A comparison of two instruments to assess spiritual well-being

Peter Cleasby
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A COMPARISON OF TWO INSTRUMENTS TO ASSESS
SPIRITUAL WELL-BEING

A thesis submitted in fulfilment of the requirements for the award of the degree of

HONOURS MASTERS OF NURSING

from

UNIVERSITY OF WOLLONGONG

by

PETER CLEASBY, BA(Macq), M.Stud.Ed.(W'gong)

DEPARTMENT OF NURSING

1995
DECLARATION

I certify the work contained in this thesis has not been submitted for a degree to any other university or institution. The work contained in this thesis is my own work.

PETER ANDREW CLEASBY

Signed

Date: 27/8/96

This thesis was produced using Microsoft Word for Windows Version 6. Data analysis was undertaken using SPSS Release 4.1 for IBM OS/MVS. Total of 256,512 bytes.
ACKNOWLEDGEMENTS

Although not a major focus, interconnectedness is a concept mentioned within this work, and its completion is testimony to the many relationships that are part of my own sense of interconnectedness.

This thesis is dedicated to my wife Lyn, who more than any other has both shared and endured my journey; and to my children Joel and Rebecca who have watched my “big story” come about.

Thanks to Phil Clingan, Jenni Dransfield, Sue-ann Redman and Jenni Blundell for their help at various stages of the study. Thanks also to Felix Yuen, who showed great patience throughout.
ABSTRACT

An exploratory factor analysis was performed on two spiritual well-being instruments: Paloutzian & Ellisons spiritual well-being scale (SWBS), and the JAREL spiritual well-being scale (JSWBS). The scales were combined and administered to a combined convenience sample (n=130) comprising of undergraduate nursing students (n=56 & n=55) and an ambulatory oncology group (n=19). The two scales were found to have a high correlation (r=0.8187). The underlying subscale structure of the SWBS was generally supported by the analysis. The JSWBS subscale structure was not supported by the analysis.

No significant difference was found in group means for spiritual well-being, existential well-being, or religious well-being scores on the basis of gender, age groupings, self reported health status, or oncology status.

Spiritual well-being and religious well-being were found to be positively correlated to frequency of attendance at a religious service.

Replication of factor analysis examination of the JAREL spiritual well-being scale is recommended. The place of the spiritual dimension in nursing and difficulties in researching spiritual well-being in Australia are discussed.
# Table of Contents

Acknowledgments ii

Abstract iii

Table of Contents iv

List of Tables viii

List of Figures xi

List of Appendices xi

Chapter 1 - Introduction

1.1 Overview 1

1.2 Spiritual Domain Instrumentation 5

1.2.1 Spiritual Well-being Scales 6

1.2.2 Moberg's Indexes of Spiritual Well-being 6

1.2.3 The Spiritual Well-being scale (SWBS) 7

1.2.4 The JAREL Scale 8

1.3 Life Threatening Illness 9

1.4 Study Goals 10

1.5 Research Questions 10

1.6 Research Hypotheses 11

Chapter 2 - Review of the Literature

2.1 Overview 13
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>Spiritual Concepts in Nursing Literature</td>
<td>13</td>
</tr>
<tr>
<td>2.3</td>
<td>Spiritual Well-being</td>
<td>16</td>
</tr>
<tr>
<td>2.3.1</td>
<td>Relationship of SWB with other Concepts</td>
<td>19</td>
</tr>
<tr>
<td>2.3.1.1</td>
<td>Loneliness</td>
<td>19</td>
</tr>
<tr>
<td>2.3.1.2</td>
<td>Anxiety</td>
<td>20</td>
</tr>
<tr>
<td>2.3.1.3</td>
<td>Hope</td>
<td>20</td>
</tr>
<tr>
<td>2.3.1.4</td>
<td>Summary of Interrelationships</td>
<td>21</td>
</tr>
<tr>
<td>2.4</td>
<td>Nursing Research</td>
<td>21</td>
</tr>
<tr>
<td>2.4.1</td>
<td>Exploratory Research</td>
<td>22</td>
</tr>
<tr>
<td>2.4.2</td>
<td>Experiential Research</td>
<td>24</td>
</tr>
<tr>
<td>2.4.3</td>
<td>Relational Research</td>
<td>26</td>
</tr>
<tr>
<td>2.5</td>
<td>Australian Historical perspectives</td>
<td>27</td>
</tr>
<tr>
<td>2.6</td>
<td>Theoretical framework</td>
<td>31</td>
</tr>
<tr>
<td>2.6.1</td>
<td>Spiritual Dimension in Nursing Models</td>
<td>31</td>
</tr>
<tr>
<td>2.6.2.2</td>
<td>The Neumans Systems Model</td>
<td>34</td>
</tr>
<tr>
<td>2.6.3.3</td>
<td>Summation</td>
<td>37</td>
</tr>
</tbody>
</table>

Chapter 3 - Method

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Instrumentation</td>
<td>38</td>
</tr>
<tr>
<td>3.2</td>
<td>Consent for instrumentation use</td>
<td>38</td>
</tr>
<tr>
<td>3.3</td>
<td>Approval process</td>
<td>38</td>
</tr>
<tr>
<td>3.4</td>
<td>Pilot study</td>
<td>40</td>
</tr>
<tr>
<td>3.5</td>
<td>Sampling</td>
<td>42</td>
</tr>
<tr>
<td>3.6</td>
<td>Consent procedure</td>
<td>43</td>
</tr>
<tr>
<td>3.7</td>
<td>Ethical considerations</td>
<td>44</td>
</tr>
<tr>
<td>3.7.1</td>
<td>Anonymity</td>
<td>45</td>
</tr>
<tr>
<td>3.7.2</td>
<td>Confidentiality</td>
<td>45</td>
</tr>
<tr>
<td>3.7.3.3</td>
<td>Dependency and Coercion</td>
<td>45</td>
</tr>
<tr>
<td>3.7.4.4</td>
<td>Storage of Data</td>
<td>47</td>
</tr>
<tr>
<td>3.8</td>
<td>Statistical Methods</td>
<td>47</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Results</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>Sample Details</td>
<td>52</td>
</tr>
<tr>
<td>4.2</td>
<td>Demographic Data</td>
<td>53</td>
</tr>
<tr>
<td>4.2.1</td>
<td>Gender</td>
<td>53</td>
</tr>
<tr>
<td>4.2.2</td>
<td>Age</td>
<td>54</td>
</tr>
<tr>
<td>4.2.3</td>
<td>Health</td>
<td>55</td>
</tr>
<tr>
<td>4.2.4</td>
<td>Place of Birth</td>
<td>55</td>
</tr>
<tr>
<td>4.2.5</td>
<td>Religion</td>
<td>56</td>
</tr>
<tr>
<td>4.2.6</td>
<td>Frequency of Attendance at a Religious Service</td>
<td>57</td>
</tr>
<tr>
<td>4.2.7</td>
<td>Level of Education</td>
<td>58</td>
</tr>
<tr>
<td>4.3</td>
<td>Spiritual Well-being Scores</td>
<td>59</td>
</tr>
<tr>
<td>4.3.1</td>
<td>Sub-scales</td>
<td>60</td>
</tr>
<tr>
<td>4.4</td>
<td>Instrument Correlations</td>
<td>62</td>
</tr>
<tr>
<td>4.4.1</td>
<td>Within Instrument Correlations</td>
<td>62</td>
</tr>
<tr>
<td>4.4.2</td>
<td>Inter Instrument Correlations</td>
<td>63</td>
</tr>
<tr>
<td>4.5</td>
<td>Factor Analysis</td>
<td>64</td>
</tr>
<tr>
<td>4.5.1</td>
<td>Factor Analysis of SWBS</td>
<td>65</td>
</tr>
<tr>
<td>4.5.2</td>
<td>Interpretation of a Three Factor Solution</td>
<td>68</td>
</tr>
<tr>
<td>4.5.3</td>
<td>Factor Analysis of JAREL SWBS</td>
<td>69</td>
</tr>
<tr>
<td>4.5.4</td>
<td>Interpretation of a Five Factor Solution</td>
<td>71</td>
</tr>
<tr>
<td>4.6</td>
<td>Reliability Analysis</td>
<td>74</td>
</tr>
<tr>
<td>4.6.1</td>
<td>SWBS</td>
<td>75</td>
</tr>
<tr>
<td>4.6.2</td>
<td>SWBS Sub-scales</td>
<td>75</td>
</tr>
<tr>
<td>4.6.3</td>
<td>JAREL SWBS</td>
<td>75</td>
</tr>
<tr>
<td>4.6.4</td>
<td>JAREL Sub-scales</td>
<td>76</td>
</tr>
<tr>
<td>4.7</td>
<td>Demographic Comparisons</td>
<td>76</td>
</tr>
<tr>
<td>4.7.1</td>
<td>SWB and Gender</td>
<td>77</td>
</tr>
<tr>
<td>4.7.2</td>
<td>SWB and Age</td>
<td>79</td>
</tr>
<tr>
<td>4.7.3</td>
<td>SWB and Religion</td>
<td>81</td>
</tr>
<tr>
<td>4.7.4</td>
<td>SWB and frequency of attendance at a religious service</td>
<td>83</td>
</tr>
<tr>
<td>4.7.5</td>
<td>SWB and health</td>
<td>85</td>
</tr>
<tr>
<td>Section</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>4.8</td>
<td>Exploratory Questions</td>
<td>88</td>
</tr>
<tr>
<td>4.8.1</td>
<td>Nurse Awareness</td>
<td>89</td>
</tr>
<tr>
<td>4.8.2</td>
<td>Nurse Assistance</td>
<td>90</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>Relationship Between Instruments</td>
<td>91</td>
</tr>
<tr>
<td>5.2</td>
<td>Instrument Structure</td>
<td>91</td>
</tr>
<tr>
<td>5.2.1</td>
<td>Structure of the SWBS</td>
<td>91</td>
</tr>
<tr>
<td>5.2.2</td>
<td>Structure of the JAREL SWBS</td>
<td>92</td>
</tr>
<tr>
<td>5.3</td>
<td>Demographic Influences</td>
<td>94</td>
</tr>
<tr>
<td>5.4</td>
<td>Recommendations for Future Research</td>
<td>97</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1. Participation and Completion Rates 52
Table 2. Gender Distribution by Group and NSW Census 54
Table 3. Range, Mean and Standard Deviation 54
    of Age by Group
Table 4. Mean and Standard Deviation for 55
    Self Report of Health
Table 5. Place of Birth by Group 56
Table 6. Religion by Group and NSW Census 57
Table 7. Frequency of Attendance at 58
    Religious Service (if able)
Table 8. Range, Mean and Standard Deviation 59
    for SWBS Scores
Table 9. Range, Mean and Standard Deviation 60
    for JAREL SWBS Scores
Table 10. Range, Mean and Standard Deviation 60
    for RWB Scores
Table 11. Range, Mean and Standard Deviation 61
    for EWB Scores
Table 12. Range, Mean and Standard Deviation 61
    for FBD Scores
Table 13 Range, Mean and Standard Deviation 61
    for LSR Scores
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 14</td>
<td>Range, Mean and Standard Deviation for LSSA Scores</td>
<td>62</td>
</tr>
<tr>
<td>Table 15</td>
<td>SWBS Sub-scale Correlations</td>
<td>62</td>
</tr>
<tr>
<td>Table 16</td>
<td>JAREL SWBS Sub-scale Correlations</td>
<td>63</td>
</tr>
<tr>
<td>Table 17</td>
<td>Inter-scale and Sub-scale Correlations</td>
<td>64</td>
</tr>
<tr>
<td>Table 18</td>
<td>Initial Statistics following Principal-components Analysis for SWBS</td>
<td>66</td>
</tr>
<tr>
<td>Table 19</td>
<td>Rotated Factor Matrix for SWBS</td>
<td>67</td>
</tr>
<tr>
<td>Table 20</td>
<td>Initial Statistics following Principal-components Analysis for JAREL SWBS</td>
<td>70</td>
</tr>
<tr>
<td>Table 21</td>
<td>Rotated Factor Matrix for JAREL SWBS</td>
<td>71</td>
</tr>
<tr>
<td>Table 22</td>
<td>One-way ANOVA of SWB by Gender</td>
<td>77</td>
</tr>
<tr>
<td>Table 23</td>
<td>One-way ANOVA of RWB by Gender</td>
<td>78</td>
</tr>
<tr>
<td>Table 24</td>
<td>One-way ANOVA of EWB by Gender</td>
<td>78</td>
</tr>
<tr>
<td>Table 25</td>
<td>Mean Scores for SWB by Age Groups</td>
<td>79</td>
</tr>
<tr>
<td>Table 26</td>
<td>One-way ANOVA for SWB by Age Groups</td>
<td>80</td>
</tr>
<tr>
<td>Table 27</td>
<td>One-way ANOVA for EWB by Age Groups</td>
<td>80</td>
</tr>
<tr>
<td>Table 28</td>
<td>One-way ANOVA for RWB by Age Groups</td>
<td>81</td>
</tr>
<tr>
<td>Table 29</td>
<td>Mean scores for SWB and RWB by Religion</td>
<td>81</td>
</tr>
<tr>
<td>Table 30</td>
<td>One-way ANOVA of SWB by Religion</td>
<td>82</td>
</tr>
<tr>
<td>Table 31</td>
<td>One-way ANOVA of RWB by Religion</td>
<td>82</td>
</tr>
<tr>
<td>Table 32</td>
<td>Mean scores for SWB and RWB by Frequency of Attendance at a Religious Service (if able)</td>
<td>83</td>
</tr>
</tbody>
</table>
Table 33 One-way ANOVA of SWB by Frequency of Attendance at Religious Service

Table 34 One-way ANOVA of EWB by Frequency of Attendance at a Religious Service

Table 35 One-way ANOVA of RWB by Frequency of Attendance at Religious Service

Table 36 Mean Scores for SWB by Self Reported Overall Health

Table 37 One-way ANOVA of SWB by Self Reported Overall Health

Table 38 One-way ANOVA of EWB by Self Reported Overall Health

Table 39 One-way ANOVA of RWB by Self Reported Overall Health

Table 40 One-way ANOVA of SWB by Sample Group

Table 41 One-way ANOVA of EWB by Sample Group

Table 42 One-way ANOVA of RWB by Sample Group

Table 43 Agreement with Nurse Awareness of Spiritual Situation

Table 44 Agreement with Nurses Assisting with Spiritual Concerns
CHAPTER ONE  INTRODUCTION

1.1 Overview

The spiritual dimension of human existence represents an area of contradiction and confusion for the nursing profession. Within the nursing literature of the last two and a half decades there is in evidence an increasing frequency of writings that recognise the importance of the spiritual dimension to nurses (eg Peipgras 1968, Dickinson 1975, Fish & Shelly 1978; Granstrom 1985; Salladay & McDonnell 1989; Carson 1989). Yet there is a repeated echo that this is a neglected or forgotten area within nursing (eg. Highfield & Carson 1983; Dettmore 1984; Simsen 1986; Hamner 1990). Adding to the confusion is a debate as to the place of nursing spiritual care as opposed to pastoral care (Patton 1984; Amenta 1988; Morrison 1990; Griswold 1990), and with it issues of ownership and responsibility. Despite the appearance of uncertainty there is clear evidence of an overall acceptance of the spiritual domain and its importance to holistic nursing care.

and critical care (Shaffer 1991). In recent times the importance of the spiritual domain to nursing is perhaps best illustrated by the inclusion of the nursing diagnosis "Spiritual Distress" by the North American Nursing Diagnosis Association (Kim et al 1987), although this step is not without its critics (Heliker 1992).

Despite the growing body of nursing literature relating to spiritual care, there has been until most recently an absence of Australian research and a negligible body of contributions in general. This study of the concept of spiritual well-being arose from the researcher’s awareness of an apparent disparity between overseas based nursing literature and local nursing behaviour in the area of spiritual care. While the mostly north American writings present spiritual nursing care as part of total nursing care, this author had seen little of this demonstrated in Australian nursing practice, and none outside of palliative care contexts. This dearth of Australian nursing comment on the area prompted the researcher to consider the spiritual domain of care from an Australian perspective.

