionaries to complete a survey anonymously where they will also rate the skills in Stage 1, and will rate their own performance on them and complete questionnaires on their job satisfaction and well-being.
This will help me to identify the key skills needed for the role of overseas missionary, and to look at links between how a missionary understands the job, how they rate their performance and their job satisfaction and personal well-being.

This is now Stage 3 and I need participants to give their opinion on what are the most important things a missionary needs to be able to do well.

Project Procedures

- **The questionnaire is attached**
- **Your input will be combined with others in the study and your name will not be used.**
- **Your emailed responses will be stored on computer under a password for 5 years after the completion of the project and then destroyed.**
- **I will at the completion of the project send you a summary of my findings if you request it by ticking a box at the end of the questionnaire.**
- **If you complete the short survey, it is understood that you have given your consent to be part of this study.**
- **It should take you approximately 15 minutes to complete the questionnaire.**

- **You are under no obligation to accept this invitation.**

I would like both partners of a married couple to participate if you are able to.

Thank you very much for your help with much-needed research in this area

I would be grateful if you could please respond within i1 week of receiving this email.

Support Processes
If you experience discomfort or distress as a result of completing the questionnaire, please contact your pastor.

Project Contacts
Please contact me at pprofiles@maxnet.co.nz or my supervisor, Dr Stuart Carr, S.C.Carr@massey.ac.nz if you have any questions about the project.

Committee Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 06/078. If you have any concerns about the conduct of this research, please contact Associate-Professor Ann Dupuis, Acting Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x 9054, email humanethicsnorth@massey.ac.nz.

Appendix vi – Study 1 Questionnaire

Massey University School of Psychology
Study 1 Questionnaire

Competency Rating Form

Job Title: Missionary- the general role of a missionary, looking at the underlying purpose and goals of all missionary work

Below is a table showing 16 'competencies' or qualities or attributes that may be important for effectiveness in achieving the underlying purpose and goals of missionary work **in general**. These 16 are **not** presented in any particular order.

These 16 have been carefully chosen based on previous research and so even if you think that something else might be vital, please would you add that note at the bottom, but still rate these 16 competencies for effective performance as a missionary. **You will be asked to rate each competency firstly on Relevance and then on Frequency.**

A Relevance: Try to compare the competencies *with one another* as you answer. For each competency on the following pages below, please put a tick or mark below one option only out of the following 4 options:

Most Relevant: Competencies that are the most relevant for success in the role of missionary. These are critical to effective performance in the role.

Relevant: Competencies that are relevant for success in the role of missionary. These are important, but less critical to job performance.

Less Relevant: Competencies that are less relevant for success in the role of missionary. These will influence job performance to some degree, but are not central to the job.

Least Relevant: Competencies that are least relevant for success in the role of missionary. These will influence effective job performance to a very limited degree.

Competency	Most Relevant	Relevant	Less Relevant	Least Relevant
Deciding and initiating action *Deciding, taking responsibility, taking calculated risks, taking initiative, generating activity.*				
Persuading and influencing *Making an impact, gaining agreement, negotiating, persuading, convincing, promoting ideas, managing conflict*				

Competency	Most Relevant	Relevant	Less Relevant	Least Relevant
Adhering to principles and values *Acting with integrity and ethics, ensuring equal opportunities, using diversity, considering community and environment.*				
Following instructions and procedures *Following procedures and instructions, time keeping, showing commitment, keeping to safety and legal guidelines.*				
Living a Christ-like life *Demonstrating love, compassion and integrity in dealings with all others, exhibiting selfless servant hood and a priority on personal time with God.*				
Working with people *Understanding others, adapting to others, rewarding others, listening, consulting, supporting, caring.*				
Relating and networking *Building relationships, networking, relating to all levels*				
Presenting and communicating information *Speaking clearly and fluently, expressing opinions, making presentations, responding to an audience, showing credibility.*				
Formulating strategies and concepts *Working strategically, setting strategies, visioning, thinking broadly.*				
Learning and researching *Learning, gathering information, understanding, managing knowledge, ensuring organisational learning approach.*				
Creating and innovating *Innovating, improving the organisation, devising change initiatives*				
Planning and organizing *Setting objectives, planning, establishing contingencies, managing time, resources and people, monitoring progress.*				

Competency	Most Relevant	Relevant	Less Relevant	Least Relevant
Adapting and responding to change *Adapting to change, accepting new ideas, adapting interpersonal style, showing sensitivity to different cultures or backgrounds, dealing with ambiguity at work*				
Achieving personal work goals and objectives *Accepting and tackling demanding goals, working hard, making the most of personal development opportunities.*				
Coping with pressures and setbacks *Coping with pressure, keeping emotions under control, balancing work and personal life, keeping optimistic, handling criticism*				
Leading and supervising *Setting direction and standards, delegating, motivating, empowering, developing and recruiting others.*				

B Frequency: For each competency on the following pages below, please put a tick or mark below one option only out of the following 4 options:

4= All the time: Competencies that are required and put to use every day in the role of missionary.

3= Much of the time: Competencies that are required and put to use several times a week in the role of missionary.

2=Sometimes: Competencies that are required and put to use less often, but at least once a month in the role of missionary.

1=Occasionally: Competencies that are required and put to use only at specific times, and less than once a month in the role of missionary.

