

CHAPTER FIVE

Results

5.1 Introduction

The primary aim of the current study was to ascertain whether or not a statistically significant relationship exists between optimism, as measured by the Life Orientation Test – Revised (LOT – R), and meaning in life, as measured by the total Life Regard Index (LRI) score. It was also hypothesised that positive correlations would also be found in respect of the LOT – R and the two LRI sub -scales, Framework (FR) and Fulfillment (FU). The nature of the above-mentioned relationship was hypothesised in Chapter 4 and a more detailed description may be found in Section 4.4 of that chapter. In this chapter the statistically significant results of the study will be reported. A detailed discussion of the results will follow in Chapter 6, as will the conclusion.

The descriptive statistics and frequencies of the measuring instruments, the LOT – R, LRI and the FR and FU sub-scales are presented first. These are followed by a description of the reliabilities of the instruments. The inferential statistics, which include the correlations of the variables - with reference to the hypotheses, will be cited. The descriptives of the biographical information follow (the frequencies of the biographical information may be found in Chapter 4). Comparisons of the biographical groups in terms of the measuring scales are then presented. Concluding remarks will be made at the end of this chapter.

5.2 Descriptive statistics of the LOT – R, LRI, and the FR and FU sub-scales.

The means, standard deviations, number of items in each scale, or sub-scale, number of respondents, Cronbach’s alpha’s of the measuring instruments and the minimum and maximum obtained scores for each instrument are summarised in Table 5.1 below.

Table 5.1

Means and standard deviations of the variables (LOT – R, LRI and FR and FU sub-scales)

Scale	Number of items	Chronbach's alpha	Sample size	Mean	Std. Dev.	Min. value	Max. value
LOT – R	6	.74	297	15.43	4.01	0	24
LRI – (FR)	14	.91	295	55.50	9.29	25	70
LRI – (FU)	14	.91	294	51.66	9.43	21	70
LRI – (Total)	28	.95	289	107.22	17.74	55	139

Table 5.1 includes descriptive statistics for the measuring instruments used in this study. The obtained, as opposed to the theoretical, minimum and maximum scores are provided. It is evident from the table that the alpha coefficients are significantly high – particularly in respect of the LRI, and the FR and FU sub-scales – indicating thus that the internal-consistency reliability of the instruments is acceptable (Mitchell & Jolley, 2001).

5.2.1 Frequencies in respect of instruments

5.2.1.1 The Life Orientation Test – Revised (LOT – R)

Of the 297 respondents who answered the LOT – R questions, three groups were formed, those showing low optimism, moderate optimism and a high

degree of optimism. The grouped frequency distributions are as follows: the low optimism group (n = 87), included all the participants up to and including the 25th percentile. The scores obtained by this group ranged from 0 to 13 (0 is the lowest possible score on the LOT – R) and included the cumulative percentage of 29.3%. The moderately optimistic group (n = 117), obtained scores ranging from 14 to 17. The highly optimistic group (n = 93), included all cases from the 75th percentile up. This group's scores ranged from 18 to 24, (24 is the highest possible score on the LOT – R). The median score for the sample was 15. The mean was 15.43.

5.2.1.2 The Life Regard Index (LRI)

289 respondents answered all the LRI questions. Respondents on the LRI were also divided up into three groups: the low meaning in life group, the moderate meaning in life group and the high meaning in life group.

The first group, the low meaning in life group, was made up of n = 72. The scores obtained by this group ranged from 55.00 to 95.50, the cumulative percentage for this group was 25.25%. The group with moderate meaning in life was made up of n = 145. The cumulative percentage for this group was 75.8%. The scores obtained by this group ranged from 95.60 to 119.50. The third group, the high life regard group, was made up of n = 72. The obtained scores for this group ranged from 119.60 to 139.00. The mean for the LRI (total) was 107.22.

5.2.2 Comparisons between the LRI and the LOT – R

Table 5.2 includes descriptive statistics comparing the low (< or = 95.5) and high (= or > 119.5) meaning in life scores on the LRI and the LOT - R.

