Who are those happy elderly people?

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Abstract

The present study was intended to analyse discriminant factors between happy and unhappy elderly people. For this purpose, 300 seniors in a metropolitan area in Korea were individually interviewed regarding subjective well-being, economic and health state, extraversion, neuroticism, self-esteem, goal instability, generativity, and social support. The discriminant factors between high emotional well-being elderly and low emotional well-being elderly were self-esteem, neuroticism, and goal instability. The discriminant factors between high life satisfaction elderly and low life satisfaction elderly were self-esteem and economic state. In conclusion, it was found that self-esteem served as the strongest discriminant factors between happy and unhappy elderly people.

Keywords : Happy elderly, Self-esteem, Neuroticism, Goal instability

1. Introduction

Who are those happy elderly and who are those unhappy elderly? As the life expectancy after retirement has increased dramatically in developed countries, this question has intrigued lay people and researchers as well. People generally believe happy elderly people are those who are affluent (at least not poor), mentally and physically healthy, having good social network, content with their life time achievement, have work to do and enjoy life. As psychology expands its inquiry into well-being of elderly as the aging society has become a reality, this question has been widely addressed by many psychologists[1-3]. Many concepts have been applied and identified to differentiate happy from unhappy elderly. Among them most notable concepts are subjective well being, self-esteem, goal instability, generativity, extroversion, neuroticism, and social support. Researches have shown that, compared to the unhappy elderly, the happy elderly is experiencing more positive emotions than negative emotions, tends to be more extroverted[1][4], have higher level of self-esteem[4-8], sense of goal directed activities[9],

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greater sense of generativity[10-12], lower tendency of neuroticism[2][7], and higher level of social support[4][5][11][13-15]. An empirically interesting question is what are the most important ones among these many variables. Since most researchers regard their variables of interest as the important determinants of elderly's happiness, the answer depends on the perspective taking. Therefore, it makes practically more sense to ask what the sufficient set of variables is to account for elderly's happiness. To learn more about the happiness of the elderly people, The present study is an attempt to derive a pragmatic model for differentiating happy elderly from unhappy elderly.

2. Method

2.1 Participants & Procedures

Participants consisted of 500 elderly people recruited from two senior centers located in two cities in Korea. Data from 300 people in a city were used to derive a discriminant function. The remaining 200 people from another city served to validate the discriminant function. For the first sample the average age was 74.6 (sd = 5.04) and the majority was female (265, 89%). For the second sample, the average age was 73.9 (sd = 5.24) and female was little over the half (107, 54%).

2.2 Measures

Emotional well-being was originally developed by Andrew and Withey[16] and translated into Korean language by Cha[17]. The scale consisted of four positive (happiness, love, pride, & satisfaction) and four negative (fear, sadness, anger, & guilt) emotions. The reliability index for internal consistency was .90 for the positive emotions and .79 for the negative emotions in the present study. Index of emotional well-being was obtained for use by subtracting total score for negative affect from total positive score. Life satisfaction, originally developed by Diener, Emmons, Larsen, and Griffin[18], was translated into Korean language by Cha[17]. The reliability index for internal consistency was .87 in the present study. A Korean translated[19] version of the Rosenberg's[20] global self-esteem scale was used. The reliability index for internal consistency was .85 in the present study. The goal instability scale, developed by Robbins and Patten[21], was translated into Korean language by Lee[22]. The reliability index for internal consistency was .85 in the present study. We took scales for neuroticism and extraversion out of

the Korean version of NEO PI-R, which was developed based on the original 5 factor personality scale by Costa and McCrae[23]. The reliability index for internal consistency was .79 for the extraversion and .80 for the neuroticism in the present study. The participants answered on 5 point scales their subjective evaluation of income level (very poor-very affluent), their health(very poor-very good), and relations with friends(very bad - very good).

2.3 Statistical Analyses

Before conducting multivariate analysis, we examined the multivariate normality of the data following the suggestions made by Tabachnick and Fidell[24]. Five cases (2 from the first sample and 3 from the second sample) were appeared to be multivariate outliers and deleted subsequently from the analysis. Since the assumption of homogeneity of variance-covariance for the first sample was violated, we used covariance matrices of within group to classify the groups mathematically adopting the second discriminant function. For the second sample which was used for cross validation, the homogeneity assumption appeared valid justifying the use of pooled covariance matrix. Therefore, the first discriminant function was used for classification. Using the scores of emotional well-being, calculated by subtracting the negative emotion experience from the positive emotion experience, we picked up those people whose score was one standard deviation (SD) higher or lower than the mean. Accordingly, 36 people were grouped as emotionally unhappy and 40 as happy from the first sample of 298. The scores of life satisfaction was used the same way to yield 37 unsatisfied and 31 satisfied from the first sample.

