

Chapter 5 Group Differences

Overview

This chapter provides analyses of differences among the three groups, preretirement, postretirement and postrelocation, in terms of the GHQ, well-being scales, the four core variables of satisfaction, and also Composite Satisfaction. These analyses are of great importance to the study, because differences between groups can then be attributed to the processes of retirement and relocation. As a major focus of the study, differences are initially tested in terms of the outcome variables in the model—GHQ (psychological health) and the six well-being subscales. Group differences in the four core variables of satisfaction—health, financial security, lifestyle, and living environment, and the aggregate Composite Satisfaction factor are then examined.

General Health Questionnaire (GHQ)

Table 5.1 presents the GHQ means, standard deviations, and standard errors for each group. As described in Chapter 4, scores are standardized (mean of 0 and a standard deviation of 1). Negative scores indicate better psychological health.

Table 5.1 Means Standard Deviations and Standard Errors of GHQ Scores for the Three Groups

Time of survey	Mean	Standard Error	Standard Deviation	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
Preretirement	0.18	0.06	.98	0.07	0.29
Postretirement	-0.30	0.06	.93	-0.43	-0.17
Postrelocation	0.10	0.09	1.04	-0.09	0.26

Dependent variable :GHQ score

A one-way analysis of variance (ANOVA) on GHQ scores indicated the difference between groups was significant, $F(2, 620) = 15.30$, $MSE = .96$, $p < .001$. Pairwise comparisons indicated that the mean for the preretirement group was significantly higher than that for the postretirement group ($p < .001$), and that the mean for the postrelocation group was significantly higher than that for the postretirement group ($p < .001$). There was no significant difference between the preretirement and the postretirement group means. This outcome can be interpreted to mean that compared to participants at preretirement, psychological health is better for those after retirement, whereas for those who have retired and relocated the level of psychological health is approximately back to the level of the preretirement group.

Well-being Subscales

Means and standard errors for the three groups (preretirement, postretirement, and postrelocation) on each of the subscales of the well-being measure are displayed in Figure 5.1 to illustrate the differences between groups.