Table 5.2

Group statistics comparing the LRI and the LOT – R

	LRI	N	Mean	Std. Dev.	Std. Error Mean
LOT – R	< or = 95.5	72	12.46	3.51	.42
	= or >119.5	72	18.44	3.20	.38

Independent samples testing revealed that the respondent's mean score on the LRI of those who scored 95.5 and lower on the LOT – R (the low optimism group) was 12.46 (refer Table 5.2). Of those who scored above 119.5 on the LOT – R, (the high optimism group), the mean score obtained on the LRI was 18.44.

T-test for equality of means (refer Table 5.4) yielded p- value = .000 (< 0.001, 2-tailed) indicating that the difference between the two mean scores is highly significant. The null hypothesis that the low life regard and high life regard means would be equal is thus rejected since $t(139) = -10.56$, p – value < 0.001.



5.2.3 Comparisons between the LOT – R and the LRI

Table 5.3 includes the descriptive data comparing the low optimism (≤ 13) and high optimism (≥ 18) participants with the LRI.

Table 5.3

Group statistics comparing the LOT – R and the LRI

	LOT - R	N	Mean	Std. Dev.	Std. Error Mean
LRI (FR)	≤13	85	49.93	9.86	1.07
	≥18	93	60.90	6.69	.69
LRI (FU)	≤13	86	45.03	8.96	.97
	≥18	91	57.82	7.39	.77
LRI (Total)	≤13	84	94.96	17.86	1.95
	≥18	91	118.66	13.00	1.36

Group statistics revealed the following in respect of the LOT - R when compared to the LRI. Of the respondents who scored below, or equal to 13 on the LOT – R the mean score obtained on the LRI (FR) was 49.93 (refer Table 5.3). Of those who scored equal to, or above 18 on the LOT – R the mean score on the LRI (FR) was 60.90. Of the respondents who scored below, or equal to 13 on the LOT – R the mean score obtained on the LRI (FU) was 45.03, whereas of the participants who scored equal to, or above 18 on the LOT – R the mean score on the LRI (FU) was 57.82. Finally, those respondents who scored below, or equal to 13 on the LOT – R achieved a mean score of 94.96 on the LRI (total), whilst those who scored equal to, or above 18 on the LOT – R scored a mean of 118.66 in respect of the LRI.

To test the null hypothesis of equal population means for the LRI (FR), LRI (FU) and total LRI for the 2 groups, low optimism and high optimism, independent samples *t*-tests were used. The results are found in Table 5.4.

Table 5.4

Independent samples test for the LOT – R, LRI and FR and FU sub-scales

Scale	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
LOT – R	.44	.507	-10.56	139	.000**	-5.98	.57
LRI (FR)	14.95	.000	-8.61	145.98	.000**	-10.97	1.28
LRI (FU)	2.55	.112	-10.39	175	.000**	-12.79	1.23
LRI Total)	9.49	.002	-9.96	150.81	.000**	-23.70	2.38

** . Significant at the 0.01 level (2-tailed).

As may be seen in Table 5.4 the null hypothesis was rejected in each case: in terms of the LOT – R, $t(139) = -10.56$, $p - \text{value} < 0.001$; in respect of FR items $t(145.98) = -8.61$, $p - \text{value} < 0.001$; in respect of the FU items, $t(175) = -10.39$, $p - \text{value} < 0.001$; and for the total LRI, $t(150.81) = -9.96$, $p - \text{value} < 0.001$.



5.3 Correlations of the variables

5.3.1 Correlations of the measuring instruments

Correlation coefficients (Pearson r) for the variables (LOT – R, LRI and the two LRI sub-scales, the FR and FU) are provided in Table 5.5.