Competency	All the time	Much of the time	Some-times	Occasion-ally
Deciding and initiating action *Deciding, taking responsibility, taking calculated risks, taking initiative, generating activity.*				

Competency	All the time	Much of the time	Some-times	Occasion-ally
Persuading and influencing *Making an impact, gaining agreement, negotiating, persuading, convincing, promoting ideas, managing conflict*				
Adhering to principles and values *Acting with integrity and ethics, ensuring equal opportunities, using diversity, considering community and environment.*				
Following instructions and procedures *Following procedures and instructions, time keeping, showing commitment, keeping to safety and legal guidelines.*				
Living a Christ-like life *Demonstrating love, compassion and integrity in dealings with all others, exhibiting selfless servant hood and a priority on personal time with God.*				
Working with people *Understanding others, adapting to others, rewarding others, listening, consulting, supporting, caring.*				
Relating and networking *Building relationships, networking, relating to all levels*				
Presenting and communicating information *Speaking clearly and fluently, expressing opinions, making presentations, responding to an audience, showing credibility.*				
Formulating strategies and concepts *Working strategically, setting strategies, visioning, thinking broadly.*				
Learning and researching *Learning, gathering information, understanding, managing knowledge, ensuring organisational learning approach.*				
Creating and innovating *Innovating, improving the organisation, devising change initiatives*				

Competency	All the time	Much of the time	Some-times	Occasion-ally
Planning and organizing *Setting objectives, planning, establishing contingencies, managing time, resources and people, monitoring progress.*				
Adapting and responding to change *Adapting to change, accepting new ideas, adapting interpersonal style, showing sensitivity to different cultures or backgrounds, dealing with ambiguity at work*				
Achieving personal work goals and objectives *Accepting and tackling demanding goals, working hard, making the most of personal development opportunities.*				
Coping with pressures and setbacks *Coping with pressure, keeping emotions under control, balancing work and personal life, keeping optimistic, handling criticism*				
Leading and supervising *Setting direction and standards, delegating, motivating, empowering, developing and recruiting others.*				

Any additional comments or notes:

Are you (please delete two)?:
An agency leader/ a missionary/ a host nation colleague of NZ missionaries

Congratulations- You are in the draw for $NZ200 towards a project of your choice, and if you win, you will be notified by email when all the responses to this questionnaire have been returned.
If you would like to receive a summary of the results on completion of the study, please Write your email address:

Thank you very much for your help and your time

Jenny Manson

Appendix vii – Information sheet for Study 2

Massey University School of Psychology

My name is Jenny Manson, based in Auckland, New Zealand and I am doing a research project as part of my study through Massey University towards a MA (Psychology).

The purpose of my research is to identify what a missionary needs to be able to do well, and to investigate links between having the skills for being a good missionary and missionary well-being.

For this final and most important stage of my project, I am asking for 200 participants, currently overseas, who have been missionaries for at least a year.
This year may have been at any time.
You may have only just left Australia or New Zealand, or may be in language school, as long as you have been a missionary for a year at some stage.
Both partners of a married couple can answer separately.

This questionnaire can be completed on-line, or if you have limited internet access, can be downloaded and sent back as an attachment.
Either way, responses will go to Massey University, not to me, and will be **completely anonymous**, as I will only see the coded data.

This is Stage 3 of my project. **If you have already been a participant at Stage 2 of this project, please do not take part at stage 3**.

The questionnaire is at http://www.massey.ac.nz/~wwsurvey/jennymanson

It will take approximately 25 minutes to complete.

- Your emailed responses will be stored on computer under a password for 5 years after the completion of the project and then destroyed.

- At the completion of the project you will be able to access a summary of my findings through your mission agency.

- Completion of the questionnaire implies that you understand that you will not be identified and that completion and return of the questionnaire implies consent.

Support Processes
Any adverse effects of participation are very unlikely. On the contrary there is potential benefit for individuals in this kind of reflection on their practice as missionaries. However, should you find that this process brings to attention some issue for you that needs further personal processing, please contact in confidence, Don Smith at livingstones@xtra.co.nz He is experienced at offering counseling and support to overseas missionaries by email and phone as appropriate and has made himself available for your support if you need it.

Project Contacts: Please contact me at pprofiles@maxnet.co.nz or my supervisor, Dr Stuart Carr, S.C.Carr@massey.ac.nz if you have any questions about the project.

Thank you very much for your help with much-needed research in this area.

Appendix viii – Study 2 Questionnaire

Massey University School of Psychology

Study 2 Questionnaire

Job Title: Missionary

What do missionaries need to do well?

Below is a table showing 16 'behaviours' or qualities or attributes that may be important for **effectiveness in achieving the underlying purpose and goals of missionary work in general**. These 16 are **not** presented in any particular order.

These 16 have been carefully chosen based on previous research and so even if you think that something else might be vital, please would you add that note at the end of part one, but still rate these 16 behaviours for effective performance as a missionary. You will be asked to rate each behaviour firstly on Relevance and then on Frequency.

PART 1 - Behaviour Ratings - Relevance

Try to compare the behaviours with one another as you answer. Please click on the box "Select one . " next to each behaviour on the following pages below and choose one of the following 4 options:

Most Relevant: Behaviours that are the most relevant for success in the role of missionary. These are critical to effective performance in the role.