Yet the very breadth and depth of this topic meant that many aspects presented as worthy of researcher’s attention, especially given the need to consider the issue within an Australian cultural context. These included the need to explore conceptualisations of spirituality including the researched concept of spiritual well-being; the need to use and evaluate tools that purported to measure dimensions of spirituality including spiritual well-being;
the need to consider the degree to which health related issues impacted on spiritual well-being plus the nature of any relationships between spiritual health deviations and general health; the need to grasp an understanding of registered nurses existing perceptions and practices in the spiritual care area; and the need to clarify the extent to which the public expect nurses to contribute to the resolution of spiritual concerns (a role the literature claimed as part of nursing's "turf").

The near total absence of Australian nursing comment on the spiritual health domain can be explained from two perspectives. Firstly the relatively recent expansion of nurse academic numbers through the 1980s together with the even more recent opportunities to undertake post graduate research in nursing has meant that the body of Australian nursing research and publication is small (though growing). It could be argued that the matter of spirituality is indeed part of the Australian nursing scene but has not yet warranted a prominent place in a somewhat limited domain of literature contributions. Indeed, as this work is taking shape the first Australian nursing thesis to focus on the area of spiritual care has been finalised (Harrington 1993).

The second perspective, and a more likely explanation in the researcher's view, is that the prevailing Australian cultural view of things "religious" has resulted in Australian nurses holding a restrictive attitude towards the spiritual dimension, limiting it to religion / denominationalism and feeling that as such it
belongs to the clergy. This impression has been reinforced by the researcher’s observations of recent pre registration nursing curriculum where the concept of a spiritual dimension of both health and nursing appeared to struggle to gain recognition and teaching time.

Within the literature there has been a variety of terms associated with the spiritual domain. The above mentioned spiritual distress, spiritual concern (Carpenito 1992) and spiritual needs (Fish & Shelly 1978), are but some. Such terms may be considered evolutionary in the documentation of nursing knowledge where an understanding of the spiritual dimension has been expanded beyond a religion focussed construct (Emblen & Halstead 1993). This can be seen as reflecting changing views within the surrounding culture, and is to be found in non nursing literature (eg. Payne 1990).

The conceptualisation of spiritual health has often been in terms of its disruption, as per the ideas of spiritual distress and despair (eg Burnard 1987). However, the concept of spiritual well-being is amongst the most frequently appearing terms, due in large part to the availability of related instrumentation. Yet the possibly more central concept of spiritual health is less clearly presented, with related instrumentation only appearing recently (eg Highfield 1992). While the concepts of spiritual well-being and spiritual health would appear logically related, the exact nature of this relationship is unclear (Ellison 1983).
As spiritual well-being (SWB) is the single most researched concept within this domain the researcher chose to begin an Australian exploration at this point. Through the examination of instrumentation purporting to measure SWB this study hopes to lay down a foundation for future exploration of the spiritual health domain. It is the issue of instrumentation that this work will focus and this paper will now address.

1.2 Spiritual Domain Instrumentation

Spiritual domain instruments other than those focussed on spiritual well-being are not readily located in the literature. Reed (1986) reported the use of a “Religious Perspective Scale” that sought to measure religious beliefs and behaviours. This scale is described as a 13 question instrument using a six point Likert type response set. Reed footnotes that the instrument has subsequently been reduced to 10 items. Recently a Spiritual Health Inventory has been developed and used within a clinical nursing environment (Highfield 1992). This thirty one (31) item self reporting scale suggests interpretative scores for both spiritual health and spiritual distress. It is designed for use with persons with a current illness, and, in the view of this author, a number of items strongly reflect its cancer related origins. The clinical context of this instrument put it outside the scope of the present study.

A further two spiritual domain instruments were utilised by Cimino (1992) in doctoral research. Details of the Health Professional’s Spiritual Role (HPSR)
scale and the Spiritual Intervention Comfort (SIC) scale were unable to be
located for this study.

1.2.1 Spiritual well-being scales

Ellerhorst-Ryan (1985, 1988) reported the existence of two SWB scales.
These are the lengthy "Indexes of spiritual well-being" developed by Moberg,
and the shorter "Spiritual well-being scale" (SWBS) produced by Paloutzian
and Ellison. These authors came from the social science field and thus these
instruments do not directly lead to nursing determinations.

Subsequently a third instrument, the JAREL spiritual well-being scale, was
developed by a team of nurses (Hunglemann, Kenkel-Rossi, Klassen, &
Stollenwerk, 1989). An overview of each of these instruments follows.

1.2.2 Moberg's indexes of spiritual well-being

This instrument was among the first social science tools to include a spiritual
well-being dimension. The forty five items that make up the questionnaire
divide into seven indexes: Christian faith, personal piety, religious cynicism,
subjective spiritual well-being, optimism, self satisfaction, and elitism. The
Moberg scale has two limitations to its clinical usefulness: its length and its
Christian focus (Ellerhorst-Ryan 1988, p.145). Evidence of use of this
instrument by nurses could not be found. Consequently this instrument was
not selected for use in this study.
1.2.3 The Spiritual Well-being Scale (SWBS)

This scale was developed to fill a perceived void in quality of life measures in that it incorporated both the concepts of general life satisfaction (or existential well-being) and deity connectedness (or religious well-being) (Paloutzian & Ellison 1982 p.231) The instrument consists of twenty questions, and utilises a six point likert response scale (strongly agree to strongly disagree). Three measures are produced: an overall SWB score, plus two sub scales, existential well-being (EWB) and religious well-being (RWB). The scale was initially developed using a sample of 206 American college students, and then administered to 100 university students.

"Test-retest reliability coefficients were 0.93 (spiritual well-being), 0.96 (religious well-being), and 0.86 (existential well-being). Internal consistency was evaluated using coefficient alpha, yielding 0.89 (spiritual well-being), 0.87 (religious well-being), and 0.78 (existential well-being)"

(Ellerhorst-Ryan 1988 p.144).

Ellison (1982) reports that the SWBS has been used with over 500 respondents of both genders, across a range of ages, locations (city to rural), and degrees of professed religiousness. The instrument does reflect a Judeo-Christian orientation, however the degree to which persons of other (or no) religious beliefs may experience difficulty with it is unclear.
Use of the SWBS is reported by a number of nurse researchers (eg. Miller 1985, Granstrom 1987, Mickley & Soeken, 1993) This research will be examined elsewhere.

Recent reviews of the SWBS have questioned aspects of its construction and interpretation. In a study within a palliative care context Kirschling & Pittman (1989) reported support for the reliability of the SWBS but suggested a lack of support for its construct validity. Ledbetter, Smith, Vosler-Hunter, and Fischer (1991) have suggested that the scale has ceiling effects with religious samples, and that "...the clinical usefulness of the SWBS may be limited to low scores." (p.49), a view supported by others including the scale's originators (Bufford, Paloutzian & Ellison 1991). Ledbetter, Smith, Fischer, Vosler-Hunter and Chew (1991) question the two factor conceptualisation of the SWBS, suggesting that the scale may be factorily complex. Another limitation of the SWBS is the absence of “established norms” that would aid interpretation in diagnostic applications (Soeken 1989).

1.2.4 The JAREL Scale

This instrument was developed following an initial qualitative study with 31 elderly subjects (Hunglemann et. al. 1989). The scale was first administered to 294 elderly adults. Four measures are produced: a global score for SWB; and three sub-scores, these being Faith/ Belief Dimension (FBD), Life/ Self-Responsibility (LSR), and Life Satisfaction/ Self-Actualisation (LSSA).
Use of the JAREL scale has thus far been limited to elderly populations, and has not yet been used with an oncology based sample (Stollenwerk 1991 per. comm.).

The developers of the scale have made a number of recommendations for further research including that it be used in conjunction with the SWBS to examine the degree of correlation between the two, and that the scale should be trialed with younger age groups (Hunglemann et al 1989 p379).

1.3 Life Threatening Illness

In an attempt to explore the sensitivity of the selected SWB instruments the author proposed to examine responses across a number of population groups, including one with a cancer diagnosis. The experience of a life threatening illness such as cancer has been identified as a significant life crisis (Salby & Glicksman 1985; Amenta & Bohnet 1986; Carnavalli & Reiner 1990), and as such is known to have a broad impact on individual well-being. Frank-Stromborg et. al. (1984) have identified a range of negative themes reported by ambulatory oncology patients in response to their diagnosis. These included shock, fear, disbelief, anger and a feeling of doom.

Other studies have suggested that spiritual issues are identified as being of importance to persons with cancer (Lilley 1987) and that greater religiousness may be reported by those with an incurable cancer diagnosis (Reed 1986). In seeking to compare and examine spiritual well-being instruments, their use in
the context of the life threatening illness perspective may allow an opportunity to comment on aspects of measurement arising from hypothesised differences in well-being status.

1.4 Study Goals

The goals of this study are to:

1. Examine the structure of two instruments designed to measure spiritual well-being.

2. Explore the concept of spiritual well-being and its relationship with a number of demographic and situational factors, including the experience of a life threatening illness.

1.5 Research Questions

The research questions of this study are:

1. What is the underlying structure of the two selected spiritual well-being instruments?

2. What is the relationship between the two selected instruments?

3. Are scores for spiritual well-being and related sub-scale scores influenced by age, gender, level of education, religious affiliation, frequency of attendance at a religious service or health status?
1.6 Research Hypotheses

The research hypotheses in this study are that:

1. The stated underlying structure of the two instruments will be supported.

2. A high correlation will exist between scores achieved with each instrument.

3. The existential sub scales of the instruments will have higher correlations with total spiritual well-being scores than the religious well-being sub scales.

4. The scores recorded for spiritual well-being will be greater for females than males.

5. The scores recorded for spiritual well-being and related sub-scales will be significantly different for a sample with an oncology diagnosis than for a non oncology sample.

6. The scores recorded for spiritual well-being will be greater for older members of the samples.

7. The scores for spiritual well-being and religious well-being will be higher for those who attend religious services more frequently.

8. The scores for spiritual well-being and religious well-being will be lower for those without a religious affiliation.

9. The scores for spiritual well-being will be unaffected by level of education.
"I believe most people hunger after spirituality, even if that hunger remains in many cases unconscious."

Patrick White 1988
CHAPTER TWO REVIEW OF THE LITERATURE

2.1 Overview

The place of the spiritual in human health is an issue of increasing interest and concern to many health disciplines. Medicine’s neglect of the human spirit has been criticised from within (Cassell 1982) and Rowe (1989) has called psychologists and psychiatrists to reconsider their attitude towards things spiritual. Within nursing, references to spiritual aspects of being and care have increased with each of the last three decades, yet the messages remain mixed. The importance of providing spiritual care is extolled (eg. Labun 1988, Carson 1989) while its neglect is observed (eg Simsen 1986, Hamner 1990, Hall & Lanig 1993). Nursings declared preference for providing “holistic” care has served as a fillip to continuing exploration of the spiritual dimension of being and health. The apparent trend is that the spiritual aspects of nursing care are increasingly accepted, and that there is something of a “renaissance” in this area (Keegan 1993).

2.2 Spiritual Concepts in Nursing Literature

When examining the concept of spirituality within the nursing and health literature a broad nomenclature is encountered. These include spiritual needs, spiritual care, spiritual distress, spirituality, spiritual integrity, spiritual health and spiritual well-being. O’Brien (1982) expanded this list when considering the idea of altered spiritual integrity, adding the terms spiritual
pain, spiritual alienation, spiritual anxiety, spiritual guilt, spiritual anger, spiritual loss, and spiritual despair.

Agreement as to the core meaning of these terms, and their relationship with human health and well-being is yet to be reached in nursing. Further, agreement on the conceptual relationship between spirituality and religion remains in a state of flux. Emblen (1992) undertook a review of the nursing literature from 1963 to 1989 in an examination of the ways in which both religion and spirituality were defined, and concluded that poor and inconsistent definition of these terms can result in poor communication and unmet patient needs. Emblen (1992 p.44) found that definitions of religion and spirituality shared “...only eight common words from the combined total of 116 key words...” suggesting that the use of the terms interchangeably was not conceptually supported within nursing literature.

Spiritual needs have been discussed by several authors. Stallwood and Stoll (1975, p1088) have defined spiritual needs as

any factors necessary to establish and/or maintain a person's dynamic personal relationship with God (as defined by that individual) and out of that relationship to experience forgiveness, love, hope, trust, and meaning and purpose in life.
Operating from a similar perspective, Fish & Shelly (1978) nominated three spiritual needs existing in relationship to God: the need for forgiveness; the need for meaning and purpose; and the need for love and relatedness.

The general utility of such "God" related frameworks is open to examination. Obviously, when the nurse and the client share a similar perspective, such spiritual needs will be readily assessable. Where either nurse or client (or both) use a non God framework, then such definitions are less likely to be operationalised in nursing practice.

A broader concept of "spiritual" is reflected in the definition of spiritual needs offered by O'Brien (1982, p.89) who suggested that

spiritual needs are seen as involving any essential variables required for the support and viability of that element which inspires in man the desire to transcend the realm of the material.

The notion of transcendence is one that gained increasing currency in spiritual conceptualisation during the 1980s (eg O'Brien 1982, Kim et al 1987). More recent work has suggested the spiritually related idea of self-transcendence as a client outcome that should be promoted by nurses (Haase et.al. 1992).
A further theme found increasingly in nursing discussion of spirituality is that of seeking/finding meaning and purpose in life and life events (eg. Burkhardt & Nagai-Jacobson 1985, Burnard 1988, Murray & Zetner 1993). This existential direction is at times offered as an alternative to more religious perspectives, as demonstrated by Murray & Zetner’s (1993 p.86) description of the spiritual dimension as (italics mine)

a quality that goes beyond religious affiliation, that strives for inspiration, reverence, awe, meaning, and purpose even in those who do not believe in any god.

nursing literature contains an increasing number of references to spiritual concepts. While numerous related terms may be found there is a sense in which the place of the spiritual dimension in nursing is not universally embraced, and key concepts remain fluid in their definition.

2.3 Spiritual Well-being

David Moberg, an American sociologist has been a strong advocate for the concept of spiritual well-being and the need to develop indicators of it from the mid 1960’s through to the 1980’s. Moberg (1979, 1984) has argued that spiritual well-being is a construct that needs to be addressed by those who would examine issues of health and quality of life. Moberg (1979) has observed that defining this concept is a difficulty that must be met in order to
identify and operationalise variables connecting with it. The National Interfaith Coalition on Aging (NICA) define spiritual well-being as

....the affirmation of life in a relationship with God, self, community and environment that nurtures and celebrates wholeness.

(NICA 1975 in Moberg 1979 p5).

This definition is noted by Moberg as being neither scientific or operational. While not offering an alternative definition, Moberg raises a number conceptual and theoretical issues about spiritual well-being in asking

whether spiritual well-being is a dichotomous (either-or) phenomenon or a continuous variable, whether it is a condition or an ongoing process, whether it is basically qualitative or quantitative, whether it is a strictly “religious” or “secular humanistic” concept, and whether it can be objectively identified or is it only an interiorised, subjective phenomenon.

(Moberg 1979 p. 304).

Ellison (1983) credits Moberg with conceptualising spiritual well-being as being twin dimensional, with what can figuratively be described as a “horizontal” and “vertical” component. The horizontal aspect is the God
connectedness dimension of well-being, while the horizontal represents life purpose and satisfaction. Paloutzian and Ellison (1982) have described the latter as existential well-being. Ellison suggests that spiritual well-being is an expression of, but is not the same as, spiritual health, and that it should be seen as a continuous variable. While seeming reluctant to specifically define SWB in earlier works, Ellison recently has likened it to the biblical term *shalom*.

Shalom describes the experience of being harmoniously at peace within and without. It presents a picture of the person functioning as an integrated system in proper equilibrium.

(Ellison & Smith 1991 p.36)

This is not unlike the central interpretation arrived at by the developers of the JAREL scale, that of “Harmonious interconnectedness” (Hunglemann et. al. 1985).