Table 5.5**Inter-Correlations of the LOT – R, LRI and the FR and FU sub-scales**

Scale	Correlation Sig. N	LRI (FR)	LRI (FU)	LRI (Total)
LOT – R	Pearson <i>r</i> Sig. (2-tailed) N	.514** .000 291	.580** .000 290	.579** .000 284
LRI (FR)	Pearson <i>r</i> Sig. (2-tailed) N		.790** .000 289	.946** .000 289
LRI (FU)	Pearson <i>r</i> Sig. (2-tailed) N			.946** .000 289

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

Table 5.5 contains the Pearson *r*'s for the two full scales, the LOT – R and the LRI and the two LRI sub-scales (FR) and (FU) used in this study. Inspection of Table 5.5 reveals that the total Life Regard Index (LRI) and both the sub-scales, Framework (FR), and Fulfillment (FU) were positively correlated with the LOT – R. (.579, .514 and .580 respectively). All three of these correlation coefficients are statistically significant at the 0.01 level (2-tailed). If we compare the correlation coefficients of the two LRI sub-scales, FR and FU we find that the Pearson *r* is .790. Pearson *r*'s for the FR and FU sub-scales in terms of the full LR are both .946. Again all of these correlation coefficients are significant at the 0.01 level (2-tailed).

The positive correlations found in the present study between the total scores of both instruments - and the sub-scales of the LRI and the LOT – R - do not indicate causality on account of the correlational design of the study (Grimm, 1993). They do, however, have a predictive quality. This reasonably high correlation reveals that participants in the study who measured high on optimism also tended to measure high on meaning in life. Those who measured low in optimism also tended to measure low on meaning in life. This is illustrated in the Life Orientation Test-Revised / Life Regard Index Crosstabulation in Table 5.6. Table 5.6 contains the comparisons of the

different groups as these relate to the LOT – R and the LRI.

Table 5.6

Life Orientation Test – R (LOT – R) / Life Regard Index (LRI)

Crosstabulation

			Life Regard Index (LRI)		Total
			< or = 95.5 (i.e. low meaning in life)	> or = 119.5 (i.e. high meaning in life)	
Life Orientation Test (LOT – R)	< or = 13 (i.e. low optimism)	Count % within Optimism % within LRI	42 89.4% 89.4%	5 10.6% 10.0%	47 100.0% 48.5%
	= or > 18 (i.e. high optimism)	Count % within Optimism % within LRI	5 10.0% 10.6%	45 90.0% 90.0%	50 100.0% 51.5%
Total		Count % within Optimism % within LRI	47 48.5% 100.0%	50 51.5% 100.0%	97 100.0% 100.0%

It is evident from Table 5.6 that 89.4% (n = 42) of those respondents who scored below or equal to 13 on the LOT – R, in other words, those respondents whose scores indicated low optimism also scored low on the LRI. Conversely, 90.0% (n = 45) of the sample who scored equal or greater than 18 on the LOT – R (i.e. those who had high optimism scores), also scored high on the LRI (above 119.5). This indicates a strong positive correlation between high optimism and high meaning in life and a strong positive correlation between low optimism and low meaning in life.

The consequence of these findings strongly suggests that the null hypothesis, namely, that optimism (high or low) is independent of life regard (high or low), must be rejected. The alternative hypothesis, that optimism (high or low) is not independent of (high or low) life regard, is accepted due to the apparent dependence between the two variables. There is clearly a strong dependence between the two constructs.

Chi-Square tests were also conducted on the data. These nonparametric statistical tests analyse categorical data. No assumptions about population parameters or population characteristics are made in these tests (Grimm, 1993). Of the tests conducted, the Fisher's Exact Test yielded a score of $p = 0.000$ (< 0.01 , 2-sided).

5.4 Reliabilities of the LOT – R, LRI and the FR and FU sub-scales

5.4.1 Reliability of the LOT – R

The internal consistency reliability analysis in respect of the item-total of the LOT – R scale, (n of items = 6; namely items 1, 3, 4, 7, 9 and 10) - the remaining 4 items are filler items and are thus not scored, found Chronbach's alpha of .74, (n of cases = 297) (refer Table 5.1, above). This reliability coefficient is slightly lower than the findings reported by Scheier, Carver and Bridges (1994), of Cronbach's alpha = .78 for the same six items.