Relevant: Behaviours that are relevant for success in the role of missionary. These are important, but less critical to job performance.

Less Relevant: Behaviours that are less relevant for success in the role of missionary. These will influence job performance to some degree, but are not central to the job.

Least Relevant: Behaviours that are least relevant for success in the role of missionary. These will influence effective job performance to a very limited degree.

Behaviour	Relevance
1. Deciding and initiating action *Deciding, taking responsibility, taking calculated risks, taking initiative, generating activity.*	Select one . . . Most Relevant Relevant Less Relevant Least relevant
2. Persuading and influencing *Making an impact, gaining agreement, negotiating, persuading, convincing, promoting ideas, managing conflict*	Select one . . .
3. Adhering to principles and values *Acting with integrity and ethics, ensuring equal opportunities, using diversity, considering community and environment.*	Select one . . .
4. Following instructions and procedures *Following procedures and instructions, time keeping, showing commitment, keeping to safety and legal guidelines*.	Select one . . .
5. Living a Christ-like life *Demonstrating love, compassion and integrity in dealings with all others, exhibiting selfless servant hood and a priority on personal time with God.*	Select one . . .
6. Working with people *Understanding others, adapting to others, rewarding others, listening, consulting, supporting, caring.*	Select one . . .
7. Relating and networking *Building relationships, networking, relating to all levels*	Select one . . .
8. Presenting and communicating information *Speaking clearly and fluently, expressing opinions, making presentations, responding to an audience, showing credibility*.	Select one . . .
9. Formulating strategies and concepts *Working strategically, setting strategies, visioning, thinking broadly*.	Select one . . .
10. Learning and researching *Learning, gathering information, understanding, managing knowledge, ensuring organisational learning approach.*	Select one . . .
11. Creating and innovating *Innovating, improving the organisation, devising change initiatives*	Select one . . .
12. Planning and organizing *Setting objectives, planning, establishing contingencies, managing time, resources and people, monitoring progress.*	Select one . . .
13. Adapting and responding to change Adapting to change, accepting new ideas, adapting interpersonal style, showing sensitivity to different cultures or backgrounds, dealing with ambiguity at work	Select one . . .

Behaviour	Relevance
14. Achieving personal work goals and objectives *Accepting and tackling demanding goals, working hard, making the most of personal development opportunities.*	Select one . . .
15. Coping with pressures and setbacks *Coping with pressure, keeping emotions under control, balancing work and personal life, keeping optimistic, handling criticism*	Select one . . .
16. Leading and supervising *Setting direction and standards, delegating, motivating, empowering, developing and recruiting others.*	Select one . . .

Comments:

PART 2 - Behaviour Ratings – Frequency

Please click on the box "Select one . ". next to each behaviour in Section 2 below and choose one of the following 4 options:

4= All the time: Behaviours that are required and put to use every day in the role of missionary.

3= Much of the time: Behaviours that are required and put to use several times a week in the role of missionary.

2=Sometimes: Behaviours that are required and put to use less often, but at least once a month in the role of missionary.

1=Occasionally: Behaviours that are required and put to use only at specific times, and less than once a month in the role of missionary.

Behaviour	Frequency
17. Deciding and initiating action *Deciding, taking responsibility, taking calculated risks, taking initiative, generating activity.*	Select one . . . All the time Much of the time Sometimes Occasionally
18. Persuading and influencing *Making an impact, gaining agreement, negotiating, persuading, convincing, promoting ideas, managing conflict*	Select one . . .
19. Adhering to principles and values *Acting with integrity and ethics, ensuring equal opportunities, using diversity, considering community and environment.*	Select one . . .

Behaviour	Frequency
20. Following instructions and procedures *Following procedures and instructions, time keeping, showing commitment, keeping to safety and legal guidelines*.	Select one . . .
21. Living a Christ-like life *Demonstrating love, compassion and integrity in dealings with all others, exhibiting selfless servant hood and a priority on personal time with God.*	Select one . . .
22. Working with people *Understanding others, adapting to others, rewarding others, listening, consulting, supporting, caring.*	Select one . . .
23. Relating and networking *Building relationships, networking, relating to all levels*	Select one . . .
24. Presenting and communicating information *Speaking clearly and fluently, expressing opinions, making presentations, responding to an audience, showing credibility*.	Select one . . .
25. Formulating strategies and concepts *Working strategically, setting strategies, visioning, thinking broadly*.	Select one . . .
26. Learning and researching *Learning, gathering information, understanding, managing knowledge, ensuring organisational learning approach.*	Select one . . .
27. Creating and innovating *Innovating, improving the organisation, devising change initiatives*	Select one . . .
28. Planning and organizing *Setting objectives, planning, establishing contingencies, managing time, resources and people, monitoring progress.*	Select one . . .
29. Adapting and responding to change *Adapting to change, accepting new ideas, adapting interpersonal style, showing sensitivity to different cultures or backgrounds, dealing with ambiguity at work*	Select one . . .
30. Achieving personal work goals and objectives *Accepting and tackling demanding goals, working hard, making the most of personal development opportunities.*	Select one . . .
31. Coping with pressures and setbacks *Coping with pressure, keeping emotions under control, balancing work and personal life, keeping optimistic, handling criticism*	Select one . . .
32. Leading and supervising *Setting direction and standards, delegating, motivating, empowering, developing and recruiting others.*	Select one . . .