Others offer a simpler, if somewhat similar, description of SWB, seeing it as

...the integrating aspect of human wholeness

(which) is characterised by meaning and hope”

(Clark.et. al. 1991 p.68)
2.3.1 Relationship of SWB with other Concepts

Whatever the nature of spiritual well-being several authors have confirmed significant correlations between measures of spiritual well-being and measurements of other psychosocial variables.

2.3.1.1 Loneliness

Paloutzian and Ellison (1982) reported significant negative correlations between SWB and Existential well-being scores and Loneliness scores for samples of college students and middle aged women (American) using the abbreviated loneliness scale. The same result was reported by Miller (1985) for samples of chronically ill and healthy adults using the same scales.

Similar negative correlations are cited by Ellison (1983) for samples using the UCLA loneliness scale. Using a convenience sample of 107 older adults, Walton et al (1991) reported the same negative correlation for existential well-being and loneliness. Positive correlations were also cited by Ellison (1983) with scores on Crumbaugh and Maholick’s Purpose in Life scale, especially with the EWB subscale. As noted by Ellison, these other scales can be said to be measuring theoretically related concepts.
2.3.1.2 Anxiety

The concept of anxiety has also been shown to be similarly inversely correlated to spiritual well-being. Kaczorowski (1989) reported such a relationship in a sample of adults with a diagnosis of cancer, using the State-Trait Anxiety Inventory. Its conceptual relationship with spiritual well-being may be through the existential well-being construct. Anxiety connects with uncertainty, which is a theme found in a number of the SWBS items from the EWB sub scale.

2.3.1.3 Hope

A positive relationship is reported to exist between SWB and the concept of hope. Carson, Soeken & Grimm (1988) administered the SWBS and a State Trait Hope Scale to university students and found a positive overall relationship, and a stronger relationship with the existential component of the SWBS. Similarly a positive relationship was reported in a related study with HIV positive males (Carson et.al. 1990).

Further studies have identified positive relationships between SWB and hope when using the Nowotony Hope Scale (Mickley, Soeken & Belcher 1992, Mickley & Soeken 1993). Such results should be treated with caution due to the construction of the Nowotony Hope Scale. In discussing its development, Nowotony (1989) identified Spiritual Beliefs as one of six key hope
dimensions. Inspection of the remaining identified dimensions leads the author to believe that several other items connect with items on the SWBS and a strong positive correlation between scores on these two instruments is readily predicted on this basis alone.

2.3.1.4 Summary of Interrelationships

The above mentioned relationships may be seen to add to an understanding of the concept of SWB. Loneliness is a relational construct, and one dimension of spirituality can be presented as being that of relationship and interconnectedness. Anxiety can be argued to be a state of “non peace”, and thus a disruption to SWB, where being “at peace” may be viewed as a spiritual construct. The relationship between hope and SWB would appear to be quite close, and as such is suggestive of much overlap in conceptualisation. While it is beyond the scope of this study, these relationships beg the question as to what is a psychological concept, what is a spiritual one, and are existing definitional boundaries more artificial than real?

2.4 Nursing Research

There is a limited but growing set of studies into the spiritual domain as it relates to nursing. Kahn & Steeves (1993) describe the state of spiritual well-being research as being sparse and leading to few conclusions. No studies were identified that examined or compared the two instruments in question.
Thus the purpose of this section is to examine ways in which nursing research has engaged with the spiritual domain, supporting the position that this area of human understanding is viewed by other nurses as being worthy of research activity. The existing body of work can be divided into the areas of exploratory research, experiential research and relational research.

2.4.1 Exploratory Research

Exploratory research here refers to that research undertaken to discover what "is".

Boutell and Bozett (1990) examined nurses assessment of patients spiritual needs through a self report questionnaire. Two hundred and thirty eight responses were compiled. The key findings were that the spiritually related items reported to be most commonly assessed were: fear of medical procedures; source of strength; and feeling hope. The least frequently reported spiritual assessment items included: discussion of the patients unifying force; meaning in suffering; and concepts of transcendence. Boutell & Bozett do not explain how they constructed their instrument, nor do they make clear what theoretical foundations underpinned it. Among other findings was the suggestion that older nurses (50-59) and nurses working in psychiatric areas would be more likely to assess spiritual needs.

Highfield & Carson (1983) sought to investigate the degree to which a group of oncology nurses (n = 35) could identify signs of spiritual health/problems, and their degree of awareness of spiritual problems among their patients.
They found that the nurses identified "religious" issues as opposed to existential ones. The results were interpreted to suggest that this group of nurses saw spiritual issues as psychosocial ones, and that they were unable to identify many indicators of possible spiritual problems. Highfield and Carson used an existing framework of religious-existential needs to develop key spiritual needs. Their response rate (35%) could have influenced their findings in that some electing not to respond may have been unwilling to display ignorance in such an area.

Research into the spiritual dimension of nursing from authors outside of the United States was in little evidence in the literature search. One exception was that undertaken by Barbara Simsen in Britain. Simsen (1985, 1986), using a mixed quantitative and qualitative approach, sought to answer two questions:

"Do patients bring spiritual resources to the experience of illness and hospitalisation?; Do patients experience spiritual need during illness and hospitalisation?"

(Simsen 1986 p.41).

Simsen reports from the first part of the study (n=45) that patients were very willing to talk about their religious beliefs; and that personal beliefs and practices were rated more highly than institutional forms, with the implication that referral to chaplain/clergy may not always be appropriate for the patient.
The second part of the study (n=5) revealed themes/tasks of finding meaning, experiencing meaning, and anticipating meaning. Simsen’s descriptive study lends international weight to a broader conceptualisation of spiritual needs.

An important addition to this body of exploratory research is that recently completed by Ann Harrington (1993). This descriptive Australian study sought to examine spiritual nursing care concepts held by registered nurses in Hospice (n=10) and acute care (n=10) settings. The study’s outcomes indicated that while the delivery of spiritual care may occur in Australian settings, the type of spiritual care offered was a result of the interaction of three factors: the practice setting, the nurses’ values, and the quality of prior relevant nursing education.

2.4.2 Experiential Research

The term “experiential research” is used here by the author to describe research that focuses on individual experience as it relates to a particular phenomenon.

Stiles (1990) explored the hospice experience of nurses (n=11) and bereaved families (n=12) to uncover “the elements comprising the nurse-family spiritual relationship” (p. 235). Stiles concluded that this relationship could be likened to a “shining stranger” where great potential exists for both parties to illuminate each others lives. “Being with” was viewed as the principle spiritual dimension of nursing rather than doing for. The focus implicit in this finding is in conflict
with much that is written about “doing for” nursing spiritual interventions (eg. Fish & Shelly, McFarland & McFarlane 1989, Carson 1989).

In an analysis of interview data obtained from thirty recently diagnosed oncology patients, O'Connor, Wicker & Germino (1990) examined the individuals search for meaning. Major themes identified included: looking at the consequences of the cancer diagnosis; living with cancer; hope; seeking an understanding of the personal significance of the diagnosis. Two sources of support were identified; Faith and Social support. O'Connor et al note that 91% of the sample reported that God had an effect on their lives “most of the time” or “always”. Yet “87% of the sample claimed that religion was not important to their lives” (p173). This would appear to emphasise the need for nurses to ensure that their concept of the patients’ spiritual life extends beyond religious constructs.

Dennis (1991) employed a qualitative approach in an exploratory study of ten nurses from a “non-religious” sample who claimed to provide spiritual care. Using Watson's conceptual framework of caring, Dennis analysed spiritual care incident focussed interview data. Observations included that giving spiritual care was integral to practice for these nurses, that the nurse client interaction had a “soul to soul” nature, and that the hospital setting was not conducive or supportive in the provision of this aspect of care.
2.4.3 Relational Research

This term is used here to describe those research papers that seek to determine the existence and nature of conceptual relationships.

Miller (1985), as mentioned above, examined the relationship between loneliness and SWB in two samples, one with rheumatoid arthritis and one identified as “healthy”. The key practice implication from the study was the apparent importance of religious well-being to the chronically ill group, as part of their total coping strategy.

Lilley (1987 p.327) undertook to examine what extent of commonality existed between registered nurses’ perception of “human need fulfilment alterations in the client with uterine cancer”, and the perception held by the clients themselves. Utilising a sample of 15 Registered Nurses and 15 clients Lilly discovered differences in the rankings of need as provided by the two groups. Amongst these differences was the client group’s ranking of the human need for Spiritual experience ("to experience a religious thought, act, belief or feeling") at equal fourth, while the Registered Nurse group failed to list it in their top ten.

Hall & Lanig (1993) looked specifically at nurses professing a Christian faith and examined the way in which this group integrated spiritual care into their roles, and the caring behaviours reported by them. A convenience sample of
303 nurses attending a conference was used. Two findings were that older nurses were more comfortable in providing spiritual care, as were nurses who had held their Christian beliefs and values for greater periods of time. This supports the view that the nurses personal belief system will influence the possible provision of spiritual care.

2.5 Australian Historical Perspectives

In considering the apparent differences between the North American nursing literature's presentation of the spiritual domain and that of Australian nursing, a comparison of respective historical origins presents a possible explanation. Before doing so it must be noted that in examining "spirituality" from an historical or sociological perspective, the definition is restricted to a religious sub-set as this has been the aspect traditionally studied.

Australian white settlement beginnings were penal: they were marked by brutality, drunkenness and "immorality" (Smith 1988; Garvin 1987). Institutional religion was viewed with disdain from the outset (Conway 1985, p161; Smith, p.23) The Australian social identity that developed out of these beginnings resulted in a "God-rejecting, authority-resenting stereotype" that has appeared pre-eminent at moments in Australian history (Conway 1978, p.13)

One accessible indicator of spirituality in Australia is Church attendance. Bennett (1986) reports an attendance of around 25% in the early 1800s,
rising to 38% by 1870, (largely due to a population boom and significant numbers of migrants from Ireland and Scotland), and falling again to around 25% by 1939. The frequency of attendance implied by these figures is not stated. Kaldor (1987, p.22), defining attendance as at least monthly, reports a steady decline from a figure of 44% in 1950, to 24% in 1983-4. (FIGURE 1)

![Figure 1. Church Attendance in Australia 1950-1984
Percentage Attending Church at Least Monthly](image)

Smith (p.15) summates historico-social differences by noting that the founding of the Australian nation was
...in sharp contrast to the idealistic and democratic base upon which our American counterparts developed their sense of nationhood and personhood.

while Garvin (p.23) notes the particularly religious differences in speaking of...the idealistic beginnings of America where the Pilgrim Fathers had gone to establish the Kingdom of Heaven on Earth!

The argument that may be put then is that the beginnings of each country greatly influenced the place and purpose of religion amongst descendants and future settlers in both countries. To extrapolate spiritually it is suggested by the author that the contrasting beginnings of "hope, freedom, and a new start" and "despair, punishment and exile" have led ultimately to differing characteristics in the persona of both societies, perhaps most succinctly seen in the cynical Australian / optimistic American archetypes.

More recent Australian writers have commented on the present place of religion in society. Conway (1985, p.162) asserts that

There is no evidence that religious faith has ever been deeply and practically professed by more than a minority of Australians.
while Millikan (1981, p7) presents a related opinion in suggesting that Australians view religion as a private matter, and also that

The 'badge' of religion is a hindrance to acceptance in Australia.

The views expressed by Conway, Millikan and others may be seen to be supported by the 1991 census data where 74% of Australians claimed identification with a "Christian" religion while 12.9% claimed no religion. A further 10.2% declined to answer this optional census question. This last figure, plus the fact that the question on religion is the only optional item in the otherwise mandatory census questionnaire, would seem to support Millikan's observation as to the perception of religion as a private matter. The gap between those claiming a Christian religious affiliation and church attendance numbers provide confirmation of Conway's assertions.

This suggests that in approaching the question of the spiritual dimension of nursing within an Australian context cultural "baggage" can reasonably be expected to influence the perceptions and understandings of Australian nurses.
2.6. Theoretical Framework

The value of a theoretical framework to a research study is that it provides a foundation and rationale for predictions about the relationship between variables....

(Feldman 1990, p.92).

For the present study a framework that incorporated a spiritual health dimension was sought.

2.6.1 Spiritual Dimension in nursing Models

The spiritual dimension of human existence is recognised in a number of nursing models and theories.

One of the first nursing models was that forwarded by Faye Abdellah in 1960. This model was based on a problem solving method and included a typology of 21 nursing problems (Dycus et al 1989). Included was the problem "To facilitate progress towards achievement of personal spiritual goals" (Falco, 1990, p.133). Abdellah's model is nursing activity focused and offers little by way of discussion of relationships between concepts (See 1989 p.131) and as such will fail to provide guidance for the present study.

Virginia Henderson, in her foundation complex definition of nursing (first published in 1966), proposed 14 basic patient needs that constituted the foci
of nursing care. The eleventh of these was to "Worship according to one's faith" (DeMeester et al 1989, p.83). Canadian theorist Evelyn Adam has subsumed Henderson's constructs into her "Conceptual Model for nursing" (Creekmur et al 1989) but offers no further extension of this topic. The major limitation of these two examples is that human spirituality is only represented by the religious domain.

Within Joyce Travelbee's 1966 Human-to-Human Relationship model, nursing is defined as an interpersonal process where the nurses role includes assisting individuals to find meaning in the experiences of illness and suffering where necessary (Hobble, Lansinger, & Magers 1989 p.222). This existential aspect to nursing activity is a valuable contribution towards a more complete understanding of the spiritual dimension of nursing care. Recognition of the existential aspect of human spirituality is reflected in the instruments being considered by this study.

Travelbees' theory does explain some variables that may affect the establishment of a therapeutic relationship between nurse and patient.

(Hobble et al p.225.)

However, it does not provide enough detail to allow predictions about relationships between variables and is thus not suited to this study.
An holistic view of the "person" is presented in Erickson, Tomlin and Swain's 1983 "Modeling and Role-Modeling theory of Nursing' wherein the authors assert that

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Body, mind, emotion and spirit are a total unit and they
act together. They affect and control one another
interactively.
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(Erickson, Tomlin and Swain in Caldwell-Gwin et al 1989 p.269.).

Although acknowledging the spiritual domain by defining and embracing holism this theory is yet to theoretically define and operationalise

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....many of the concepts embedded in the fundamental constructs of environment, health, and nursing....
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(Stein 1989 p.345).

This limits the utility of this theory for the present study.

The provision of a spiritual environment, the recognition of existential-phenomenological forces, and the instillation of faith and hope are three of the ten carative factors postulated by Jean Watson (1979) as underpinning her proposed science of caring. These particular factors are directly spiritual in terms of their construction. Boyd and Mast note that Watson's model
...is unique in that it combines phenomenology, existentialism, metaphysics, and spiritualism with nursing's interest in care.

(Boyd & Mast 1989 p.382).

The strength of spiritual perspective afforded by this model suggests its value to research in this area. Certainly Watson's model is capable of incorporating the direction and purpose of this study. However, the model is both elaborate and abstract (Watson, in Boyd and Mast p.374) and its level of conceptual complexity is redundant to the scope of this study.

2.6.2 The Neumans Systems Model

Betty Neuman's 1982/89 conceptual model, described by Lancaster & Whall (1989 p.255) as being both comprehensive and timely in its adaptation of general systems theory to nursing, provides a suitable theoretical framework for this study. Within this model the metaparadigm concept of person is labelled client and described by Neuman as

an open system that interacts with the environment in order to promote harmony and balance between the internal and external environment. The client is a composite of physiological, psychological, sociocultural, developmental, and spiritual variables that are viewed as parts of the whole. Ideally the client as a system adjusts
successfully to internal and external stressors retaining the normal wellness level or system stability.

(Neuman 1990a, p257)

Of particular interest to the writer is the incorporation of spiritual variables to the later revision of the model (Neuman 1989; Pierce & Hutton 1992), an alteration that appears without explanation. The spiritual variable is

...viewed as innate, a component of the basic structure whether or not it is ever acknowledged by the client or client system.