5.4.2 Reliability of the LRI

Calculation of reliability coefficients for the total LRI and the two sub-scales, FR and FU yielded Chronbach's alpha's as follows: Chronbach's alpha for the full scale (LR) was found to be .95 (all 28 items, n of cases = 289); FR (items number 1 – 14) = .91 (n of cases = 296) and FU (items number 15 – 28) = .91 (n of cases = 295), (refer Table 5.1).

5.5 Descriptive statistics, frequencies and findings regarding the variables: age, marital status, witness to a serious crime, clinically depressed and commitment to religious belief

The findings described in this section relate to the research hypotheses formulated (see Section 4.4.1) regarding the biographical information explored in the questionnaire. These findings were found to be statistically significant and thus warrant inclusion in this chapter. These variables include age, marital status, witness to a serious crime, diagnosed as clinically depressed and commitment to religious belief. For ease of reference all findings relating to each variable are described under separated sub-headings.

5.5.1 Comparisons between the variable, age and the LOT – R, LRI , and FR and FU sub-scales

Table 5.7 includes descriptive information for the three age groups, 19 years old, 20 years old and 21 years old and older, as this information relates to the different scales.

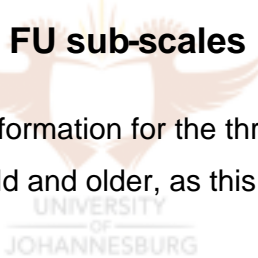


Table 5.7

Comparison of the means, standard deviations and standard errors in respect of the different scales and the different age groups

Scale	Age group	N	Mean	Std. Dev.	Std. Error
LOT – R	19 years	89	14.43	3.94	.42
	20 years	119	15.77	3.73	.34
	21 and older	88	15.99	4.29	.46
	Total	296	16.43	4.01	.23
LRI (FR)	19 years	87	54.67	9.04	.97
	20 years	122	55.08	10.05	.91
	21 and older	86	56.92	8.29	.89
	Total	295	55.50	9.29	.54
LRI (FU)	19 years	89	50.10	9.06	.96
	20 years	119	51.67	10.03	.92
	21 and older	86	53.27	8.74	.94
	Total	294	51.66	9.43	.55
LRI (Total)	19 years	87	105.00	16.95	1.81
	20 years	118	106.82	19.43	1.79
	21 and older	83	110.12	15.73	1.73
	Total	288	107.22	17.74	1.04

5.5.1.1 Comparison of the age groups in terms of the LOT – R, LRI and the FR and FU sub-scales - ANOVA

In order to test the null hypothesis that the mean of the different age groups, 19 years old, 20 years old and 21 and older, is the same in respect of the four scales, ANOVA was used. The alternative hypothesis is that at least two of the groups would have different means. A statistically significant difference was found only in terms of the LOT – R between the age groups, 19 years old and 21 and older (refer Table 5.8).

Table 5.8

The differences between the two age groups, 19 and 21 and older, regarding the LOT – R, LRI and the FR and FU sub-scales

Scale	Groups	Sum of squares	Df	Mean square	F	Sig.
LOT – R	Between	131.01	2	65.51	4.17	.016*
	Within	4603.64	293	15.71		
	Total	4734.65	295			
LRI (FR)	Between	254.80	2	127.40	1.48	.229
	Within	25100.95	292	85.96		
	Total	25355.74	294			
LRI (FU)	Between	438.51	2	219.53	2.50	.084
	Within	25597.16	291	87.97		
	Total	26035.67	293			
LRI (Total)	Between	1145.72	2	572.87	1.83	.162
	Within	89164.06	285	312.86		
	Total	90309.78	287			

*. Significant at 0.05 level.

As can be seen from Table 5.8 the null hypothesis that the means of the 19 year old group, the 20 year old group and the 21 and older group would be equal is rejected because $F(2, 293) = 4.17$, $p\text{-value} = 0.016$ (< 0.05).

With respect to the LRI and the FR and FU sub-scales the null hypothesis is accepted.