PART 3 – PERSONAL STRENGTHS

Please make an estimate of your own performance on each of these behaviours. You may have a natural tendency to be modest and self-critical, or to be highly optimistic. Please do your best to be objective and to give a fair assessment of your performance. While this may feel an uncomfortable exercise, your responses will not be identifiable in any way.
Please click on the box "Select one . " next to each behaviour on the following pages below and choose by clicking on one of the following 5 options:

Definitely a Strength-This is definitely a strength, and I do this well.
Above Average-My performance is above average in this area
Average-My performance is average in this area, and meets requirements of role.
Below Average- Below average in this area, it is not a personal strength.
Generally Weak- Generally weak in this area, I consistently struggle with this.

Behaviour	
33. Deciding and initiating action *Deciding, taking responsibility, taking calculated risks, taking initiative, generating activity.*	Definitely a strength Above Average Average Below average Generally weak
34. Persuading and influencing *Making an impact, gaining agreement, negotiating, persuading, convincing, promoting ideas, managing conflict*	Select one . . .
35. Adhering to principles and values *Acting with integrity and ethics, ensuring equal opportunities, using diversity, considering community and environment.*	Select one . . .
36. Following instructions and procedures *Following procedures and instructions, time keeping, showing commitment, keeping to safety and legal guidelines*.	Select one . . .
37. Living a Christ-like life *Demonstrating love, compassion and integrity in dealings with all others, exhibiting selfless servant hood and a priority on personal time with God.*	Select one . . .
38. Working with people *Understanding others, adapting to others, rewarding others, listening, consulting, supporting, caring.*	Select one . . .
39. Relating and networking *Building relationships, networking, relating to all levels*	Select one . . .
40. Presenting and communicating information *Speaking clearly and fluently, expressing opinions, making presentations, responding to an audience, showing credibility*.	Select one . . .
41. Formulating strategies and concepts *Working strategically, setting strategies, visioning, thinking broadly*.	Select one . . .

Behaviour	
42. Learning and researching *Learning, gathering information, understanding, managing knowledge, ensuring organisational learning approach.*	Select one . . .
43. Creating and innovating *Innovating, improving the organisation, devising change initiatives*	Select one . . .
44. Planning and organizing *Setting objectives, planning, establishing contingencies, managing time, resources and people, monitoring progress.*	Select one . . .
45. Adapting and responding to change *Adapting to change, accepting new ideas, adapting interpersonal style, showing sensitivity to different cultures or backgrounds, dealing with ambiguity at work*	Select one . . .
46. Achieving personal work goals and objectives *Accepting and tackling demanding goals, working hard, making the most of personal development opportunities.*	Select one . . .
47. Coping with pressures and setbacks *Coping with pressure, keeping emotions under control, balancing work and personal life, keeping optimistic, handling criticism*	Select one . . .
48. Leading and supervising *Setting direction and standards, delegating, motivating, empowering, developing and recruiting others.*	Select one . . .

PART 4 – Well Being and work behaviour

Below are ten statements with which you may agree or disagree. Please click on the box "Select one . ." next to each behaviour on the page below and choose by clicking on only one of the options offered:

Please be open and honest in your responding to all 10 questions in Part 4.

49. In most ways my life is close to my ideal.

Strongly Agree
Agree
Slightly Agree
Neither agree nor disagree
Slightly Disagree
Disagree
Strongly Disagree

50. I sometimes feel resentful when I don't get my own way. Select one . . .

51. There have been times when I took advantage of someone. Select one . . .

52. The conditions of my life are excellent. Select one . . .

53. I am satisfied with life. Select one . . .

54. I am always courteous, even to people who are disagreeable Select one . . .

55. So far I have gotten the important things I want in life Select one . . .

56. If I could live my life over, I would change almost nothing Select one . . .

57. I sometimes try to get even rather than forgive and forget. Select one . . .

58. No matter who I am talking to, I am always a good listener. Select one . . .

PART 5 Work Satisfaction

Below are a number of statements that describe different emotions that a job can make a person feel. Please indicate the amount to which any part of your job (e.g., the work, coworkers, supervisor, physical demands, living conditions etc) has made you feel that emotion in the past 30 days.
Please check one response for each item that best indicates how often you've experienced each emotion over the past 30 days.

59. My job made me feel angry. Select one . . . Extremely often
Quite often
Sometimes
Rarely
Never

60. My job made me feel anxious. Select one . . .

61.. My job made me feel at ease. Select one . . .

62.. My job made me feel bored. Select one . . .

63. My job made me feel calm. Select one . . .

64 My job made me feel content. Select one . . .

65. My job made me feel depressed. Select one . . .

66. My job made me feel discouraged. Select one . . .

67. My job made me feel disgusted. Select one . . .

68. My job made me feel ecstatic. Select one . . .

69. My job made me feel energetic. Select one . . .

70. My job made me feel enthusiastic. Select one . . .

71. My job made me feel excited. Select one . . .
72. My job made me feel fatigued. Select one . . .
73. My job made me feel frightened. Select one . . .
74. My job made me feel furious. Select one . . .
75. My job made me feel gloomy. Select one . . .
76. My job made me feel inspired. Select one . . .
77. My job made me feel relaxed. Select one . . .
78. My job made me feel satisfied. Select one . . .