(Neuman 1989, p.29)

This construct has particular application to an Australian context where spirituality may be considered to be undervalued or not recognised by many.

Health in this model is viewed as a continuum and

...is equated with optimal system stability, that is, the best possible wellness state at any given time.

(Neuman 1989 p.33).

Wellness is described in terms of system harmony (Neuman 1990b p.129). The notion of spiritual well-being has been presented elsewhere as a measure or assessment of spiritual wellness and consequently the Neuman
conceptualisation of health readily accommodates the spiritual well-being (wellness) construct.

The Neuman model focuses primarily upon two components, the nature of an individual's or group's response to stressors and also upon the nurse's activities that assist the person to best respond to stressors.


These stressors are characterised as forces that can impact upon system stability (Harris et al 1989) and are sub categorised by Neuman as being intrapersonal, interpersonal, and extrapersonal in nature (Cross 1990). The consequence of these stressors upon the client system is varied, subject to the system’s lines of resistance and defence. However, they represent a threat to the system in terms of its stability, and the role of the care giver can be seen in terms of maintaining or restoring optimal stability (ie. “the best possible state of wellness.” (Meleis 1991 p.298))

The diagnosis of a life threatening illness (eg. cancer) contains all the attributes of a human crisis (Salby & Glicksman 1985) and as such may be viewed as a stressor within the Neuman framework. The model would suggest that spiritual variables will be involved in the client's response to this stressor. Extrapolating from this it would be an expectation that an individual
with an oncology diagnosis would demonstrate different SWB scores to an individual without a significant health event. However, Neumans model does not suggest the direction nor magnitude of such differences, as many terms are not operationally defined and corresponding empirical indicators are yet to be identified (Lancaster & Whall 1989). It is the models theoretical support for the concepts central to this study that leads to its suitability here.

Neuman's model is not without its critics. Meleis (1991) contends that there is a lack of clarity in the presentation of central concepts such as health and wellness. There is the suggestion that "the model lends itself to "reductionism" rather than "holism.""(Cross 1990 p.274) plus the observation that the model is health focussed and as such is more multidisciplinary than nursing in its orientation (Cross 1990; Meleis 1991). These criticisms do not impact on the model's suitability for inclusion in this study.

2.6.3 Summation

Most nursing models and theories embrace the four metaparadigms of person, nurse, health, and the environment. This study required a nursing framework that embraced the concept of a spiritual dimension to health and, ideally, a wellness focus. Neuman's systems model provided an environment within which to ground the present study.
CHAPTER THREE  

METHOD

3.1 Instrumentation

The research involved the administration of a self reporting questionnaire that was built around two existing instruments: the SWBS and the JAREL SWBS.

3.2 Consent for instrumentation use

As the author was wanting to examine and compare two existing instruments, permission was sought from the original developers. For the JAREL scale Ruth Stolenwark, one of the original developers of the scale, was contacted and permission to freely use the tool was granted. Craig Ellison was located and contacted regarding the use of the SWBS. Permission in this instance was conditional upon the payment of a fee per usage. This was payed through the financial support of the Dept. of nursing of the University of Wollongong.

3.3 Approval process

The proposed research was forwarded to the Human Experimentation Ethics Committee of the University of Wollongong for approval. This was not immediately forthcoming as further information and assurances were sought on two subsequent occasions, including the seeking of a guarantee that the researcher would not use the study as an opportunity to proselytise. Such a request was the first of a number of examples throughout the course of this study that reflected the Australian discomfort with things “religious”. Approval
was gained and the researcher sought to initially implement the study in three rural oncology outpatient clinics.

Despite receiving initial approval from the respective hospitals to utilise these clinics a number of difficulties ensued. The researcher approached the Oncologists responsible for the clinics for their approval as an act of professional courtesy. While no correspondence was ever received from these doctors one hospital withdrew its approval citing discussions with the visiting specialists. The study went ahead at a second hospital, with the oncologist involved implementing his previously discussed option to preclude any patient judged by him to be unsuitable from being approached to participate in the study. Arrangements at the third hospital were delayed when it was discovered that the regional department of health had requested that all proposed research utilising facilities under its jurisdiction be vetted by a departmental research evaluation committee. This resulted in certain constraints being applied to the consent seeking procedure to be employed at that outpatients clinic which will be described elsewhere.

The oncology day centre attached to a fourth hospital (non-rural) was utilised with no approval difficulty, giving a total of three oncology groups.

Approval was also sought from the institutional ethics committee of a separate university so that a sample of undergraduate nursing students could
be included. This strategy was employed in recognition of the need to have a sample of sufficient size to allow an adequate statistical analysis and comparison of the two scales employed in the questionnaire. It was considered that the time available for the study would be inadequate to accumulate substantial numbers of oncology outpatients as this population was small in size and logistically difficult to access repeatedly due to the distances involved between rural centres. It was also noted that one of the instruments (SWBS) was initially validated with a sample of American college students.

3.4 Pilot Study

A pilot of the initial questionnaire was undertaken with a small group of oncology patients (N=5) at one of the centres. The questionnaire consisted of ten demographic items, two "short answer" questions ("What meaning does the word spiritual have for you?" and "How would you describe your spiritual health?"), and fifty seven statements using a six point Likert type scale (strongly agree to strongly disagree; no neutral position). The questionnaire is included here as Appendix one.

The demographic items sought information about age, gender, postcode (to allow for possible comparison based on localities), country of birth of the respondent and their parents, religion, level of education, perception of current health, and frequency of attendance at religious services.
The fifty seven items consisted of two existing instruments; Paloutzian & Ellison's Spiritual Well-Being scale and the JAREL Spiritual Well-being scale, which constituted forty one questions in total. Twelve of the remaining questions were constructed by the researcher in an attempt to extend the scope of the Paloutzian and Ellison scale, based on the model of spiritual needs suggested by Labun (1988). The final four questions were exploratory in nature, seeking information on the respondents perception of their freedom to express spiritual beliefs, their opportunity to talk about spiritual concerns, and their perception of Nurses responsibilities in the area of spiritual concerns (two questions).

The pilot experience resulted in a number of changes to the questionnaire. A decision was made to delete the two "short answer" questions. It was judged that the quality of answers was poor, indeed answers ranged from no response or single words, to a short phrase. Further, the length of the questionnaire was seen as too great taking up to thirty minutes to complete. Two of the pilot sample failed to complete the questionnaire on the basis of length. The researcher considered that given that one of the target groups was to be oncology outpatients, and that this group frequently included individuals who experienced problems with concentration due to low haemoglobin levels and/or the effects of medication, the questionnaire should be reduced in size.
Consequently the twelve items based on Labun's model were deleted, as were the two exploratory questions relating to freedom of expression and availability of opportunity (as described above). These two were removed as they were considered by the researcher to be more appropriate to an inpatient setting than an outpatient one. Further, their continued inclusion in the questionnaire could have lead to contextual differences in interpretation for the intended student group.

The two questions about Nurses responsibilities in spiritual care were retained, and these were placed between the two instruments as a boundary. Thus the final questionnaire (Appendix Two) consisted of ten demographic items, and forty three statements.

3.5 Sampling

Nonprobability sampling strategies were employed by the researcher. Five separate convenience samples were used, these being two sets of third year undergraduate nursing students at a rural university; oncology outpatients attending two rural outpatient centres; and clients of a metropolitan oncology day centre. (The three oncology samples provided small numbers of participants, and these groups were subsequently collapsed into a single oncology set.) Haber (1990 p.272) contends that the principal disadvantage in such sampling "...is that the risk of bias is greater than in any other type of sample." Given the primary goal of scale comparison in this study the issue of
bias is not viewed as critical to outcome. The limitations inherent in such a sample will restrict subsequent generalisability when considering the differences that may be observed between the student and oncology subsets.

3.6 Consent procedure

The consent procedure varied across settings. In the university all third year students in a nursing subject were approached in tutorial groups by the researcher who introduced the research and invited participation. A brief information sheet was then distributed to each student together with a consent form. Those students who elected to participate were then given the survey to complete.

This same series of steps were followed in the day care centre, except that individual approaches were made to all subjects viewed as suitable. Persons not approached were those who appeared upset or particularly unwell. This judgement was made by the researcher using his clinical background as an oncology nurse.

This procedure was employed at the first rural outpatient setting, however an additional number of possible subjects were not approached as they had been excluded by the oncologist involved. The stated reasons given for exclusion were that the person was believed likely to be upset by the topic of
the research or that the person was a subject in another "quality of life" research project.

The research management committee of the Department of Health imposed an additional step in the consent procedure utilised in the final setting by insisting that all persons scheduled to attend the outpatients on the day of the research be sent a letter in advance advising them of the research. This letter utilised the researcher's information sheet which was still offered to those individuals indicating a willingness to participate. The recipients of this letter were instructed to advise the outpatients clerk on their arrival if they wished to participate. The clerk then advised the researcher which persons could be approached for consent.

3.7 Ethical considerations

The process of informed consent is pivotal to the ethical conduct of human research (Nieswiadomy 1993 p.43). While all steps were taken to ensure the acquisition of informed consent, a number of related ethical issues were recognised and addressed in the course of the study. These were anonymity, confidentiality, dependency and coercion.
3.7.1 Anonymity

Anonymity of the students responses was assured with the instrument being distributed and collected in sets of approximately twenty (tutorial groups). In the oncology clinics however anonymity could not be assured as the researcher distributed and collected individual copies of the instrument. For this reason the researcher chose not to examine completed forms until the end of each day when a number would be available and the possibility of individual identification would be lessened.

3.7.2 Confidentiality

Confidentiality was achieved through the use of a collection code only on the completed forms, while the signed consent forms were collected and stored separately from the data forms. This ensured that no individual response could be identified in the study. However, confidentiality could be argued to have been breached in that the researcher knew, by association, that those persons attending the oncology centres had a current or recent history of cancer. Such knowledge is unavoidable when samples are medical diagnosis specific and signed consent forms are obtained.

3.7.3 Dependency and Coercion

The issues of dependency and coercion needed to be addressed from two perspectives. Firstly, the utilisation of university students, while perhaps time
honoured has not always been honourable when considering the possibility of coercion due to the students perception of a dependent or power relationship existing with the researcher, or the researcher's department. The National Health and Medical Research Council (1992 p.3) notes that

Special care must be taken in relation to consent, and to safeguarding individual rights and welfare where the research involves ... those in dependant relationships..

As the students sampled in this study were taught by the researcher there was the appearance of a dependant relationship that needed to be addressed. To reduce the perception of possible coercion the researcher utilised the final twenty minutes of a two hour tutorial session and indicated that those not wishing to participate were free to go. Further, the information sheet made clear that the research was not related to the subject, and that non-participation would in no way influence the students outcome in the subject.

It may be argued that this procedure was less than optimal in avoiding the appearance of coercion. A possible alternative strategy would have involved the approach and distribution being conducted by a third party, unrelated to the context of the students' learning environment.
The other coercion issue exists with the conduct of research in health care settings where a dependent relationship exists between the health care provider and/or facility and the recipient. The researcher took great care to identify himself as a post graduate student not belonging to the health care facility. Further, the information sheet, consent form and advance letter (where required) all clearly stated that non participation would in no way influence the care, treatment or services received. In this way it was hoped that the appearance of coercion would be avoided. Given the less than complete participation rate from the student sample, and the very low participation rate in the oncology sample, it could be suggested that an abuse of any real or perceived dependant relationships did not occur.

3.7.4 Storage of Data

In accordance with ethical approval policy the returned questionnaires, which had no personal identifiers, were stored in a locked filing cabinet. The transcribed information was entered on computer with password security.

3.8 Statistical Methods

The first focus of this study is to examine the underlying structure of the two instruments. The approach to be employed is that of exploratory factor analysis. Babbie (1990 p 313) notes that
Factor analysis is used to discover patterns among the variations in values of several variables, essentially through the generation of artificial dimensions (factors) that correlate highly with several of the real variables.

Portney & Watkins (1993) identify several steps followed in factor analysis, which will be briefly reviewed here.

A correlation matrix is first created using all test items. Groups of variables are then “extracted” on the basis of the strength of their linear correlation, into principal components (or factors). These factors are rank ordered on the basis of the percentage of variance accounted for. An eigenvalue is assigned by the process to each of these factors. The eigenvalue represents the proportion of total variance the factor represents. While the preceding steps are automatically undertaken by the computer, a decision now needs to be made as to the number of factors to be selected for further analysis. The standard procedure is to take the number of factors with eigenvalues greater than, or equal to, a value of “1”. A factor matrix is then computed that indicates the degree of fit of each item on each factor. This degree of fit is called the factor loading. The next phase in the analysis is factor rotation, a mathematical manoeuvre that seeks to present
A unique statistical solution so that each variable relates highly to only one factor.


A number of methods are available at the rotation stage, with the most common approach being the varimax rotation. The outcome of rotation is the creation of a new factor matrix. Using the resulting factor loadings, each variable (or item) can be allocated to one of the factors based on its new factor loading value. The final stage of the process is to name the factors based on whatever underlying conceptual connection is gleaned from the items now constituting each factor.

This multivariate method will allow a comparison between the resulting factor structure of the two instruments arising from this study, and the existing sub scales reported by the instrument creators.

The second purpose is to examine the relationship between the two instruments. This will be undertaken through the calculation of a measure of correlation (the Pearson product-moment correlation coefficient). Measures of correlation are measures of the degree of linear relationship existing between two variables. Generally the closer a correlation value is to +/- 1.0 the stronger the relationship between the two variables being examined. The precise meaning of correlation values is however clouded as there
...can be no single scheme for interpreting correlation coefficients which will be applicable in all cases.

( Martin and Pierce 1994, p113).

This study will adopt the statistical convention of considering correlation coefficients of greater than 0.7 as being indicators of a high level of relatedness existing between the variables under examination (Munro & Page 1993 p. 181).

The last part of the study is to examine for variations in scores of spiritual well-being arising from demographic factors, specifically gender, age, religious affiliation, frequency of attendance at religious services, and health. This will be achieved through the use of the Analysis of Variance test (ANOVA). This statistical procedure addresses the null hypothesis

...that there is no difference among the sample means; that is, all the sample means are equal.


The assumptions for ANOVA are identified by Munro & Page (1993 p.111) as being that the level of measurement of the dependent variable (SWB) be either ratio or interval level; that there be independent groups, and the groups have equal variances; and that the SWB measure be normally distributed. However, ANOVA has been described as being flexible enough to
accommodate a less than strict adherence to these assumptions, and still provide a useful result (Munro & Page, 1993).

The advantage of a single test such as ANOVA over multiple application of t-tests is that the latter approach increases the risk of a Type I error (rejecting a null hypothesis when it is true) (Nieswiadomy 1993 p. 291).

ANOVA results in the calculation of the F ratio, being "...the ratio of between to within variance.." (Munro & Page 1993 pg, 118). This outcome is compared to a set of calculated critical values to determine the likelihood of a significant finding.

A finding of consequence with ANOVA does not reveal which of the group means are significantly different from each other. The above mentioned risk of increased Type I errors associated with multiple t-tests precludes that approach as a post hoc analysis technique. In this study the Scheffe procedure will be employed in the event of a significant ANOVA outcome. This statistical technique is designed to reduce the chance of a Type I error by calculating higher critical values for the F ratio based on the number of groups under examination (Munro & Page 1993, p.122).
CHAPTER FOUR RESULT

4.1 Sample details

A total of 244 potential subjects were approached, comprising of student groups and oncology outpatients. Of these, 153 agreed to participate, and this number of surveys were distributed across the resulting three sample groups. Surveys were directly distributed and were returned in person to the researcher. The resulting return rate from distribution was 100% in all groups. Group 1 and group 2 consisted of final year nursing students enrolled in a Diploma of Health Science (nursing) program. Group 3 is the result of three oncology groups whose individual numbers were too small to allow separate comparison. The number agreeing to participate varied across the groups, ranging from 71.7% for group 1 to 34.5% for group 3. Not all the returned forms were completed. As the instruments being used were dependent upon 100% completion for interpretation, the author determined that incomplete forms would be discarded. Participation and completion rates are presented in Table 1.