Table 5.9

Multiple comparisons of the LOT – R, LRI and the FR and FU sub-scales and the 19, 20, and 21 and older, age groups

Dependent variable	Age (a)	Age (b)	Mean Difference (a-b)	Std. Error	Sig.
LOT – R	19 Years old	20 Years old	-1.35	.56	.055
	19 Years old	21 and older	-1.56*	.60	.034
	20 Years old	21 and older	-.22	.56	.928
LRI (FR)	19 Years old	20 Years old	-.42	1.30	.950
	19 Years old	21 and older	-2.25	1.41	.281
	20 Years old	21 and older	-1.84	1.31	.373
LRI (FU)	19 Years old	20 Years old	-1.57	1.31	.490
	19 Years old	21 and older	-3.17	1.42	.084
	20 Years old	21 and older	-1.60	1.33	.487
LRI (Total)	19 Years old	20 Years old	-1.82	2.50	.767
	19 Years old	21 and older	-5.012	2.71	.171
	20 Years old	21 and older	-3.30	2.53	.430

*. Significant at the .05 level.

Post hoc multiple comparisons between the two groups, 19 and 21 and older, (refer Table 5.9) using Scheffe's testing method (which assumes equal variances) found a significant difference only in respect of the LOT – R. ANOVA revealed that the mean scores obtained by the two groups, 19 years old and the 21 and older, were significant. The mean difference was -1.56. This difference is significant at the 0.05 level (p– value = 034).

5.5.2 Marital status

Two groups were formed for the purposes of the statistical analyses, Single and Other. Table 5.10 contains descriptive data relating to the measuring instruments (LOT – R, LRI and FR and FU sub-scales) as these relate to marital status.

Table 5.10

Comparison of the means, standard deviations and standard errors in respect of the different scales and marital status

Scale	Marital status	N	Mean	Std. Dev.	Std. Error Mean
LOT – R	Single	274	15.34	3.92	.24
	Other	23	16.56	4.82	1.00
LRI (FR)	Single	272	54.97	9.27	.56
	Other	24	61.37	7.18	1.46
LRI (FU)	Single	271	51.24	9.38	.57
	Other	24	56.67	8.42	1.72
LRI (Total)	Single	265	106.26	17.61	1.08
	Other	24	118.04	15.27	3.11

5.5.2.1 Comparison of the marital status groups in terms of the LOT – R, LRI and the FR and FU sub-scales – *t*-test

As noted, above, two groups were formed in this biographical category, Single and Other. *T*-test results are summarised in Table 5.11.

Table 5.11

The differences between marital status groups regarding the LOT – R, LRI and the FR and FU sub-scales

Scale	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
LOT – R	2.36	.126	-1.41	295	.160	-1.22	.87
LRI (FR)	5.55	.019	-4.08	294	.000**	-6.40	1.57
LRI (FU)	2.06	.153	-2.74	293	.007**	-5.42	1.98
LRI (Total)	2.57	.110	-3.17	287	.002**	-11.78	3.72

** Significant at < 0.01 level.

Independent samples *t*-test for equality of means revealed that in so far as marital status was concerned, statistically significant differences exist only in respect of the total LRI and the FR and FU sub-scales. FR items, *p* - value = .000 (< 0.001, 2-tailed). FU items, *p* - value = 0.007 (< 0.01, 2-tailed) and total LRI, *p*- value = 0.002 (< 0.01, 2-tailed).

The null hypothesis that the means of the two groups, Single and Other, would be the same is thus rejected.

5.5.3 Witness to a serious crime

Table 5.12 includes the means, standard deviations and standard error means for the respondents who answered Yes, and No, to witnessing a serious crime during 2001.

Table 5.12
Comparison of the means, standard deviations and standard errors in respect of the different scales and witness to a serious crime

Scale	Witness to crime	N	Mean	Std. Dev.	Std. Error Mean
LOT – R	Yes	30	14.00	4.10	.75
	No	264	15.54	3.95	.24
LRI (FR)	Yes	30	53.70	10.77	1.97
	No	262	56.63	9.11	.56
LRI (FU)	Yes	28	49.53	9.43	1.78
	No	263	51.80	9.39	.58
LRI (Total)	Yes	28	120.53	18.91	3.57
	No	257	107.56	17.55	1.09

5.5.3.1 Comparison of the witness to a serious crime groups in terms of the LOT – R, LRI and the FR and FU sub-scales – *t*-test

In order to ascertain whether the means of the two groups, those who had reported Yes and those who had reported No, to witnessing a serious crime were significantly different, *t*-tests were conducted (refer Table 5.13).