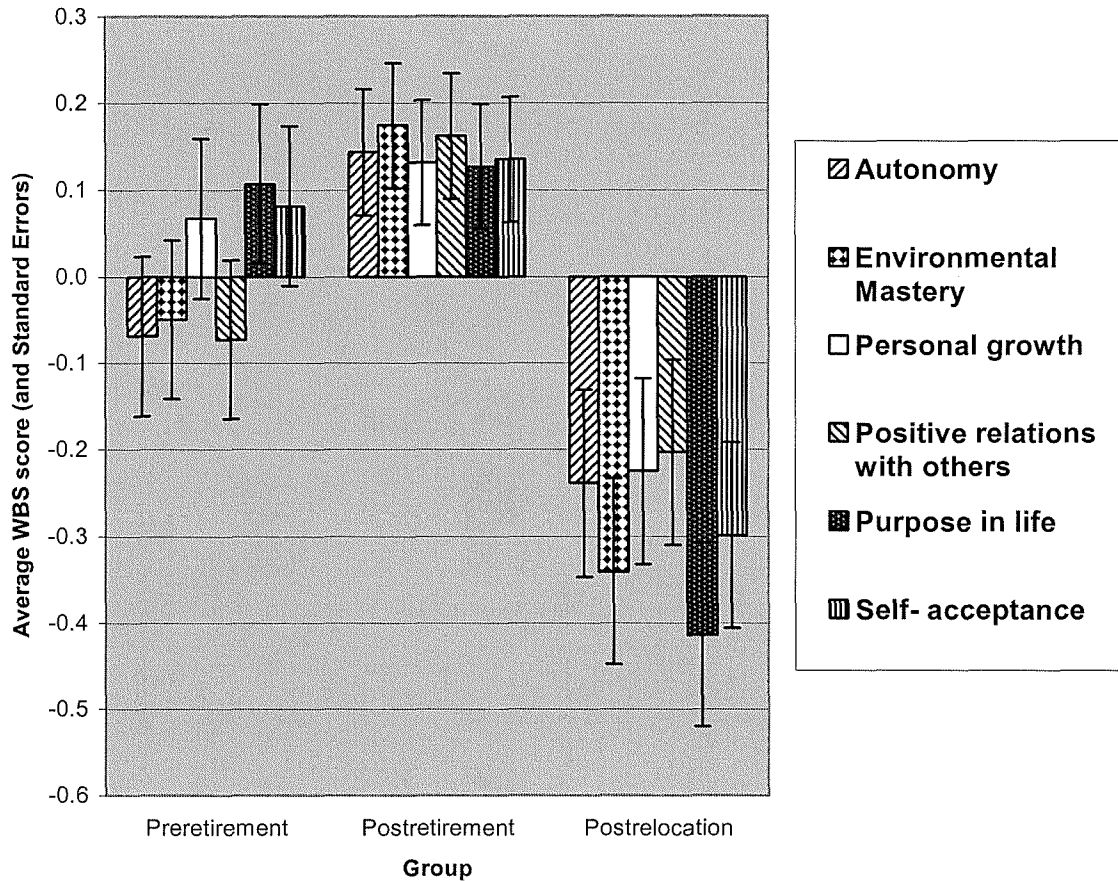


Figure 5.1. Means and standard errors of well-being subscale scores for the three groups.

A MANOVA was conducted on the well-being subscale scores for these groups. The four tests of the multivariate effect due to Group routinely provided by SPSS pointed to the same inference, that Group was significant. The Wilks' Lambda value was .08, $F(12, 744) = 2.48, p < .003$.

The results of univariate ANOVAs on each of the subscales are summarised in Table 5.2.

Table 5.2 Tests of Between-subjects Effects of Group

Dependent Variable	Mean Square	F	Sig.
Autonomy	4.58	4.69	0.010
Environmental Mastery	7.83	8.15	0.000
Personal Growth	3.77	3.91	0.021
Positive Relations with Others	4.44	4.61	0.010
Purpose in Life	9.33	9.80	0.000
Self-Acceptance	5.71	5.95	0.003

Note: $df = 2,381$, in all cases.

Table 5.3 below indicates the significant differences ($p < .05$) between the three groups across all of the well-being subscales. Appendix 19 provides full details of mean differences, standard errors, and significance levels across the three groups.

Table 5.3 Significant Differences between the Three Groups for each Subscale

Group			Dependent Variable
Preretirement	Postretirement	Postrelocation	
		●-----●	Autonomy
●-----●		●-----●	Environmental Mastery
	●-----●	●-----●	Environmental Mastery
●-----●		●-----●	Personal Growth
	●-----●	●-----●	Personal Growth
	●-----●	●-----●	Positive Relations With Others
	●-----●	●-----●	Positive Relations With Others
●-----●		●-----●	Purpose in Life
	●-----●	●-----●	Purpose in Life
●-----●		●-----●	Self-Acceptance
	●-----●	●-----●	Self-Acceptance

Note: A dotted line indicates that the two groups at the extremities differ significantly.

Scores on all six of the well-being subscales for the postrelocation group were significantly lower than those for the postretirement group. Four of the well-being subscales, Environmental Mastery, Personal Growth, Purpose in Life, and Self-Acceptance, were significantly lower for the postrelocation group than for the preretirement group, and only one subscale, Positive Relations With Others, was significantly lower for the preretirement group than for the postretirement group.

To check the possibility that the significant effects observed were simply due to age (the postrelocation group was significantly older than the other groups) or related to the length of time since retirement, supplementary analyses were undertaken. Age and months after retirement were used as covariates, and the analyses of GHQ and WBS scores were re-run.

A univariate analysis of covariance (ANCOVA) of GHQ with age as a covariate was undertaken and there was no significant effect for age. To ascertain the effect of age on the well-being measures, a multivariate analysis was undertaken using age as a covariate. There were no significant effects for age. Since age made no significant effect on differences reported for group, it was therefore excluded from further analyses.

A univariate analysis of covariance (ANCOVA) of GHQ with time after retirement as a covariate was undertaken and there was no significant effect for time after retirement. To ascertain the effect of time after retirement on the well-being measures, a multivariate analysis was undertaken using time after retirement as a covariate, and there was no significant effect for time after retirement. Since time after retirement made no significant effect on differences reported for group, it was therefore excluded from further analyses.