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Approached</th>
<th>Participated</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>92</td>
<td>66 (71.7%)</td>
<td>56 (59.7%)</td>
</tr>
<tr>
<td>Group 2</td>
<td>96</td>
<td>67 (69.7%)</td>
<td>55 (57.2%)</td>
</tr>
<tr>
<td>Group 3</td>
<td>58</td>
<td>20 (34.5%)</td>
<td>19 (32.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>244</td>
<td>153 (62.7%)</td>
<td>130 (53.3%)</td>
</tr>
</tbody>
</table>
The two student groups displayed similar rates, with around a two thirds participation rate. Greater than 10% of those forms returned by both groups were found to be incomplete. The non participation rate in the oncology group was more than twice that of the students. The influence this participation rate has on the subsequent findings cannot be accurately determined. However, the possible impact will be discussed elsewhere in this study.

4.2 Demographic data

Ten information items were collected from respondents. Seven of these are presented in this section. The remaining items (postcode, father's place of birth, mothers place of birth) are excluded as they contribute nothing to the study at hand due to the lower than anticipated number of oncology participants recruited.

4.2.1 Gender

The samples were predominantly female. This is expected from the student groups which were drawn from an undergraduate nursing program. The distribution in group three more closely approximates the norm. Table 2 shows the gender distribution for the three sample groups plus the percentages revealed in the 1991 NSW census data. The samples cannot be seen as representative of the wider population in this item.
Table 2

GENDER DISTRIBUTION BY GROUP AND NSW CENSUS

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Totals</th>
<th>NSW 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>46 (82.1%)</td>
<td>48 (87.3%)</td>
<td>11 (57.9%)</td>
<td>105 (80.8%)</td>
<td>50.4%</td>
</tr>
<tr>
<td>Male</td>
<td>10 (17.9%)</td>
<td>7 (12.7%)</td>
<td>8 (42.7%)</td>
<td>25 (19.2%)</td>
<td>49.6%</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>55</td>
<td>19</td>
<td>130</td>
<td></td>
</tr>
</tbody>
</table>

4.2.2 Age

The age of the samples is indicated in Table 3. As is expected from the sample groups, the students have a lower average age than the oncology group. The large proportion of older students is a feature of the student groups.

Table 3

RANGE, MEAN, AND STANDARD DEVIATION OF AGE BY GROUP

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range (years)</td>
<td>20 - 49</td>
<td>19 - 42</td>
<td>37 - 69</td>
<td>19 - 69</td>
</tr>
<tr>
<td>Mean</td>
<td>24.6</td>
<td>24.3</td>
<td>55.3</td>
<td>28.6</td>
</tr>
<tr>
<td>S. D.</td>
<td>7.0</td>
<td>6.7</td>
<td>11.6</td>
<td>13.0</td>
</tr>
</tbody>
</table>
4.2.3 Health

Respondents were asked to rate their overall health from excellent (scored as 4) to poor (scored as 1). Table 4 presents the group scores. Despite the existence of a cancer diagnosis, the oncology group reported only a slightly lower mean score than the first student group.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.9</td>
<td>3.3</td>
<td>2.6</td>
<td>3.0</td>
</tr>
<tr>
<td>S. D.</td>
<td>0.6</td>
<td>0.5</td>
<td>0.8</td>
<td>0.65</td>
</tr>
</tbody>
</table>

4.2.4 Place of Birth

Place of birth was used as an indicator of the Australianness of the sample. Table 5 illustrates the distribution of country of birth. The sample can be described as being overwhelmingly Australian by birth, and as such no further use will be made of this item.
Table 5

PLACE OF BIRTH BY GROUP

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>52 (92.9%)</td>
<td>54 (98.2%)</td>
<td>16 (84.2%)</td>
<td>122 (93.8%)</td>
</tr>
<tr>
<td>U. K.</td>
<td>4 (7.1%)</td>
<td>0</td>
<td>2 (10.5%)</td>
<td>6 (4.6%)</td>
</tr>
<tr>
<td>Asia</td>
<td>0</td>
<td>1 (1.8%)</td>
<td>0</td>
<td>1 (0.8%)</td>
</tr>
<tr>
<td>Europe</td>
<td>0</td>
<td>0</td>
<td>1 (5.3%)</td>
<td>1 (0.8%)</td>
</tr>
</tbody>
</table>

4.2.5 Religion

Religious affiliation was selected as a possible discriminating variable in the interpretation of the SWB scores. The distribution of religion across the sample, together with NSW 1991 census comparisons, is presented in Table 6. While the combined sample and the student groups can be said to be similar to the general population, the oncology group is not, with Catholics under represented and Anglicans over represented. The group “other” in this sample consisted of persons who either identified another (protestant/christian) religion, or merely described themselves as “Christians”. 
Table 6

RELIGION BY GROUP AND NSW CENSUS

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
<th>NSW 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catholic</td>
<td>19 (33.9%)</td>
<td>19 (34.5%)</td>
<td>2 (10.5%)</td>
<td>40 (30.8%)</td>
<td>29.5%</td>
</tr>
<tr>
<td>Anglican</td>
<td>15 (26.8%)</td>
<td>14 (25.5%)</td>
<td>14 (73.7%)</td>
<td>43 (33.1%)</td>
<td>27.3%</td>
</tr>
<tr>
<td>Uniting</td>
<td>5 ( 8.9%)</td>
<td>9 (16.4%)</td>
<td>1 ( 5.3%)</td>
<td>15 (11.5%)</td>
<td>6.5%</td>
</tr>
<tr>
<td>Other Protestant</td>
<td>11 (19.7%)</td>
<td>7 (12.7%)</td>
<td>0</td>
<td>18 (13.8%)</td>
<td>16.9%</td>
</tr>
<tr>
<td>None</td>
<td>6 (10.7%)</td>
<td>6 (10.9%)</td>
<td>2 (10.5%)</td>
<td>14 (10.8%)</td>
<td>10%</td>
</tr>
</tbody>
</table>

4.2.6 Frequency of Attendance at a Religious Service

Some authors have suggested that stated religion alone is not a strong predictor of faith commitment, and frequency of attendance at a religious service is a useful co-variable (Ireland & Rule 1991). The item used to measure this factor is derived from that used in the demographic items association with the JAREL SWB scale. Table 7 summarises the distribution within the sample. One modification resulting from the data set was the need to modify the option “yearly” to “once or twice a year”. This change was made in response to the notable number of answers that indicated a twice yearly attendance pattern (usually “Christmas and Easter”). While 89% of the sample identified a religious affiliation, only 12% attend monthly, and 22% weekly or more often. The “other” category was used by those whose normal
attendance was infrequent and connected with events such as baptisms, weddings and funerals.

Table 7

FREQUENCY OF ATTENDANCE AT RELIGIOUS SERVICE (IF ABLE)

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; weekly</td>
<td>3 (5.4%)</td>
<td>2 (3.6%)</td>
<td>5 (3.8%)</td>
<td></td>
</tr>
<tr>
<td>Once a week</td>
<td>10 (17.9%)</td>
<td>10 (18.2%)</td>
<td>4 (21.1%)</td>
<td>24 (18.5%)</td>
</tr>
<tr>
<td>Once a month</td>
<td>10 (17.9%)</td>
<td>4 (7.3%)</td>
<td>2 (10.5%)</td>
<td>16 (12.3%)</td>
</tr>
<tr>
<td>1-2 times per year</td>
<td>19 (34%)</td>
<td>27 (49%)</td>
<td>11 (57.9%)</td>
<td>57 (43.8%)</td>
</tr>
<tr>
<td>Not at all</td>
<td>9 (16.1%)</td>
<td>10 (18.2%)</td>
<td>2 (10.5%)</td>
<td>21 (16.3%)</td>
</tr>
<tr>
<td>Other</td>
<td>5 (8.9%)</td>
<td>2 (3.6%)</td>
<td>7 (5.4%)</td>
<td></td>
</tr>
</tbody>
</table>

4.2.7 Level of Education

This item sought to describe the educational level of the respondents. However, as the university students universally indicated their current level of educational achievement rather than that prior to commencing their course, this item offered no real spread of responses (113 or 87% answered “University”). The item was not used in subsequent analysis.
4.3 Spiritual Well-being Scores

Both instruments provide a global score for SWB. Maximum possible scores are 120 for the SWBS, and 126 for the JAREL SWBS.

Scores for the SWBS ranged from 55 to 120, and the skewness measure was 0.378. Scores for the JAREL SWBS ranged from 63 to 124, and the skewness measure was 0.037 for the combined samples.

Table 8 presents ranges and mean scores for the SWBS, while the range and mean scores for the JAREL SWB scale are located in Table 9.

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td>55 - 120</td>
<td>55 - 119</td>
<td>62 - 116</td>
<td>55 - 120</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>88.3</td>
<td>84.9</td>
<td>88.4</td>
<td>86.85</td>
</tr>
<tr>
<td><strong>S.D</strong></td>
<td>17.11</td>
<td>15.45</td>
<td>16.99</td>
<td>16.37</td>
</tr>
</tbody>
</table>
### Table 9

**RANGE, MEAN AND STANDARD DEVIATION FOR JAREL SWBS SCORES**

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td>63 - 124</td>
<td>64 - 117</td>
<td>77 - 123</td>
<td>63 - 124</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>96.9</td>
<td>94.6</td>
<td>97.3</td>
<td>95.9</td>
</tr>
<tr>
<td><strong>S.D.</strong></td>
<td>13.23</td>
<td>11.06</td>
<td>12.71</td>
<td>12.24</td>
</tr>
</tbody>
</table>

### 4.3.1 Sub-scales

Each instrument purports a number of sub scales. The two SWBS sub scales each have ten items, allowing for a maximum score of 60. Range, mean and standard deviation for these scores are presented in tables 10 and 11.

### Table 10

**RANGE, MEAN AND STANDARD DEVIATION FOR RWB SCORES**

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td>10 - 60</td>
<td>10 - 60</td>
<td>28 - 60</td>
<td>10 - 60</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>40.4</td>
<td>38.4</td>
<td>44.8</td>
<td>40.19</td>
</tr>
<tr>
<td><strong>S.D.</strong></td>
<td>13.30</td>
<td>12.24</td>
<td>9.28</td>
<td>12.44</td>
</tr>
</tbody>
</table>
Table 11
RANGE, MEANS AND STANDARD DEVIATION FOR EWB SCORES

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>34-60</td>
<td>22-60</td>
<td>33-60</td>
<td>22-60</td>
</tr>
<tr>
<td>Mean</td>
<td>47.9</td>
<td>46.5</td>
<td>43.6</td>
<td>46.7</td>
</tr>
<tr>
<td>S.D.</td>
<td>7.67</td>
<td>8.90</td>
<td>8.6</td>
<td>8.40</td>
</tr>
</tbody>
</table>

The three JAREL Sub scales comprise seven items each, allowing for a maximum score of 42. The distribution of scores for these scales is presented in tables 12 to 14.

Table 12
RANGE, MEAN AND STANDARD DEVIATION FOR FBD SCORES

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>13-42</td>
<td>19-42</td>
<td>23-42</td>
<td>13-42</td>
</tr>
<tr>
<td>Mean</td>
<td>31.68</td>
<td>31.2</td>
<td>33.0</td>
<td>31.68</td>
</tr>
<tr>
<td>S.D.</td>
<td>5.92</td>
<td>5.47</td>
<td>4.96</td>
<td>5.59</td>
</tr>
</tbody>
</table>

Table 13
RANGE, MEAN AND STANDARD DEVIATION FOR LSR SCORES

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>14-42</td>
<td>18-42</td>
<td>25-42</td>
<td>14-42</td>
</tr>
<tr>
<td>Mean</td>
<td>30.64</td>
<td>29.2</td>
<td>30.8</td>
<td>30.1</td>
</tr>
<tr>
<td>S.D.</td>
<td>5.98</td>
<td>5.16</td>
<td>5.49</td>
<td>5.58</td>
</tr>
</tbody>
</table>
Table 14

RANGE, MEAN AND STANDARD DEVIATION FOR LSSA SCORES

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>25 - 42</td>
<td>18 - 42</td>
<td>23 - 41</td>
<td>18 - 42</td>
</tr>
<tr>
<td>Mean</td>
<td>34.6</td>
<td>34.1</td>
<td>33.5</td>
<td>34.2</td>
</tr>
<tr>
<td>S.D.</td>
<td>4.18</td>
<td>4.39</td>
<td>5.67</td>
<td>4.49</td>
</tr>
</tbody>
</table>

4.4 Instrument correlations

The relationship between and within the two instruments was examined through a calculation of correlation coefficients.

4.4.1 Within instrument correlations

The data set was examined to determine the degree of correlation existing between global and sub scale scores for both instruments. The correlation coefficients are presented in tables 15 and 16.

Table 15

SWBS SUB SCALE CORRELATION

<table>
<thead>
<tr>
<th></th>
<th>EWB</th>
<th>RWB</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWBS</td>
<td>.6681</td>
<td>.8646</td>
</tr>
<tr>
<td>EWB</td>
<td></td>
<td>.2039</td>
</tr>
</tbody>
</table>
The stronger correlation between the RWB sub-scale and the SWBS is noted. The low correlation between the two subscales is suggestive of a low level of overlap between them.

Table 16

<table>
<thead>
<tr>
<th></th>
<th>FBD</th>
<th>LSSA</th>
<th>LSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAREL SWBS</td>
<td>.8822</td>
<td>.6045</td>
<td>.8107</td>
</tr>
<tr>
<td>FBD</td>
<td></td>
<td>.3102</td>
<td>.6674</td>
</tr>
<tr>
<td>LSSA</td>
<td></td>
<td></td>
<td>.1690</td>
</tr>
</tbody>
</table>

The strong correlation between the JAREL sub-scales LSR and FBD, and the weaker correlation between the sub-scales FBD and LSSA is noted. These correlations may be indicative of a lack distinctiveness existing between the sub-scales.

4.4.2 Inter-instrument Correlations

The data was examined for the degree of correlation between the two instruments. A correlation of .8187 was calculated for the total sample group.
The correlations between the scales and separate sub-scales are presented in Table 17.

### Table 17

**INTER-SCALE / SUB-SCALE CORRELATIONS**

<table>
<thead>
<tr>
<th></th>
<th>JAREL SWBS</th>
<th>FBD</th>
<th>LSR</th>
<th>LSSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWBS</td>
<td>.8187</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EWB</td>
<td>.5345</td>
<td>.3365</td>
<td>.3131</td>
<td>.6271</td>
</tr>
<tr>
<td>RWB</td>
<td>.7157</td>
<td>.7715</td>
<td>.7347</td>
<td>.0865</td>
</tr>
</tbody>
</table>

The between instrument correlation (.8187) supports the commonality of purpose for the two instruments. The two JAREL SWBS subscales that conceptually equate to the SWBS subscales showed moderate levels of association (EWB and LSSA = 0.6271; RWB and FBD 0.7715). However, the correlation coefficient of 0.7347 for LSR and RWB was not anticipated on the basis of the sub-scales respective items.

### 4.5 Factor Analysis

The instruments were examined separately through factor analysis to explore their structure from the perspective of the collected data.
4.5.1 Factor Analysis of SWBS

The Kaiser-Meyer-Olikin (KMO) measure of sampling adequacy is a useful guide to the suitability of the data for factor analysis (Norusis, no date, p.317). The KMO measure for the SWBS data set was 0.91886 which is indicative that the data is most suitable for factor analysis.