Table 5.13

The differences between witness to serious crime groups regarding the LOT – R, LRI and the FR and FU sub-scales

Scale	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
LOT – R	.25	.617	-2.02	292	.044*	-1.54	.76
LRI (FR)	1.93	.166	-1.07	290	.283	-1.92	1.79
LRI (FU)	.190	.663	-1.21	289	.227	-2.26	1.87
LRI (Total)	.007	.934	-1.43	283	.155	-5.02	3.52

*. Significant at the 0.05 level (2 -tailed).

As can be seen from Table 5.13 statistical significance was found only in terms of the LOT – R (p – value = 0.44 < 0.50, 2-tailed).

5.5.4 Diagnosed as clinically depressed

Table 5.14 includes the means, standard deviations and standard error means for the respondents who answered Yes, and No, to having being diagnosed as clinically depressed during 2001.

Table 5.14

Comparison of the means, standard deviations and standard errors in respect of the different scales and clinical depression

Scale	Clinically Depressed	N	Mean	Std. Dev.	Std. Error Mean
LOT – R	Yes	13	12.15	4.81	1.33
	No	282	15.56	3.90	.23
LRI (FR)	Yes	12	49.58	12.79	3.69
	No	281	55.73	9.08	.54
LRI (FU)	Yes	13	42.38	10.09	2.80
	No	279	52.06	9.19	.55
LRI (Total)	Yes	12	92.00	22.69	6.55
	No	274	107.83	17.27	1.04

5.5.4.1 Comparison of the depressed and non-depressed groups in terms of the LOT– R, LRI and the FR and FU sub-scales – *t*-test

T-tests were conducted in order to ascertain whether a statistically significant difference existed between the group of respondents who had been diagnosed as clinically depressed and those who had not (refer Table 5.15).

Table 5.15

The differences between clinically depressed groups regarding the LOT – R, LRI and the FR and FU sub-scales

Scale	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
LOT – R	.82	.365	-3.05	293	.003**	-3.41	1.12
LRI (FR)	4.84	.029	-1.65	11.48	.127	-6.14	2.73
LRI (FU)	.38	.540	-3.69	290	.000**	-9.68	2.62
LRI (Total)	3.90	.049	-2.39	11.57	.035*	-15.83	6.63

*. Significant at the 0.05 level (2-tailed).

** . Significant at the 0.01 level (2-tailed).

Significant difference was found only as far as the LOT – R, the LRI and the FU sub-test are concerned: LOT – R (p – value $0.003 < 0.01$), LRI (p – value = $0.035 < 0.05$) and FU (p – value < 0.001) (all 2-tailed).

5.5.5 Commitment to religious belief

Table 5.16 includes the means, standard deviations and standard error means for the respondents who indicated that they Always, Sometimes or Never practice their religion (i.e. degree of commitment to chosen religion).

Table 5.16

Comparison of the means, standard deviations and standard errors in respect of the different scales and commitment to religion

Scale	Practice Belief	N	Mean	Std. Dev.	Std. Error
LOT – R	Always	172	15.77	3.92	.30
	Sometimes	112	14.90	4.08	.38
	Never	11	15.00	4.12	1.24
	Total	295	15.41	4.00	.23
LRI (FR)	Always	173	57.90	8.28	.63
	Sometimes	108	52.13	9.70	.93
	Never	12	50.58	9.29	2.68
	Total	293	55.47	9.31	.54
LRI (FU)	Always	169	53.34	9.09	.70
	Sometimes	111	49.14	9.54	.90
	Never	12	50.67	9.60	2.48
	Total	292	51.63	9.43	.55
LRI (Total)	Always	168	111.28	16.59	1.28
	Sometimes	108	101.32	18.04	1.75
	Never	12	101.25	16.52	4.77
	Total	288	107.17	17.77	1.05

5.5.5.1 Comparison of the commitment to religion groups in terms of the LOT – R, LRI and the FR and FU sub-scales – ANOVA

In order to test the hypothesis that the mean of the LOT – R, LRI and FR and FU sub-scales is the same for the students who Always practice their religion, Sometimes practice their religion and Never practice their religion, ANOVA was used (refer Table 5.17).