The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, choose 'never'. If you have had this feeling, indicate how often you feel it by choosing the words that best describe how frequently you feel that way.

79. At my work, I feel bursting with energy Select one . . . Every day
A few times a week
Once a week
A few times a month
Once a month or less
A few times a year or less
Never

80. _At my job, I feel strong and vigorous Select one . . .
81. _I am enthusiastic about my job Select one . . .
82. _ My job inspires me Select one . . .
83._ When I get up in the morning, I feel like going to work Select one . . .
84. I feel happy when I am working intensely Select one . . .
85. _I am proud of the work that I do Select one . . .
86. _I am immersed in my work Select one . . .
87. I get carried away when I'm working Select one . . .

Part 7. Demographic and Health Information

88. What age are you now? Select one . . .

89. What age were you when you started missionary service? Please discount any short term assignments of less than 9 months Select one . . .

90. Gender: Select one . . .

91. In the family you were brought up in, what is your place in the birth order of the children? Select one . . .

92. Are you married and accompanied on your assignment by your spouse? Select one . . .

93. How many children do you have with you on your assignment? Select one . . .

94. What is your highest level of educational qualification? Select one . . .

95. Was your birth father present in your family throughout your childhood? (Do not count business trips or boarding school, but do count any parental separation where you lived apart from your father, and do count any work postings to another location your father may have had where he lived elsewhere for regular periods of more than a month over a year or more) Select one . . .

96. Prior to becoming a missionary, had you experienced any episodes of emotional or psychological distress, such as depression, anxiety, eating disorders, psychotic episodes? Select one . . .

97. If so, did you receive professional help for this? Select one . . .

98. What is the general category of the work you do? Select one . . .

Please now save this as a word document and then email it back as an attachment to psych.webmaster@massey.ac.nz

with the subject line: missionary survey

Appendix ix – Results of pilot study *N*=13

Competency	Description	Ranking	Mean 1*	Standard Deviation	Agency leader mean a	Host Nation Colleague mean b	Missionary mean c	Mean 2, mean of 3 group means**
9.2	Living a Christ-like Life	1	4	0.00	4	4	4	4
2.2	Adhering to Principles	2	4	0.00	4	4	4	4
9.1	Following God	3	3.9	0.28	3.8	4	4	3.9
7.1	Adapting	4	3.9	0.28	4	3.8	4	3.9
2.1	Working with People	5	3.9	0.28	4	3.8	4	3.9
7.2	Coping with pressure	6	3.8	0.44	4	3.5	3.8	3.8
3.1	Relating & Networking	7	3.8	0.48	3.8	3.5	3.8	3.7
1.1	Deciding & Initiating	8	3.3	0.65	3.2	3.5	3.5	3.4
6.1	Planning & Organising	9	3.3	0.63	3	3.8	3.3	3.3
5.1	Learning & Researching	10	3.3	0.60	3.2	3.5	3	3.2
8.1	Achieving Goals	11	3.1	0.80	3.6	2.8	3	3.1
5.3	Formulating Strategies	12	3.1	0.64	2.8	3.8	2.8	3.1
1.2	Leading & Supervising	13	3.1	0.49	3	3.3	3	3.1
6.3	Following Instructions	14	3	0.71	2.6	3	3	3
3.3	Presenting information	15	3	0.58	2.6	3.5	3	3
3.2	Persuading & Influencing	16	2.9	0.58	3	3	3	3
5.2	Creating & Innovating	17	2.9	0.76	3	3.5	2.3	2.9
4.2	**Applying Expertise**	**18**	**2.8**	**0.55**	**2.6**	**3**	**3**	**2.9**
4.3	**Analysing**	**19**	**2.7**	**0.48**	**2.8**	**2.8**	**2.5**	**2.7**
6.2	**Delivering Results**	**20**	**2.6**	**0.60**	**2.8**	**2.5**	**2.5**	**2.6**
4.1	**Writing & Reporting**	**21**	**2.5**	**0.51**	**2.6**	**2.8**	**2.5**	**2.6**
8.2	**Entrepreneurial Thinking**	**22**	**2.1**	**0.55**	**2.2**	**2.3**	**2**	**2.2**

*Mean 1 was the mean of the 13 participants

**Mean 2 was the mean of the 3 group means, a, b and c. This mean enabled each group to have equal input despite different group sizes. The competencies with a mean rating of 3 or more by this calculation were retained, plus the next ranked item, “Creating and Innovating”, because it was rated 3.5 by host nation colleagues. Boldfaced competencies were discarded

APPENDIX x – Study 2 participant information

Variables		N	%
Gender	Male	58	46.0
	Female	68	54.0
	Missing data	0	0
Age now	18-29	9	7.1
	30-39	23	18.3
	40-49	34	27.0
	50-59	30	23.8
	60+	30	23.8
	Missing data	0	0
Age at start of mission work	18-29	59	46.8
	30-39	47	37.3
	40-49	14	11.1
	50-59	5	4.0
	60+	1	0.8
	Missing data	0	0
Married & accompanied	Yes	95	75.4
	No	30	24.0
	Missing data	1	0.8
No of accompanying children	0	63	50.0
	1	14	11.1
	2	26	20.6
	3	18	14.3
	4+	5	4.0
	Missing data	0	0
Place in birth order of family of origin	1	41	32.5
	2	37	29.4
	3	19	15.1
	4	10	7.9
	5+	19	15.1
	Missing data	0	0
Birth father present in childhood	Yes	109	86.5
	No	17	13.5
	Missing data	0	0