Principle components analysis extracted three factors with Eigenvalues greater than 1.0. These three factors accounted for 70.1% of total variance. Table 18 lists eigenvalues and related variance for eight factors.
TABLE 18

INITIAL STATISTICS FOLLOWING PRINCIPAL-COMPONENTS ANALYSIS
FOR SWBS

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>EIGENVALUE</th>
<th>PERCENTAGE OF VARIANCE</th>
<th>CUMMULATIVE PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWBS1</td>
<td>8.20440</td>
<td>41.0</td>
<td>41.0</td>
</tr>
<tr>
<td>SWBS2</td>
<td>4.71377</td>
<td>23.6</td>
<td>64.6</td>
</tr>
<tr>
<td>SWBS3</td>
<td>1.10478</td>
<td>5.5</td>
<td>70.1</td>
</tr>
<tr>
<td>SWBS4</td>
<td>0.94149</td>
<td>4.7</td>
<td>74.8</td>
</tr>
<tr>
<td>SWBS5</td>
<td>0.67918</td>
<td>3.4</td>
<td>78.2</td>
</tr>
<tr>
<td>SWBS6</td>
<td>0.53278</td>
<td>2.7</td>
<td>80.9</td>
</tr>
<tr>
<td>SWBS7</td>
<td>0.50605</td>
<td>2.5</td>
<td>83.4</td>
</tr>
<tr>
<td>SWBS8</td>
<td>0.48667</td>
<td>2.4</td>
<td>85.8</td>
</tr>
</tbody>
</table>

Orthogonal rotation (Varimax method) was performed. A three factor solution was selected by the program. The resulting rotated factor matrix is presented in Table 19.
Table 19

ROTATED FACTOR MATRIX FOR SWBS

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWBS1</td>
<td>.84805</td>
<td>-.00127</td>
<td>.14239</td>
</tr>
<tr>
<td>SWBS2</td>
<td>.10438</td>
<td>.25079</td>
<td>.82514</td>
</tr>
<tr>
<td>SWBS3</td>
<td>.82312</td>
<td>.03179</td>
<td>.07456</td>
</tr>
<tr>
<td>SWBS4</td>
<td>.14008</td>
<td>.74674</td>
<td>-.01102</td>
</tr>
<tr>
<td>SWBS5</td>
<td>.76123</td>
<td>.18978</td>
<td>.12545</td>
</tr>
<tr>
<td>SWBS6</td>
<td>.21710</td>
<td>.57636</td>
<td>.28652</td>
</tr>
<tr>
<td>SWBS7</td>
<td>.89788</td>
<td>.08440</td>
<td>-.07810</td>
</tr>
<tr>
<td>SWBS8</td>
<td>0.4698</td>
<td>.86272</td>
<td>.00425</td>
</tr>
<tr>
<td>SWBS9</td>
<td>.86117</td>
<td>.11999</td>
<td>.08966</td>
</tr>
<tr>
<td>SWBS10</td>
<td>.00135</td>
<td>.74902</td>
<td>.30056</td>
</tr>
<tr>
<td>SWBS11</td>
<td>.87088</td>
<td>.15054</td>
<td>-.03714</td>
</tr>
<tr>
<td>SWBS12</td>
<td>.06579</td>
<td>.69920</td>
<td>.22359</td>
</tr>
<tr>
<td>SWBS13</td>
<td>.84210</td>
<td>.03845</td>
<td>.01875</td>
</tr>
<tr>
<td>SWBS14</td>
<td>-.03275</td>
<td>.85941</td>
<td>.03953</td>
</tr>
<tr>
<td>SWBS15</td>
<td>.90543</td>
<td>.10617</td>
<td>-.04614</td>
</tr>
<tr>
<td>SWBS16</td>
<td>-.05896</td>
<td>.40165</td>
<td>.74575</td>
</tr>
<tr>
<td>SWBS17</td>
<td>.91235</td>
<td>.09536</td>
<td>-.02393</td>
</tr>
<tr>
<td>SWBS18</td>
<td>.13258</td>
<td>.73923</td>
<td>.25487</td>
</tr>
<tr>
<td>SWBS19</td>
<td>.92115</td>
<td>.07123</td>
<td>.01139</td>
</tr>
<tr>
<td>SWBS20</td>
<td>.14030</td>
<td>.71518</td>
<td>.07368</td>
</tr>
</tbody>
</table>
4.5.2 Interpretation of a three factor solution

Each of the twenty variables was allocated to one factor according to the strength of correlation. This resulted in a three factor outcome, with Factor 1 loading 10 variables, Factor 2 loading 8 variables, and Factor 3 with 2 variables.

SWBS Factor 1

Inspection of the Factor 1 variables reveals that each question refers to "God". No other variables make this reference, hence the factor has incorporated all "God" aspects contained in the instrument. This finding supports the RWB subscale of the SWBS.

SWBS Factor 2

The variables loading on Factor two were as follows:
I believe that life is a positive experience;
I feel unsettled about my future;
I feel very fulfilled and satisfied with life;
I feel a sense of well-being about the direction my life is headed in;
I don't enjoy much about life;
I feel good about my future;
Life doesn't have much meaning;
I believe there is some real purpose for my life.
These items speak about attitude to life now and feelings about the future. They are about a sense of “being”, both current and future. A possible name for this factor is “Life-being”.

**SWBS Factor 3**

Factor three has two variables:

I don't know who I am, where I came from, or where I'm going;

I feel that life is full of conflict and unhappiness.

It is difficult to link these two items. One is about identity, while the other is a life perception item, that might have been expected to connect with Factor two. No name is suggested for this grouping.

**4.5.3 Factor analysis of JAREL SWBS**

The KMO measure for the JAREL SWBS data set was 0.80417. This indicates that the data is suitable for factor analysis.

Principle components analysis extracted five factors with Eigenvalues greater than 1.0. These five factors accounted for 63.2% of total variance. Table 20 sets out initial statistics for the first eight factors identified through this analysis.
Orthogonal rotation (Varimax method) was performed. A five factor solution was selected by the program. The resulting rotated factor matrix is presented in table 21.
Table 21

ROTATED FACTOR MATRIX FOR JAREL SWBS

<table>
<thead>
<tr>
<th>JAREL1</th>
<th>FACTOR 1</th>
<th>FACTOR 2</th>
<th>FACTOR 3</th>
<th>FACTOR 4</th>
<th>FACTOR 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAREL1</td>
<td>0.88840</td>
<td>-0.09249</td>
<td>0.11275</td>
<td>0.06308</td>
<td>-0.05554</td>
</tr>
<tr>
<td>JAREL2</td>
<td>0.53992</td>
<td>0.04467</td>
<td>0.51144</td>
<td>-0.04876</td>
<td>0.32190</td>
</tr>
<tr>
<td>JAREL3</td>
<td>0.14552</td>
<td>0.14013</td>
<td>0.13226</td>
<td>0.27549</td>
<td>0.69260</td>
</tr>
<tr>
<td>JAREL4</td>
<td>0.04140</td>
<td>0.66672</td>
<td>0.39639</td>
<td>0.15283</td>
<td>0.22999</td>
</tr>
<tr>
<td>JAREL5</td>
<td>0.48789</td>
<td>0.17394</td>
<td>0.44671</td>
<td>0.01578</td>
<td>0.28148</td>
</tr>
<tr>
<td>JAREL6</td>
<td>0.70969</td>
<td>0.19922</td>
<td>-0.06821</td>
<td>-0.23884</td>
<td>0.15345</td>
</tr>
<tr>
<td>JAREL7</td>
<td>-0.14307</td>
<td>-0.04327</td>
<td>-0.40058</td>
<td>-0.33470</td>
<td>0.59439</td>
</tr>
<tr>
<td>JAREL8</td>
<td>0.86260</td>
<td>-0.00577</td>
<td>-0.00397</td>
<td>-0.07446</td>
<td>0.01679</td>
</tr>
<tr>
<td>JAREL9</td>
<td>0.10883</td>
<td>0.80885</td>
<td>0.06345</td>
<td>0.06203</td>
<td>0.00514</td>
</tr>
<tr>
<td>JAREL10</td>
<td>0.02720</td>
<td>0.59333</td>
<td>0.60977</td>
<td>-0.01405</td>
<td>0.04879</td>
</tr>
<tr>
<td>JAREL11</td>
<td>0.04347</td>
<td>0.75741</td>
<td>0.17115</td>
<td>0.22589</td>
<td>0.04409</td>
</tr>
<tr>
<td>JAREL12</td>
<td>0.77018</td>
<td>0.01240</td>
<td>-0.01456</td>
<td>0.14580</td>
<td>-0.06692</td>
</tr>
<tr>
<td>JAREL13</td>
<td>-0.04714</td>
<td>0.21436</td>
<td>0.74430</td>
<td>-0.02438</td>
<td>0.01054</td>
</tr>
<tr>
<td>JAREL14</td>
<td>0.78650</td>
<td>-0.00712</td>
<td>0.13704</td>
<td>0.21259</td>
<td>-0.15670</td>
</tr>
<tr>
<td>JAREL15</td>
<td>-0.15069</td>
<td>0.43071</td>
<td>0.11764</td>
<td>0.25020</td>
<td>0.50838</td>
</tr>
<tr>
<td>JAREL16</td>
<td>-0.08176</td>
<td>0.49689</td>
<td>0.52472</td>
<td>0.16388</td>
<td>0.24483</td>
</tr>
<tr>
<td>JAREL17</td>
<td>0.00442</td>
<td>0.29176</td>
<td>-0.04785</td>
<td>0.65145</td>
<td>-0.03082</td>
</tr>
<tr>
<td>JAREL18</td>
<td>0.16577</td>
<td>-1.0872</td>
<td>0.19186</td>
<td>0.69425</td>
<td>0.21678</td>
</tr>
<tr>
<td>JAREL19</td>
<td>0.06297</td>
<td>0.07880</td>
<td>0.59845</td>
<td>0.17222</td>
<td>-0.10439</td>
</tr>
<tr>
<td>JAREL20</td>
<td>0.88708</td>
<td>-0.05451</td>
<td>-0.04941</td>
<td>0.15887</td>
<td>0.04802</td>
</tr>
<tr>
<td>JAREL21</td>
<td>0.04080</td>
<td>0.30268</td>
<td>0.06924</td>
<td>0.56978</td>
<td>0.05404</td>
</tr>
</tbody>
</table>

4.5.4 Interpretation of a Five Factor Solution

Allocation of variables across the factors by correlations suggested the following distribution.

Factor 1 eight variables
Factor 2 three variables
Factor 3 four variables
Factor 4 three variables
Factor 5 three variables

Factor 1 JAREL SWBS

Factor 1 variables are as follows:

Prayer is an important part of my life;
I believe I have spiritual well-being;
I feel there is a close relationship between my spiritual beliefs and what I do;
I believe in an after life;
God has little meaning in my life;
Prayer does not help me in making decisions;
Belief in a supreme being has no part in my life.

These items appear to be connecting with spiritual/religious belief and practice. A possible label for this factor is “Faith”. This factor contains five of the seven items comprising the Sub scale “faith/belief dimension”. However, two of that scale’s items appear elsewhere in this analysis, plus three further items from the remaining two sub-scales are gathered into this factor. Thus the analysis only partly supports the “Faith/belief dimension” subscale.
Factor 2 JAREL SWBS

Factor 2 variables are as follows:

I find meaning and purpose in my life;

I am able to receive and give love to others;

I set goals for myself.

There is no clear theme that links these items. Two items are drawn from the “Life satisfaction/self actualisation” subscale, and one from the “Life/self responsibility” subscale.

Factor 3 JAREL SWBS

Factor 3 variables are as follows:

I am satisfied with my life;

I am satisfied with the way I am using my abilities;

I am pretty well put together;

I accept my life situations.

These items appear to be about personal satisfaction with life and self. A possible label for these items is “Satisfaction”. All of these items are drawn from the “Life satisfaction/self actualization” subscale, lending some support to it.

Factor 4 JAREL SWBS

Factor 4 variables are as follows:
I prefer that others make decisions for me;
I find it hard to forgive others;
I cannot accept change in my life.

These items appear to be about the relationship of self with externals. A possible label for this factor is “I-you”. The three items here are all drawn from the “Life/self responsibility subscale.

**Factor 5 JAREL SWBS**

Factor 5 variables are as follows:

As I grow older I find myself more tolerant of others beliefs;
When I am sick I have less spiritual well-being;
I am able to appreciate differences in others.

While the first and third variables can be connected through a theme of “attitude to others”, the second variable avoids logical association. No label will be assigned to this factor. The three items are drawn from all of the three suggested sub-scales.

**4.6 Reliability Analysis**

Each scale and subscale was tested for reliability through an examination of the Cronbach's alpha scores and Pearson correlation coefficients.
4.6.1 SWBS

Cronbach’s alpha for the SWBS was 0.9170, suggesting a high level of reliability.

4.6.2 SWBS Sub-scales

Cronbach’s alpha for the RWB subscale was 0.9640. The Pearson correlation coefficients (between individual item scores and the sum of the scores on the remaining items) (Norusis p.466) ranged from 0.735 to 0.899. The reliability coefficient could not be improved through the deletion of any item in this subscale, indicating cohesion in construction.

Cronbach’s alpha for the EWB subscale was 0.89. Pearson correlation coefficients ranged from 0.4659 to 0.7449. The deletion of one item from this subscale would result in a slight increase in the alpha score to 0.8916. The item involved is one of those identified in the above factor analysis as falling outside of the subscale (SWBS factor 3). The other item in that factor would have the least impact on the reliability of this subscale if it were to be deleted (0.886)

4.6.3 JAREL SWBS

Cronbach’s alpha for the JAREL SWBS was 0.825. This would be increased if either of two items were to be deleted. Removal of questionnaire item 7
would result in an alpha score of 0.8454, while deletion of item 17 would see a small increase to 0.8265.

4.6.4 JAREL Sub-scales

Cronbach's alpha for the LSR subscale was 0.5782. Pearson correlation coefficients ranged from -0.2646 to 0.6227. Deletion of questionnaire item 7 would result in an increase in alpha score to 0.6961, while removal of questionnaire item 17 would slightly increase the alpha score to 0.5791.

Cronbach's alpha for the LSSA subscale was 0.7946. Pearson correlation coefficients ranged from 0.1968 to 0.5756. The deletion of questionnaire item 19 would result in an increase in alpha to 0.8024.

Cronbach's alpha for the FBD subscale was 0.7817. Pearson correlation coefficients ranged from 0.2452 to 0.6388. Deletion of two items (items 3 and 4) in this scale would each result in a small increase in alpha (0.7969 and 0.7908).

4.7 Demographic Comparisons

Spiritual well-being and its related sub constructs were further explored through the examination of group scores across a number of demographic
attributes. The SWBS was the primary instrument employed for this activity as the above factor analysis and reliability analysis lent support to its structure over that of the JAREL SWBS. However, despite the questions raised about JAREL SWBS sub-scale structure, the SWB score from this instrument will also be included where SWB alone is being considered.

One-way analysis of variance (ANOVA) was used in each case to determine the presence of significant differences between groups.

4.7.1 SWB and Gender

The total sample was compared on the basis of gender. There were no missing cases for this item. The results of the ANOVAs for the three variables SWB, EWB, and RWB are shown in Tables 22-24 respectively.

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>1</td>
<td>106.38</td>
<td>106.38</td>
<td>.395</td>
<td>.531</td>
</tr>
<tr>
<td>Within</td>
<td>128</td>
<td>34447.85</td>
<td>269.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>129</td>
<td>34554.23</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 22

One-way Analysis of Variance of SWB by Gender
TABLE 23
One-way Analysis of Variance of RWB by Gender

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/ freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>1</td>
<td>159.82</td>
<td>159.82</td>
<td>1.03</td>
<td>.311</td>
</tr>
<tr>
<td>Within</td>
<td>128</td>
<td>19798.37</td>
<td>154.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>129</td>
<td>19958.19</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 24
One-way Analysis of Variance of EWB by Gender

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/ freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>1</td>
<td>5.42</td>
<td>5.42</td>
<td>0.076</td>
<td>.783</td>
</tr>
<tr>
<td>Within</td>
<td>128</td>
<td>9095.69</td>
<td>71.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>129</td>
<td>9101.11</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result of the ANOVAs showed no significant difference in the means recorded for SWB, EWB, and RWB scores between male and female groups on any of the scales. The hypothesis that the scores recorded for Spiritual well-being Existential well-being and Religious well-being will be greater for females than males is rejected.
4.7.2 SWB and Age

The relationship between scores for spiritual well-being and age was examined in two ways. Firstly a correlation coefficient was calculated for total SWB score with age. Negligible values were revealed (SWB & Age = 0.08), suggesting that no relationship is in evidence.