Table 5.17

The differences between the three commitment to religion groups: Always, Sometimes and Never regarding the LOT – R, LRI and the FR and FU sub-scales

Scale	Groups	Sum of Squares	df	Mean square	F	Sig.
LOT – R	Between	52.72	2	26.38	1.66	.192
	Within	4646.62	292	15.91		
	Total	4699.40	294			
LRI (FR)	Between	2514.63	2	1257.31	15.98	.000**
	Within	22820.43	290	78.70		
	Total	25335.06	292			
LRI (FU)	Between	1189.66	2	594.83	6.95	.001**
	Within	24720.17	289	85.54		
	Total	25909.79	291			
LRI (Total)	Between	6892.97	2	3446.49	11.73	.000**
	Within	83153.63	283	293.83		
	Total	90046.60	285			

** . Significant at the 0.01 level.

ANOVA comparing within and between groups and the LOT – R, LRI and FR and FU sub-scales found significance only in respect of LRI ($p = .000, < .001$), FR ($p = .000, < .001$) and FU ($p = .001, < .01$) sub-tests. In respect of the FR items the mean difference was found to be significant at p - value = < 0.001 between the Always and Sometimes groups, and p -value = 0.023 between the Always and Never groups. In terms of the FU items the mean difference was significant p - value = < 0.001 between the Always and Sometimes groups. With the overall LRI scale significance was found between the Always and Sometimes groups, p -value < 0.001 . No difference was found in terms of optimism.

The null-hypothesis of equal population means is rejected for FR ($F(2, 290) = 15.98, p$ – value < 0.01), FU ($F(2, 289) = 6.95, p$ – value = 0.001) and LR ($F(2, 283) = 11.73, p$ – value < 0.001).

5.5.5.2 Comparison of the commitment to religion groups in terms of the LOT – R, LRI and the FR and FU sub-scales – Post hoc tests

In order to ascertain which means differed Scheffe post-hoc tests were used - because the null-hypothesis of equal group variances can be assumed (p – values > 0.05), (refer Table 5.18).

Table 5.18

Multiple comparisons of the LOT – R, LRI and the FR and FU sub-scales and the Always, Sometimes and Never groups

Dependent variable	Commitment to Belief (a)	Commitment to Belief (b)	Mean Difference (a-b)	Std. Error	Sig.
LOT – R	Always	Sometimes	.87	.48	.204
	Always	Never	.77	1.24	.826
	Sometimes	Never	-9.82	1.26	.997
LRI (FR)	Always	Sometimes	5.77*	1.09	.000
	Always	Never	7.32*	2.65	.023
	Sometimes	Never	1.55	2.70	.849
LRI (FU)	Always	Sometimes	4.19*	1.13	.001
	Always	Never	2.67	2.76	.627
	Sometimes	Never	-1.52	2.81	.864
LRI (Total)	Always	Sometimes	9.97*	2.13	.000
	Always	Never	10.04	5.12	.149
	Sometimes	Never	7.08	5.22	1.000

*. The mean difference is significant at the .05 level.

As far as FR is concerned, students who Always practice their religion differ significantly from both the Sometimes and the Never groups. In particular the mean FR for the Always group is 57.90 while the means for the other two groups are 52.13 and 50.58 respectively.

As far as FU is concerned, the Always group differs significantly from the Sometimes group. No other significant differences were found. The average FU for the Always group is 53.34 in comparison with the 49.14 of the Sometimes group.

5.6 Conclusion

This chapter reported the results of the study. A discussion of the important findings will be found in Chapter 6. This chapter also contains the conclusion to the study and an overview of the contents of the dissertation. It will include a brief exploration of some of the strengths and limitations of the study and suggestions for further research in this field. It is to this that we now turn.