APPENDIX x continued – Study 2 participant information

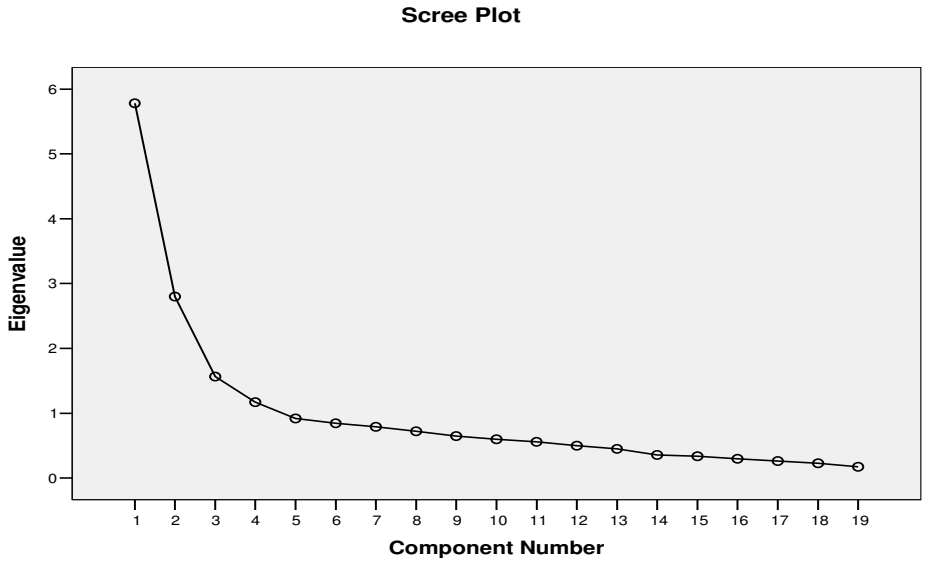
Educational qualifications	None	2	1.6
	School qualification	11	8.7
	Tertiary Certificate	26	20.6
	Bachelors degree	31	24.5
	Post-Graduate diploma	21	16.7
	Masters or Doctoral degree	35	27.8
	Missing data	0	0
Psychological distress prior to mission work	Yes	21	16.7
	No	105	83.3
	Missing data	0	0
Psychological help sought	Yes	10	7.9
	No	16	12.7
	Not applicable	96	77.8
	Missing data	2	1.6
Type of mission work	Administrative	18	14.3
	Medical	5	4.0
	Education	16	12.7
	Church work	15	11.9
	Translation or literacy	15	11.9
	Leadership	27	21.4
	Missionary support	7	5.6
	Business development	1	0.8
	Evangelism	7	5.6
	Physical support	2	1.6
	Relief	4	3.2
	Other	9	7.1
	Missing data	0	0

APPENDIX xi – Factor loadings for the JAWS-20, UWES, SWLS, and MCSDS

JAWS-20

Table xi 1. *The 19 retained Items for the Job-Affective Well-Being Scale and their Factor Loadings.*

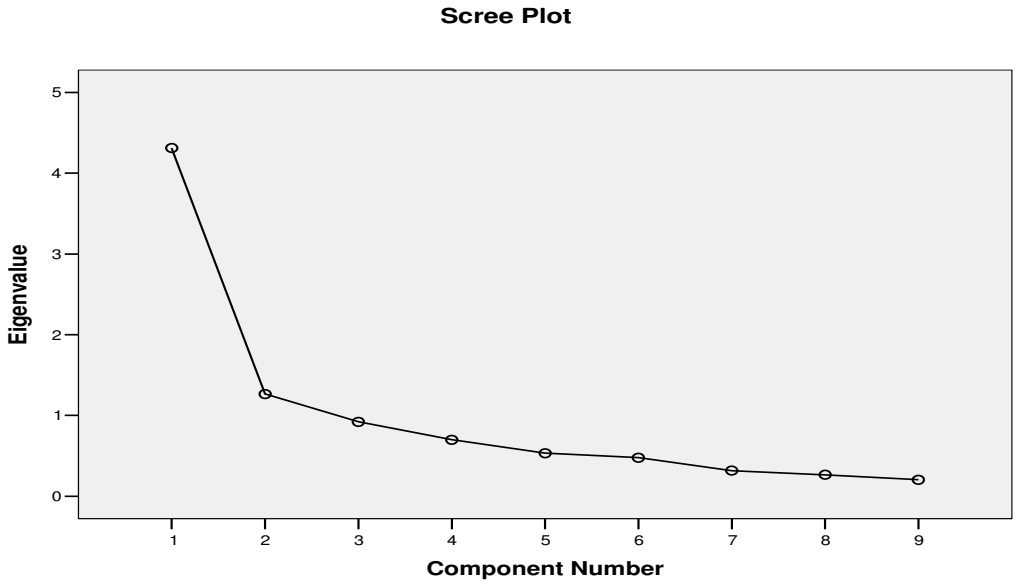
Items	Component 1	Component 2
Excited	.83	
Enthusiastic	.83	
Inspired	.80	
Ecstatic	.79	
Energetic	.73	
Content	.71	
At ease	.69	
Satisfied	.63	.32
Calm	.59	
Relaxed	.53	.33
Reverse Furious		.67
Reverse Angry		.66
Reverse Depressed	.37	.64
Reverse Frightened		.58
Reverse Discouraged		.55
Reverse Gloomy		.55
Reverse Disgusted		.54
Reverse Fatigued		.52
Reverse Anxious		.42