The second examination of the relationship between age and SWB was undertaken through a regrouping of the age variable into four subsets. The first subset was 21 years of age or less, covering the normal age for final year post Higher School Certificate university students. The next two groups were for the twenties and thirty decades. The final grouping were all remaining subjects. Three participants elected not to give their age, resulting in a reduced total (n=127). The mean scores for SWB for these new groups are presented in Table 25.

TABLE 25

<table>
<thead>
<tr>
<th>MEAN SCORES FOR SWB BY AGE GROUPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 21 years</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Number</td>
</tr>
<tr>
<td>Mean SWBS</td>
</tr>
<tr>
<td>Mean JSWB</td>
</tr>
</tbody>
</table>
Using this age grouping differences between group means for SWB, EWB, and RWB were tested. Tables 26-28 present the ANOVA results for the three scales for these age grouping.

### TABLE 26

One-way Analysis of Variance of SWB by Age group

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/ freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>3</td>
<td>272.15</td>
<td>90.71</td>
<td>0.339</td>
<td>0.797</td>
</tr>
<tr>
<td>Within</td>
<td>123</td>
<td>32925.61</td>
<td>267.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>126</td>
<td>33197.76</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 27

One-way Analysis of Variance of EWB by Age group

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/ freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>3</td>
<td>403.41</td>
<td>134.47</td>
<td>1.95</td>
<td>0.125</td>
</tr>
<tr>
<td>Within</td>
<td>123</td>
<td>8477.93</td>
<td>68.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>126</td>
<td>8881.34</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The ANOVA between age groups for SWB, RWB, EWB revealed no significant difference in group scores. The hypothesis that spiritual well-being scores will be greater for those of greater age is rejected.

### 4.7.3 SWBS and Religion

The mean scores for SWB, and and the religiously affiliated RWB sub-scale for groups based on stated religion are displayed in Table 29.

**Table 29**

**MEAN SCORES FOR SWB AND RWB BY RELIGION**

<table>
<thead>
<tr>
<th></th>
<th>Mean Score SWB</th>
<th>Mean Score RWB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catholic (n=40)</td>
<td>90.60</td>
<td>43.80</td>
</tr>
<tr>
<td>Anglican (n=43)</td>
<td>85.67</td>
<td>40.37</td>
</tr>
<tr>
<td>Uniting (n=15)</td>
<td>84.53</td>
<td>38.07</td>
</tr>
<tr>
<td>Other Protestant (n=18)</td>
<td>98.37</td>
<td>47.69</td>
</tr>
<tr>
<td>None (n=14)</td>
<td>70.85</td>
<td>23.14</td>
</tr>
</tbody>
</table>
Group means were compared by one-way ANOVA, and the results are presented in Tables 30 and 31.

Table 30

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/ freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>4</td>
<td>6403.48</td>
<td>1600.87</td>
<td>7.07</td>
<td>.000</td>
</tr>
<tr>
<td>Within</td>
<td>123</td>
<td>27836.24</td>
<td>226.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>127</td>
<td>34239.72</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 31

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/ freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>4</td>
<td>5558.19</td>
<td>1389.55</td>
<td>11.88</td>
<td>.000</td>
</tr>
<tr>
<td>Within</td>
<td>123</td>
<td>14386.53</td>
<td>116.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>127</td>
<td>19944.72</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The ANOVAs each resulted in a significant value. Scheffe procedure showed that the “no religion” group mean for SWB was significantly different to all religious groups except “Uniting”, while for RWB mean scores the “none” group was significantly different to all other groups. The hypothesis that those without a religious affiliation will record lower RWB scores is supported,
while for SWB scores the hypothesis is rejected as there was no significant difference in group means for this group and the “Uniting” group.

4.7.4 SWB and Frequency of Attendance at Religious Service

The mean scores for SWB, EWB and RWB for groups based on frequency of attendance at a religious service if able show a clear trend. The more frequent the attendance the higher the mean scores for SWB, and the “God” related RWB sub scale. This trend is illustrated in table 32.

Table 32
MEAN SCORES FOR SWB AND RWB BY FREQUENCY OF ATTENDANCE AT A RELIGIOUS SERVICE IF ABLE

<table>
<thead>
<tr>
<th>Number of subjects</th>
<th>Mean score SWBS</th>
<th>Mean score RWB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>21 (16.3%)</td>
<td>72.1</td>
</tr>
<tr>
<td>Once a month</td>
<td>16 (12.3%)</td>
<td>91.6</td>
</tr>
<tr>
<td>Once a week</td>
<td>24 (18.5%)</td>
<td>100.9</td>
</tr>
<tr>
<td>&gt; weekly</td>
<td>5 (3.8%)</td>
<td>114</td>
</tr>
</tbody>
</table>

Group means were compared by ANOVA. The results are presented in Tables 33-35.
### TABLE 33

One-way Analysis of Variance of SWB by Frequency of Attendance at Religious Service if able

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/Sum of Mean</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>freedom Squares Square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>3 13251.69 4417.23</td>
<td>26.08</td>
<td>.000</td>
</tr>
<tr>
<td>Within</td>
<td>119 20157.30 169.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>122 33408.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 34

One-way Analysis of Variance of EWB by Frequency of Attendance at Religious Service if able

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/Sum of Mean</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>freedom Squares Square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>3 572.98 190.99</td>
<td>2.74</td>
<td>.046</td>
</tr>
<tr>
<td>Within</td>
<td>119 8284.21 69.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>122 8857.19 72.60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 35

One-way Analysis of Variance of RWB by Frequency of Attendance at Religious Service if able

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/Sum of Mean</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>freedom Squares Square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>3 9832.92 3277.64</td>
<td>40.70</td>
<td>0.000</td>
</tr>
<tr>
<td>Within</td>
<td>119 9583.09 80.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>122 19416.01 159.15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The ANOVAs revealed a significant difference existing between groups for SWB and RWB scores. Post hoc analysis showed that the group "not at all" had a significantly lower SWB score than any of the remaining groups. The "once or more per week" attendance group recorded significantly higher SWB scores than the other groups. No further intergroup differences were shown. RWB group scores were again significantly different for the "not at all" group when compared to all other groups. The RWB mean scores for the most frequent attending group and the monthly group was shown to be significantly different when compared to both the occasional group and the non-attenders.

The hypothesis that those who attend religious services more frequently would record higher scores for spiritual well-being and religious well-being is supported.

4.7.5 SWB and Health

Participants were asked to self rate their overall health, from “excellent” (4) to “poor” (1). The relationship between scores for spiritual well-being and reported health was examined in two ways. Firstly a correlation coefficient was calculated for SWB scores and health scores. Negligible values were revealed (SWB & Health = .058), suggesting that no relationship is in evidence.
The second examination of the relationship between age and SWB was undertaken through a comparison of SWB scores by reported health. As only three respondents reported their health as being “poor”, a combined “fair/poor” health group was created. Spiritual well-being scores for reported overall health are presented in Table 36.

### TABLE 36

**MEAN SCORES FOR SWB BY SELF REPORTED OVERALL HEALTH**

<table>
<thead>
<tr>
<th></th>
<th>Fair / Poor</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
<td>20</td>
<td>83</td>
<td>27</td>
</tr>
<tr>
<td><strong>Mean SWBS</strong></td>
<td>86.2</td>
<td>86.17</td>
<td>89.44</td>
</tr>
<tr>
<td><strong>Mean JSWB</strong></td>
<td>94.0</td>
<td>94.99</td>
<td>96.41</td>
</tr>
</tbody>
</table>

Group means were compared by ANOVA for SWB, EWB, RWB. Tables 37-39 present the results.

### TABLE 37

**One-way Analysis of Variance of SWB by Self Reported Overall Health**

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/ freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2</td>
<td>228.72</td>
<td>114.36</td>
<td>.243</td>
<td>0.656</td>
</tr>
<tr>
<td>Within</td>
<td>127</td>
<td>34325.50</td>
<td>270.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>129</td>
<td>34554.22</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
One-way ANOVA indicated no significant difference between means. The hypothesis that SWB scores would be related to self report health scores is rejected.

Scores for SWB were also examined on the basis of original sample groups. This was to test the hypothesis that the oncology group would produce
different SWB outcomes. The resulting ANOVAs are presented in tables 40 to 42.

**TABLE 40**
One-way Analysis of Variance of SWB by Sample Group

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/ freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2</td>
<td>374.50</td>
<td>187.25</td>
<td>.0.69</td>
<td>0.501</td>
</tr>
<tr>
<td>Within</td>
<td>127</td>
<td>34179.72</td>
<td>269.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>129</td>
<td>34554.22</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 41**
One-way Analysis of Variance of EWB by Sample Group

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/ freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2</td>
<td>258.85</td>
<td>129.43</td>
<td>1.859</td>
<td>0.160</td>
</tr>
<tr>
<td>Within</td>
<td>127</td>
<td>8842.25</td>
<td>69.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>129</td>
<td>9101.10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 42**
One-way Analysis of Variance for RWB by Sample Group

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees/ freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F value</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2</td>
<td>580.47</td>
<td>290.24</td>
<td>1.90</td>
<td>0.153</td>
</tr>
<tr>
<td>Within</td>
<td>127</td>
<td>19377.72</td>
<td>152.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>129</td>
<td>19958.19</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
One-way ANOVA indicated no significant difference between means. The hypothesis that SWB scores would be influenced by oncology status is rejected.

4.8 Exploratory Questions

Two questions relating to the nurses role in spiritual care were included in the questionnaire and acted as a boundary between the two SWB scales. The small clinical sample limits the value of this information.

4.8.1 Nurse Awareness

The first question sought a response to the statement "I believe that Nurses should be aware of people's spiritual situation". The response was on a scale of strongly agree (=6) to strongly disagree (=1) with no neutral position. The results are grouped here in terms of total agree / disagree and are presented in Table 43.

Table 43

AGREEMENT WITH NURSES AWARENESS OF SPIRITUAL SITUATION

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Agree %</td>
<td>100</td>
<td>100</td>
<td>80</td>
<td>97.6</td>
</tr>
<tr>
<td>Total Disagree %</td>
<td></td>
<td></td>
<td>20</td>
<td>2.4</td>
</tr>
<tr>
<td>Mean Score</td>
<td>5.6</td>
<td>5.5</td>
<td>4.2</td>
<td>5.4</td>
</tr>
<tr>
<td>S.D.</td>
<td>0.7</td>
<td>0.8</td>
<td>1.2</td>
<td>0.9</td>
</tr>
</tbody>
</table>
ANOVA resulted in an F Ratio of 17.38 (p=.000). Post hoc analysis via the Scheffe Procedure confirmed that the mean score for the oncology group (group 3) was significantly different to the mean score for both other groups.

**4.8.2 Nurse Assistance**

The second question sought a response to the statement "I believe that Nurses should assist people with spiritual concerns", with the same range employed. The results are presented in Table 44

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Agree %</strong></td>
<td>96.4</td>
<td>89.1</td>
<td>63.2</td>
<td>88.5</td>
</tr>
<tr>
<td><strong>Total Disagree %</strong></td>
<td>3.6</td>
<td>10.9</td>
<td>36.8</td>
<td>11.5</td>
</tr>
<tr>
<td><strong>Mean Score</strong></td>
<td>5.2</td>
<td>4.9</td>
<td>3.8</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>S.D.</strong></td>
<td>1.0</td>
<td>1.1</td>
<td>1.2</td>
<td>1.2</td>
</tr>
</tbody>
</table>

ANOVA resulted in an F Ratio of 11.39 (p=.000). Post hoc analysis with the Scheffe procedure again confirmed that the oncology group differed significantly from both other groups.
5.1 Relationship between instruments

Both the SWBS and the JAREL SWB scale seek to provide a measure of spiritual well-being. The high correlation between scores for these instruments (.8187) is suggestive of some commonality between the two. Inspection of the items in each instrument reveals similar language and overlap of concepts.

5.2 Instrument Structure

The exploratory factor analysis revealed questions about the structure underlying each of the instruments. The results from this sample are suggestive of a more complex structure for both the SWBS and the JAREL SWB scale.

5.2.1 Structure of the SWBS

Paloutzian & Ellison's SWBS claims two sub scales. The first is Existential Well-Being (EWB) which can be described as being a "horizontal" dimension, representing life satisfaction and life purpose. The second is Religious Well-Being which can be viewed as a "vertical" dimension, representing God related well-being. Of these two sub scales, the RWB structure was supported by the exploratory factor analysis, with all ten items loading onto the one factor. The EWB structure was less clear. Eight items loaded clearly onto a single factor. Two items loaded onto a third factor. These were
statements 25 and 39 on the research instrument (Appendix Two). The two items (I don’t know who I am, where I came from, or where I’m going; I feel that life is full of conflict and unhappiness) are difficult to combine conceptually. Tabachnick and Fidell (p.636) note that the interpretation “of factors defined by only one or two variables is cautious....under even the most exploratory factor analysis.”

The reliability analysis lent support to the findings of the factor analysis in that the two items constituting factor 3 were found to have the weakest relationship with the remainder of the EWB subscale items, and the deletion of one of them (I don’t know who I am, where I came from, or where I’m going) would increase the reliability score for the subscale.

It is suggested by this analysis that this item at least either requires reconsideration in general, or has failed to successfully make the transition to an Australian context.

5.2.2 Structure of the JAREL SWBS

The JAREL SWBS is a twenty one item instrument that claims to have a three subscale structure (each of seven items). This construction meant a more complex approach to spirituality than the SWBS’s two dimensional representation of spiritual well-being. Exploratory factor analysis, together with reliability analysis, failed to support this suggested structure. The
resultant five factor solution suggests that in this study at least the items in the JAREL SWBS are not relating in the manner originally suggested.

The Faith/Belief Dimension subscale was strongly present in the "Faith" factor revealed in this study's analysis, contributing five of the eight items. Similarly the Life satisfaction/self actualization subscale contributed all four of the items found in the "satisfaction" factor. The Life/self responsibility subscale was least supported by this analysis. A visual inspection of the items in this subscale reveals that there is little connection between these and any of the SWBS items. Instead of expanding the concept of spiritual well-being it would seem that this subscale lacks cohesion and hence usefulness. The evolution of the JAREL instrument from a qualitative study may be part of the explanation for the above findings, especially given the change of cultural context. However, the twelve items that loaded onto the two above factors may be the strongest parallels to the RWB and EWB constructs in the SWBS. In terms of developing future instruments of less than the SWBS' twenty items these may warrant re-examination.

It is concluded that the SWBS is a more reliable scale to employ when measuring spiritual well-being.
5.3 Demographic Influences

When exploring the relationship between SWB scores and demographic variables a number of research hypotheses were tested.

There was no demonstrable relationship in this study between SWB, RWB or EWB and age. While no direct correlation was shown, the lack of evidence of any difference between age grouped means may be dependant upon the groupings created in the study. Decade based groupings with a larger and more age spread sample may provide different outcomes.

There was no difference in SWB, RWB or EWB based on gender. This at first would appear to be in conflict with accepted wisdom that in Australia women tend towards greater religiousness than men (Black 1991 p.2.). However, such perceptions have been based on overt manifestations of religious affiliation, while the SWBS has a more personal “inner” approach.

No differences were found by way of self reported state of health. The methodological problem with such a measure is that there can be no certainty about interpretation of the scale’s points of reference. What is “good” health to one may be “poor” or “excellent” to another. With this in mind little can be extrapolated from this finding.
There was a clear relationship between scores of SWB and RWB and presence of a religious affiliation. Those who identified their religion as “none” had, as a group, a significantly lower RWB score, and (with the exception of the “Uniting” group) SWB score. This outcome suggests that within this sample a low level of “God relatedness” was associated with those outside traditional denominational structures.