Thus the differences between groups in terms of GHQ and well-being subscale scores cannot be explained in terms of differences in age and time after retirement.

Analyses of Satisfaction measures

Respondents across all groups were asked to express their level of satisfaction with their *health*, *financial security*, *lifestyle*, and *living environment*. Frequencies and percentages to each response option for each group across these satisfaction measures are presented in Appendix 20.

The four variables constitute the Composite Satisfaction factor, and Table 5.4 presents the means and standard error for the standardised scores for each group with Composite Satisfaction as the dependent variable.

Table 5.4 Means and Standard Errors of Composite Satisfaction Scores for the Three Groups

Time of Survey	Mean	Standard Deviation	Standard Error	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
Preretirement	0.04	0.86	0.06	-0.07	0.15
Postretirement	0.88	1.03	0.07	-0.46	0.22
Postrelocation	-0.25	1.22	0.09	-0.43	-0.07

An ANOVA on Composite Satisfaction score indicated that the difference between groups was significant, $F(2, 562) = 3.57$, $MSE = .97$, $p < .05$.

Pairwise comparisons in Table 5.5 show that Composite Satisfaction was significantly lower for the postrelocation group than both the preretirement and postretirement groups. There was no significant difference between preretirement and postretirement groups.

Table 5.5 Pairwise Comparisons of the Three Groups with Composite Satisfaction as the Dependent Variable

(I) Time of survey	(J) Time of survey	Mean Difference (I-J)	Standard Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Preretirement	Postretirement	-.48	.09	.87	-.27	.17
	Postrelocation	.29	.11	.03	.03	.55
Postretirement	Preretirement	.05	.09	.87	-.17	.27
	Postrelocation	.34	.11	.01	.06	.61
Postrelocation	Preretirement	-.29	.11	.03	-.55	-.03
	Postretirement	-.34	.11	.01	-.61	-.06

To ascertain which of the variables differed significantly between groups, a series of Kruskal-Wallis tests were utilized. The Kruskal-Wallis is a one-way analysis of variance by ranks which can be used with ordinal measures (Siegel, 1956).

In comparing preretirement and postrelocation groups, Table 5.6 indicates the mean ranking of each group, the Chi-Square and significance levels.

Table 5.6 Kruskal-Wallis Test Ranking of Satisfaction Measures by Group

	Group	N	Mean Rank	Chi-Square	df	Asymp. Sig.
Health Satisfaction	Preretirement	293	213.39	2.79	1	.095
	Postrelocation	121	193.24			
	Total	414				
Financial Security	Preretirement	294	227.12	32.52	1	.000
	Postrelocation	119	157.29			
	Total	413				
Lifestyle	Preretirement	276	200.96	.95	1	.002
	Postrelocation	118	189.41			
	Total	394				
Living Environment	Preretirement	294	195.07	11.77	1	.001
	Postrelocation	120	237.96			
	Total	414				

Table 5.6 shows that satisfaction with financial security and lifestyle are judged to be significantly lower by the postrelocation group compared to the preretirement group. However in relation to satisfaction with living environment, the postrelocation group judges this to be significantly higher than the preretirement group.

Table 5.7 compares the postretirement group and the postrelocation group. The postrelocation group ranks satisfaction with financial security and lifestyle significantly lower than the postretirement group.

Table 5.7 Kruskal-Wallis Test Ranking of Satisfaction Measures by Group

	Group	N	Mean Rank	Chi-Square	df	Asymp. Sig.
Health Satisfaction	Postretirement	212	171.84	1.63	1	.202
	Postrelocation	121	158.52			
	Total	333				
Financial Security	Postretirement	211	173.91	4.96	1	.026
	Postrelocation	119	150.58			
	Total	330				
Lifestyle	Postretirement	213	173.65	4.24	1	.040
	Postrelocation	118	152.18			
	Total	331				
Living Environment	Postretirement	213	171.17	1.26	1	.261
	Postrelocation	120	159.60			
	Total	333				

Summary

The results reported in this chapter indicate that there are significant differences between participants who are in those phases of preretirement, after retirement and after relocation. Those who relocated after retirement reported lower psychological health (GHQ), Autonomy, Environmental Mastery, Personal Growth, Positive Relations With Others, Purpose in Life and Self-Acceptance than those who had not relocated. They also reported lower financial satisfaction and lower satisfaction with their lifestyle compared to those who were retired but did not relocate.