UTRECHT WORK ENGAGEMENT SCHEDULE

Table xi 2. *The 9 Items for the Utrecht Work Engagement Schedule and their Factor Loadings.*

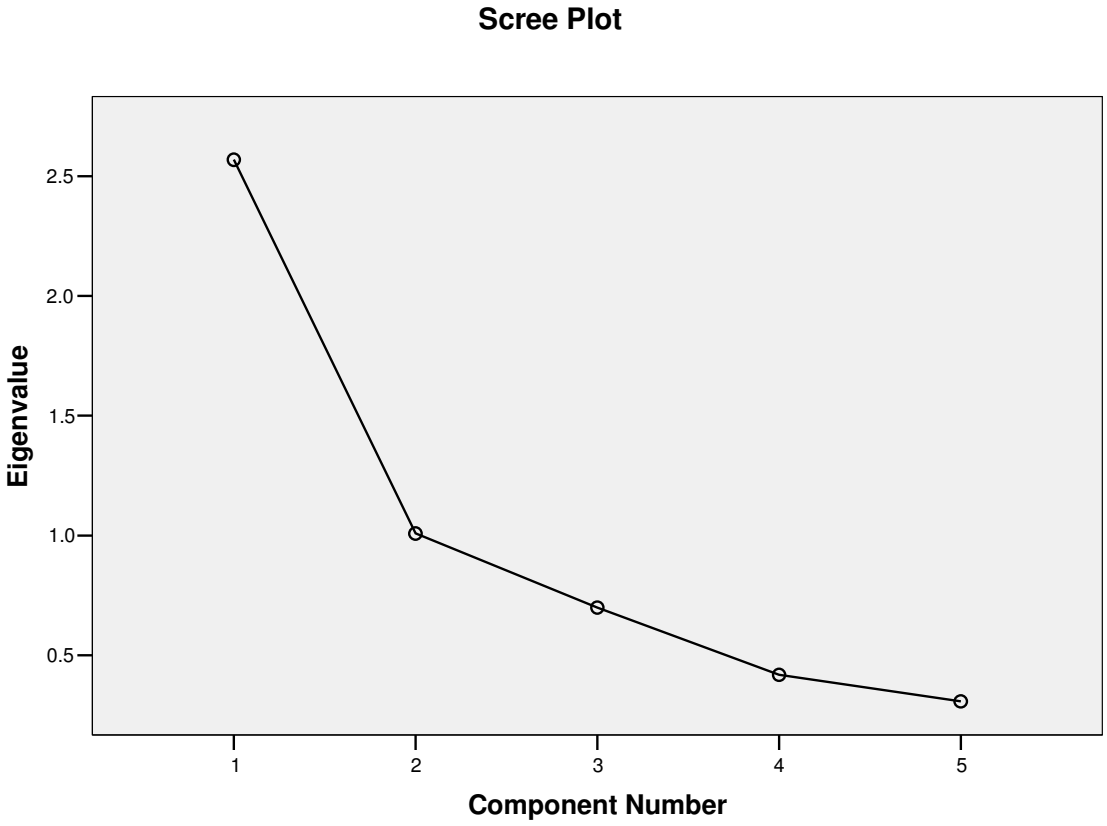
Items	Component 1
At work I feel bursting with energy	.63
At my job, I feel strong and vigorous	.72
I am enthusiastic about my job	.75
My job inspires me	.79
When I get up in the morning, I feel like going to work	.79
I feel happy when I am working intensely	.68
I am proud of the work I do	.70
I am immersed in my work	.63
I get carried away when I am working	.57



SATISFACTION WITH LIFE SCALE

Table xi 3. *The 5 Items for the Satisfaction With Life Scale and their Factor Loadings.*