There was a stronger apparent relationship between SWB and RWB with the item “frequency of attendance at a religious service if able. This variable cut across denominational lines, with greater frequency of attendance being clearly associated with higher scores on these two measures.

Neumans systems model provided a framework that supported in principal the suggestion that the oncology group would show differences in their SWB scores. This was not shown to be the case. However, several factors can be identified that may have lead to this not being a representative sample of persons with an oncology diagnosis. The participation rate for this group was 34.5%, almost half that of the student sample. The writer is unable to adequately convey to the reader the reactions of those non participants to the research information sheet. The facial expressions, the tone of voice, other body language cues combined to give an (unsubstantiatable) message that
non participation was not just a cognitive act for many of these individuals. There seemed to be a strong emotional component in the decision as well. If a representative sample of these non participants had been included the outcomes for the group may have been quite different.

The researcher did not seek information about the length of time from diagnosis to the day of the study. This was in part to minimise the sense of intrusion at the oncology settings. Neumans model would suggest that an external stressor (eg. a cancer diagnosis; cancer treatment) can impact on the stability of a client system, and that spiritual variables will be involved in the client's response to the stressor as the system seeks to attain the best possible state of wellness (optimal system stability). While the initial impact on an individual's spiritual resources may be marked, the passage of time allows the system to stabilise. The oncology based participants in this study were accessed through outpatient settings, and may have travelled some distance in their personal journeys since their initial diagnosis. Indeed, the one oncologist who chose to exclude some clients from being approached by the researcher did so on the basis of his assessment that they would be less likely to cope with the nature of the study. While not stated these persons may have been either newly diagnosed or recently relapsed, and their contributions would have reflected more system disharmony. Similarly those who elected not to participate may have been experiencing more "discomfort" than those who did participate.
5.4 Recommendations for Future Research

This study sought to examine the structures of two spiritual well-being instruments; the nature of relationships between them, and relationships (in an Australian context) between spiritual well-being and gender, age, self reported health status, religion, frequency of attendance at religious services if able and the presence of a life threatening illness.

The study's support for Paloutzian & Ellison's spiritual well-being scale is consistent with other research. However, the instrument's general use remains limited on several counts. The low participation rate in the oncology sample may be reflective of an underlying discomfort in Australia with spiritual concepts. As well, 15% of all forms returned were eliminated due to incomplete responses. Visual inspection of these forms revealed that “God” questions remained unanswered in general by these non completers. As the SWBS is 50% “God” focussed this may continue to be a barrier to its wider research value in this country. The clinical sensitivity of the scale was not clearly demonstrated in this study, and future research is needed to explore the instrument's value in situations of spiritual “ill health” or crisis. More qualitative methodologies may be required to more fully explore the ways in which people in Australia view the role of the spiritual in their overall well-being. Finally, the Existential well-being subscale was not completely supported by the factor analysis, and future users in Australia should note the
items on this scale that were not loaded in this analysis, especially the item “I don’t know who I am, where I came from, or where I am going” whose deletion in the reliability analysis resulted in an increased Crobach’s alpha score.

The study’s lack of support for the structure of the JAREL scale is qualified by the design and method limitations discussed above. Further exploratory or initial confirmatory factor analyses of the JAREL scale are needed before any judgement can be made of that scale’s integrity and utility. The important advance attempted by the JAREL scale was to extend the boundaries of what elements contribute to spiritual well-being. While the two dimensionality of the SWBS has proved effective, it is intellectually reasonable to assume that the spiritual well-being construct is more complex than these two conceptual directions alone. While the JAREL sub-scale “Life/ Self Responsibility” was particularly lacking in support in this study, other conceptions of spirituality may yet exist to be discovered, described, and operationalised by future writers.

Future researchers may wish to note this study’s support of the demographic item “frequency of attendance at a religious service if able” as a stronger indicator of spiritual well-being than stated religion. While this finding may be argued to be a manifestation of the construction of the SWBS and its RWB
sub-scale, religious nominalism in anglo-Australian society mediates against the value of stated religion as being a useful indicator of SWB. Frequency of attendance at a religious service if able may serve as a useful aid in assessing an individual's spiritual resources.

While this study did not examine Australian nurses' attitudes and behaviours towards the area of spirituality and spiritual health needs such research is most desirable if effective use of any spiritual domain instrument is to occur in this country. Harringtons (1993) exploration of Australian Registered Nurses perceptions of spiritual care provides a useful point of reference for such future research. However, qualitative studies must be complemented by quantitative research if a better understanding of nursing and the spiritual health domain is to be achieved.

The two exploratory questions suggest that the clients of nursing care may view the nurses' role in matters spiritual quite differently to the way posited by the nursing literature. If Australian nurses seek to develop their spiritual care role those in receipt of such care may need some persuading as to the nurses right to embrace this area. Further research in this area of perceptual differences is suggested by this study's exploratory questions.
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Appendix One  Pilot Questionnaire
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<th>FEMALE □</th>
<th>AGE (years)</th>
<th>POSTCODE</th>
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**HOW WOULD YOU RATE YOUR OVERALL HEALTH?**

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<td>EXCELLENT</td>
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**PLACE OF BIRTH**

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**FATHERS' PLACE OF BIRTH**

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**MOTHERS' PLACE OF BIRTH**

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**RELIGION**

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<td>ORTHODOX</td>
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**OTHER (Please state)__________________________**
HOW OFTEN WOULD YOU ATTEND A RELIGIOUS SERVICE IF ABLE?

- NOT AT ALL
- ONCE A WEEK
- MORE THAN ONCE A WEEK
- ONCE A MONTH
- ONCE A YEAR
- OTHER (Please state)

LAST LEVEL OF EDUCATION COMPLETED

- PRIMARY SCHOOL
- SECONDARY SCHOOL
- TECHNICAL COLLEGE
- UNIVERSITY
- OTHER (Please state)

WHAT MEANING DOES THE WORD "SPIRITUAL" HAVE FOR YOU?

HOW WOULD YOU DESCRIBE YOUR SPIRITUAL HEALTH?
For each of the following statements circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience. Circle only one response for each statement.

SA = Strongly Agree  
MA = Moderately Agree  
A = Agree  
D = Disagree  
MD = Moderately Disagree  
SD = Strongly Disagree

1. I don't find much satisfaction in private prayer with God
SA  MA  A  D  MD  SD

2. I don't know who I am, where I came from, or where I'm going
SA  MA  A  D  MD  SD

3. I believe that God loves me and cares about me.
SA  MA  A  D  MD  SD

4. I believe that life is a positive experience
SA  MA  A  D  MD  SD

5. I believe that God is impersonal and not interested in my daily situations
SA  MA  A  D  MD  SD

6. I feel unsettled about my future
SA  MA  A  D  MD  SD

7. I have a personally meaningful relationship with God
SA  MA  A  D  MD  SD

8. I feel very fulfilled and satisfied with life
SA  MA  A  D  MD  SD

9. I don't get much personal strength and support from God
SA  MA  A  D  MD  SD

10. I feel a sense of well-being about the direction my life is headed in
SA  MA  A  D  MD  SD

11. I believe that God is concerned about my problems
SA  MA  A  D  MD  SD

12. I don't enjoy much about life
SA  MA  A  D  MD  SD
13. I don't have a personally satisfying relationship with God (SA MA A D MD SD)

14. I feel good about my future (SA MA A D MD SD)

15. My relationship to God helps me to not feel lonely (SA MA A D MD SD)

16. I feel that life is full of conflict and unhappiness (SA MA A D MD SD)

17. I feel most fulfilled when I'm in close communion with God (SA MA A D MD SD)

18. Life doesn't have much meaning (SA MA A D MD SD)

19. My relationship to God contributes to my sense of well-being (SA MA A D MD SD)

20. I believe there is some real purpose for my life (SA MA A D MD SD)

21. I feel angry towards God (SA MA A D MD SD)

22. Beliefs that once mattered seem unimportant now (SA MA A D MD SD)

23. God would be pleased with the way I've lived my life (SA MA A D MD SD)

24. I feel that I am in control of my life (SA MA A D MD SD)

25. I feel out of touch with God (SA MA A D MD SD)

26. I am unhappy with the life I've led (SA MA A D MD SD)

27. I feel at peace with God (SA MA A D MD SD)

28. My beliefs now are as strong as ever (SA MA A D MD SD)

29. I feel free to express my personal spiritual beliefs (SA MA A D MD SD)
30. My life would not satisfy God's expectations
   SA MA A D MD SD

31. Life seems out of control
   SA MA A D MD SD

32. I feel close to God
   SA MA A D MD SD

33. I am pleased with the life I have led
   SA MA A D MD SD

34. I don't get the opportunity to talk about my spiritual concerns
   SA MA A D MD SD

35. Prayer is an important part of my life
   SA MA A D MD SD

36. I believe I have spiritual well-being
   SA MA A D MD SD

37. As I grow older, I find myself more tolerant of others beliefs
   SA MA A D MD SD

38. I find meaning and purpose in my life
   SA MA A D MD SD

39. I feel there is a close relationship between my spiritual beliefs and what I do
   SA MA A D MD SD

40. I believe in an afterlife
   SA MA A D MD SD

41. When I am sick I have less spiritual well-being
   SA MA A D MD SD

42. I believe in a supreme power
   SA MA A D MD SD

43. I am able to receive and give love to others
   SA MA A D MD SD

44. I am satisfied with my life
   SA MA A D MD SD

45. I set goals for myself
   SA MA A D MD SD
46. God has little meaning in my life
   SA  MA  A  D  MD  SD

47. I am satisfied with the way I am using my abilities
   SA  MA  A  D  MD  SD

48. Prayer does not help me in making decisions
   SA  MA  A  D  MD  SD

49. I am able to appreciate differences in others
   SA  MA  A  D  MD  SD

50. I am pretty well put together
   SA  MA  A  D  MD  SD

51. I prefer that others make decisions for me
   SA  MA  A  D  MD  SD

52. I find it hard to forgive others
   SA  MA  A  D  MD  SD

53. I accept my life situations
   SA  MA  A  D  MD  SD

54. Belief in a supreme being has no part in my life
   SA  MA  A  D  MD  SD

55. I cannot accept change in my life
   SA  MA  A  D  MD  SD

56. I believe that Nurses should be aware of peoples' spiritual situation
   SA  MA  A  D  MD  SD

57. I believe that Nurses should assist people with spiritual concerns
   SA  MA  A  D  MD  SD
Appendix Two   Final Questionnaire
MALE □ FEMALE □

AGE (years) _______ POSTCODE _______

HOW WOULD YOU RATE YOUR OVERALL HEALTH?

EXCELLENT □
GOOD □
FAIR □
POOR □

PLACE OF BIRTH

AUSTRALIA □
UNITED KINGDOM □
IRELAND □
EUROPE □
ASIA □

OTHER (please state) __________________

FATHERS' PLACE OF BIRTH

AUSTRALIA □
UNITED KINGDOM □
IRELAND □
EUROPE □
ASIA □

OTHER (please state) __________________

MOTHERS' PLACE OF BIRTH

AUSTRALIA □
UNITED KINGDOM □
IRELAND □
EUROPE □
ASIA □

OTHER (please state) __________________

RELIGION

CATHOLIC □
ANGLICAN □
UNITING □
ORTHODOX □
NONE □

OTHER (please state) __________________
HOW OFTEN WOULD YOU ATTEND A RELIGIOUS SERVICE IF ABLE?

NOT AT ALL □
ONCE A WEEK □
MORE THAN ONCE A WEEK □
ONCE A MONTH □
ONCE A YEAR □

OTHER (please state) __________________________

LAST LEVEL OF EDUCATION COMPLETED

PRIMARY □
SECONDARY SCHOOL □
TECHNICAL COLLEGE □
UNIVERSITY □

OTHER (please state) __________________________
For each of the following statements, circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience. Circle only one response for each statement.

SA = Strongly Agree  
MA = Moderately Agree  
A = Agree  
D = Disagree  
MD = Moderately Disagree  
SD = Strongly Disagree

1. Prayer is an important part of my life
2. I believe I have spiritual well-being
3. As I grow older, I find myself more tolerant of others beliefs
4. I find meaning and purpose in my life
5. I feel there is a close relationship between my spiritual beliefs and what I do
6. I believe in an afterlife
7. When I am sick I have less spiritual well-being
8. I believe in a supreme power
9. I am able to receive and give love to others
10. I am satisfied with my life
11. I set goals for myself
12. God has little meaning in my life
13. I am satisfied with the way I am using my abilities
14. Prayer does not help me in making decisions
15. I am able to appreciate differences in others
16. I am pretty well put together
17. I prefer that others make decisions for me
18. I find it hard to forgive others
19. I accept my life situations
20. Belief in a supreme being has no part in my life
21. I cannot accept change in my life
22. I believe that Nurses should be aware of peoples' spiritual situation
23. I believe that Nurses should assist people with spiritual concerns
24. I don't find much satisfaction in private prayer with God
25. I don't know who I am, where I came from, or where I'm going
26. I believe that God loves me and cares about me.
27. I believe that life is a positive experience
28. I believe that God is impersonal and not interested in my daily situations
29. I feel unsettled about my future
30. I have a personally meaningful relationship with God
31. I feel very fulfilled and satisfied with life
32. I don't get much personal strength and support from God
33. I feel a sense of well-being about the direction my life is headed in: SA MA A D MD SD
34. I believe that God is concerned about my problems: SA MA A D MD SD
35. I don't enjoy much about life: SA MA A D MD SD
36. I don't have a personally satisfying relationship with God: SA MA A D MD SD
37. I feel good about my future: SA MA A D MD SD
38. My relationship to God helps me to not feel lonely: SA MA A D MD SD
39. I feel that life is full of conflict and unhappiness: SA MA A D MD SD
40. I feel most fulfilled when I'm in close communion with God: SA MA A D MD SD
41. Life doesn't have much meaning: SA MA A D MD SD
42. My relationship to God contributes to my sense of well-being: SA MA A D MD SD
43. I believe there is some real purpose for my life: SA MA A D MD SD
Appendix Three Information sheet
SPRITUAL WELL-BEING SURVEY

OUTLINE

People view themselves in different ways, and value different things in their lives. This study seeks to examine how people view their lives from a spiritual perspective, and further how health and spirituality influence each other. Spiritual is a word that has many meanings, all of which are important to this study.

METHOD

The study involves the filling out of a survey that will take around 10-20 minutes. This survey has a number of statements which you are asked to respond to by indicating how much you agree or disagree with each statement.

The statements are about life satisfaction, and spiritual beliefs.

This research is being conducted by a Post-graduate student from the Department of Nursing at the University of Wollongong.

All information obtained will be treated in the strictest confidence. You will not be able to be personally identified in the study. The research information will only be discussed by the researcher and his supervisor (Dr. Felix Yuen)

Your involvement or non-involvement will have no influence the care and treatment you receive.

If you start to fill in the survey but find yourself unable or unwilling to continue then simply return the form to the researcher.

You may withdraw your agreement to participate at any time.

If you have any questions about your possible involvement in the study, or any other matter, then please speak with the researcher.

If you have any concerns about the way in which this research has been conducted then please contact the researcher, his supervisor, or the University Ethics Committee at the addresses below.
Thank you for your time. If you wish to participate in the survey please complete the consent form on the next page.

Researcher

Peter Cleasby
C/- Department of Nursing
The University of Wollongong
P.O. Box 1144
Wollongong 2500

Supervisor

Dr. Felix Yuen
Department of Nursing
The University of Wollongong
P.O. Box 1144
Wollongong 2500

Human Experimentation Ethics Committee
The University of Wollongong
P.O. Box 1144
Wollongong 2500
Appendix Four  Consent form
SPIRITUAL WELL-BEING SURVEY

All people view themselves in different ways, and value different things in their lives. This study seeks to examine how people view their lives from a spiritual perspective, and further how health and spirituality influence each other. Spiritual is a word that has many meanings, all of which are important to this study.

METHOD

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Researcher
Peter Cleasby
C/- Department of Nursing
P.O. Box 1144
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