Compared to those who had not retired, the group who had retired and relocated had significantly lower environmental mastery, Personal Growth, Purpose in Life and Self-Acceptance, and had lower satisfaction with financial security and lifestyle. However those who had retired and relocated had significantly higher satisfaction with their living environment compared to those who had not yet retired. Differences in age and time since retirement could not account for the health and well-being effects because when statistically adjusted for, the difference due to groups remained.

Discussion

This study found that although psychological health (as measured by the GHQ) was significantly better for the postretirement group compared to the preretirement group, only one of the well-being factors (Positive Relations With Others) was higher for the postretirement group.

The significant difference in psychological health is contrary to McGoldrick's (1989) finding of no difference in mental health. However, there were no differences in well-being between the groups, supporting the findings of Ross and Drentea (1998) and the general consensus in the literature that retirement of itself is not experienced as a stressful event (Gall et al., 1997; Talaga & Beehr, 1989).

In terms of the satisfaction measures in this study, financial satisfaction was significantly lower for the postretirement group. This finding is supported by a large body of literature (Brown et al., 1996; Kim & Moen, 1999; McGoldrick & Cooper, 1994) that identified adequate income being related to adjustment to retirement. Although financial issues might have some deleterious effects, in the present study these effects might be counterbalanced by a higher postretirement level of satisfaction with living environment and collaboration in decision making and more positive relations with others. These last two variables might point to improved relationship effects, an issue identified by Kim and Moen (1999) that marriage and family relationships play an important role in predicting well-being following retirement. No other well-being subscale was significantly different between the postretirement group and the preretirement group, supporting the notion of retirement having little impact on the majority of retirees.

The first hypothesis that those who relocate after retirement show poorer psychological health and well-being than those who do not relocate was supported. In terms of the psychological well-being scale, scores for the group who had relocated were significantly lower on all six subscales compared with the group who had not relocated. The postrelocation group also had significantly lower psychological health, and in terms of life satisfaction, were much lower in financial satisfaction, lifestyle satisfaction and satisfaction with the living environment.

The group who had relocated were lower in a positive evaluation of self and past life (Self-Acceptance), a sense of continued growth and development as a person (Personal Growth), the belief that one's life is purposeful and meaningful (Purpose in Life), the experience of quality

relations with others (Positive Relations with Others), the capacity to manage effectively one's life and surrounding world (Environmental Mastery), and a sense of self-determination (Autonomy). This result would seem to support the theoretical prediction that when retirement is followed by relocation, and many aspects of life are changed, people would have difficulties (Holmes & Rahe, 1967; Scully, et al., 2000). It also supports the notion proposed by Stallings et al. (1997) that these potentially positive events, when accompanied by significant change have the potential to be distressing.

Hendrick et al. (1982) suggested that the stress of a major move, and stress resulting from readjustment to a new lifestyle and new interpersonal relations in a new community, along with alienation and social isolation among retirees, might be exacerbated by geographical relocation after retirement. They suggested that relocation into the general community was more socially isolating and less supported, than moving into a retirement community. Participants in the present study represented both environments, but no significant differences between people who relocated to retirement communities compared to the general community were observed.

Baglioni (1989) also suggested that discrepancies between characteristics of the individual and the environment produce stress. If the imbalance is prolonged, then negative psychological and physiological consequences can occur as a result of the continued strain to achieve a more homeostatic balance. It may be that many in the postrelocation group were experiencing discrepancies.

This finding of the study is contrary to that of Kling et al., (1997) that 70 year old women undergoing relocation showed higher well-being (higher Self-esteem, Environmental Mastery, and lower Depression) 18 months afterwards, and gained in all outcome measures over time. However, since no other study has specifically compared psychological health and well-being of those who do and do not relocate after retirement, these results would seem to break new ground in our understanding of this issue and also the potential impact of dual life transitions.