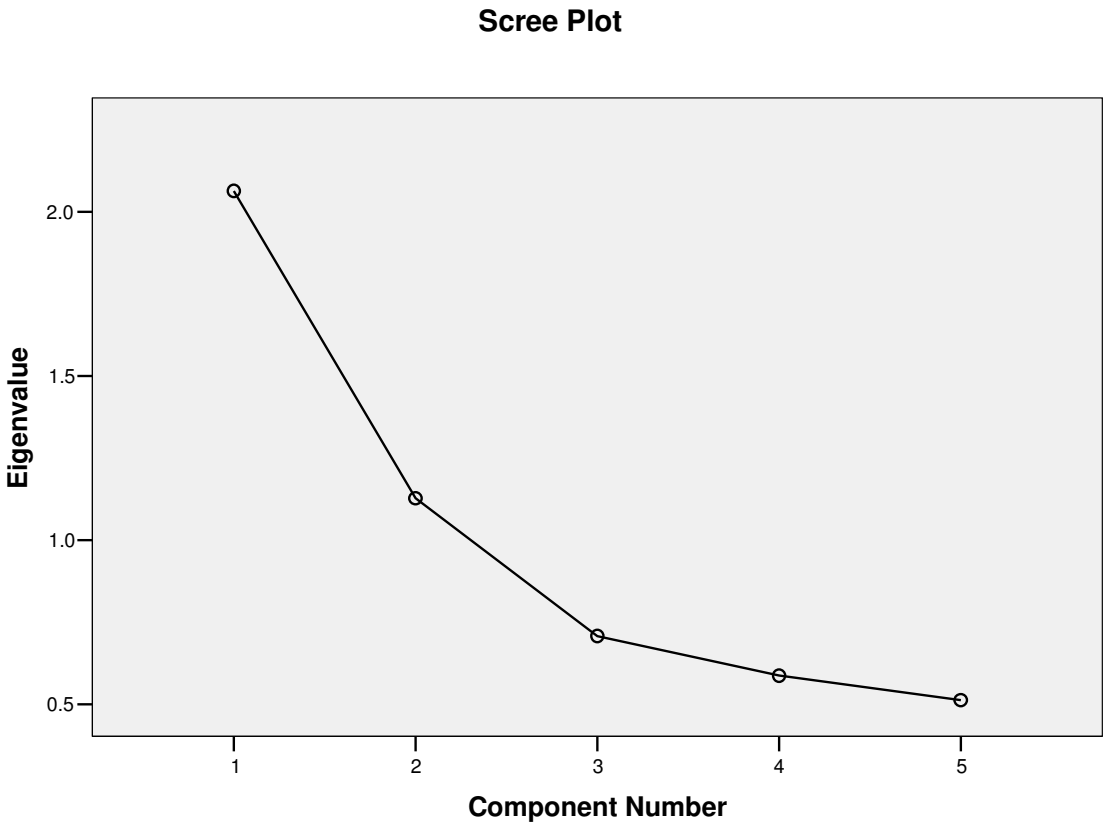
Items	Component 1
I am satisfied with life	.84
If I could live my life over, I would change almost nothing	.70
In most ways my life is close to my ideal	.69
The conditions of my life are excellent	.65
So far I have the most important things I want in life	.56



MARLOWE-CROWN SOCIAL DESIRABILITY SCALE

Table xi 4. *The 5 Items for the Marlowe-Crown Social Desirability Scale and their Factor Loadings.*

Items	Component 1
There have been occasions when I took advantage of someone (reversed)	0.72
I sometimes try to get even rather than forgive and forget (reversed)	0.68
I am always courteous, even to people who are disagreeable	0.62
I sometimes feel resentful when I don't get my own way (reversed)	0.61
No matter who I'm talking to, I'm always a good listener	0.59



APPENDIX xii – Study 2- Inter-item Correlation matrix for ratings of competencies (*N*=126)

Inter-Item Correlation Matrix

	lm_deci	lm_pers	lm_adhe	lm_foll	lm_livi	lm_work	lm_rela	lm_pres	lm_form	lm_lear	lm_crea	lm_plan	lm_adap	lm_achi	lm_copi	lm_lead
lm_deci	1.000	.456	.163	.141	.121	.062	.211	.291	.342	.321	.348	.315	.186	.395	.222	.310
lm_pers	.456	1.000	.143	-.012	-.060	.167	.058	.284	.389	.228	.396	.259	.288	.256	.270	.402
lm_adhe	.163	.143	1.000	.163	.247	-.010	.020	.235	.228	.350	.067	.164	.087	.132	.130	.169
lm_foll	.141	-.012	.163	1.000	.088	.020	.215	.298	.206	.260	.150	.331	.113	.414	.066	.238
lm_livi	.121	-.060	.247	.088	1.000	.205	.258	.160	.091	.067	.112	.114	.173	.052	.116	.073
lm_work	.062	.167	-.010	.020	.205	1.000	.548	.122	.178	.123	.194	.066	.277	.061	.281	.255
lm_rela	.211	.058	.020	.215	.258	.548	1.000	.181	.149	.195	.237	.097	.282	.171	.196	.287
lm_pres	.291	.284	.235	.298	.160	.122	.181	1.000	.431	.380	.281	.264	.157	.337	.129	.344
lm_form	.342	.389	.228	.206	.091	.178	.149	.431	1.000	.475	.534	.467	.191	.320	.228	.510
lm_lear	.321	.228	.350	.260	.067	.123	.195	.380	.475	1.000	.328	.351	.233	.357	.242	.253
lm_crea	.348	.396	.067	.150	.112	.194	.237	.281	.534	.328	1.000	.396	.194	.308	.062	.419
lm_plan	.315	.259	.164	.331	.114	.066	.097	.264	.467	.351	.396	1.000	.155	.375	.283	.354
lm_adap	.186	.288	.087	.113	.173	.277	.282	.157	.191	.233	.194	.155	1.000	.133	.305	.049
lm_achi	.395	.256	.132	.414	.052	.061	.171	.337	.320	.357	.308	.375	.133	1.000	.352	.249
lm_copi	.222	.270	.130	.066	.116	.281	.196	.129	.228	.242	.062	.283	.305	.352	1.000	.189
lm_lead	.310	.402	.169	.238	.073	.255	.287	.344	.510	.253	.419	.354	.049	.249	.189	1.000

The covariance matrix is calculated and used in the analysis.