3. Result

A discriminant analysis was carried out for each criterion variable using all the predictor variables. For those two groups differing in emotional well-being, the discriminant function was able to classify 96.2% people correctly, yielding eta square of 73.7%. A stepwise discriminant analysis showed that three predictors are sufficiently enough to correctly classify 94.7% of the people on the emotional well-being. Self-esteem, neuroticism, and goal instability constitute the discriminant function. The canonical correlation between the three predictors and the groups is .856, and eta square is 73.4% (Table 1 & 2).

[Table 1] Stepwise Discriminant Function Analysis Classifying Emotional Well-being Level

Step	Included Predictor	Wilk's λ	F*	p
1	Self-Esteem	.37	122.84	< .001
2	Neuroticism	.29	19.69	< .001
3	Goal Instability	.27	5.89	.018
4	Social Support from Family	.26	3.27	.075

* Degree of freedom for each F statistics is (1, 74), (2, 73), (3, 72), and (4, 71) each step.

[Table 2] Classification Results When the Self-esteem, Neuroticism and Goal Instability Were Used as Predictors

Actual Group	No. of cases	Predicted Group Membership	
		Low Emotional Well-being	High Emotional Well-being
Low emotional well-being	36	34 (94.44%)	2 (5.56%)
High emotional well-being	40	2 (5.00%)	38 (95.00%)

Note. Percentage of grouped cases correctly classified is 94.72%.

For the two groups differing in life satisfaction, a stepwise discriminant analysis showed that self-esteem and income level perception are enough to classify 91.4% people correctly. The canonical correlation between the discriminant function with two variables and the groups turns out .84, yielding eta square of 70.1% (Table 5 & 6).

[Table 3] Stepwise Discriminant Function Analysis Predicting Life Satisfaction Level

Step	Included Predictor	Wilk's λ	F*	p
1	Self-Esteem	.32	139.47	< .001
2	Subjective Evaluation of Income Level	.30	4.55	.037
3	Social Support from Family	.28	2.90	.094

* Degree of freedom for each F statistics is (1, 66), (2, 65), and (3, 64) each step.

[Table 4] Classification Results When the Self-esteem and Subjective Evaluation of Income Level Were Used as Predictors

Actual Group	No. of Cases	Predicted Group Membership	
		Low Life Satisfaction	High Life Satisfaction
Low life Satisfaction	37	33 (89.19%)	4 (10.81%)
High Life Satisfaction	31	2 (6.45%)	29 (93.55%)

Note. Percentage of grouped cases correctly classified is 91.37%.

Since the stepwise discriminant analysis is highly subject to sample characteristics, a cross-validation is highly recommended. For cross-validation we applied the discriminant function to independent set of people. 200 elderly people from a senior center in another city served for this purpose. This people filled out the questionnaire given to the first sample. On each of the two criterion measures, two groups of people were identified by using the 1 standard deviation method, as previously stated. The discriminant function of three predictor variables (self-esteem, neuroticism, and goal stability) classified correctly 95.9% of those high and low emotional well-being. The discriminant function of two predictor variables (self-esteem, perception of income level) classified correctly 91.8% of those high and low life satisfaction. The results show the two discriminant functions have sufficient cross-validity in classifying elderly people distinctively high or low in emotional well-being and in life satisfaction.

4. Findings and Conclusion

The present investigation attempted to pull out discriminant functions to classify happy people and unhappy people. Two criteria variables of subjective well-being were independently used for discriminant analysis. Individually tested, the variables of extraversion, neuroticism, self-esteem, generativity, goal instability, income level, health, and friendship are all shown to be differentiating happy and unhappy people. But three variables, self-esteem, neuroticism, and goal instability are able to represent most variances of emotional well-being. Discriminant function of 11 variables accounted for 74.4% of variances but the function of three variables remarkably accounted for 73.4%. In the analysis of life satisfaction, the discriminant function of 11 variables pulled out 73.7% but a function of two variables, self-esteem and perceived income level, are able to pull out most variances (70.1%). The two discriminant functions are shown to have sufficient cross-validity in different sample of elderly people. The present results indicate that, among many variables, self-esteem is the foremost variable differentiating happy and unhappy people. The current result confirms that neuroticism is a significant factor affecting mainly emotional well-being and shows that goal instability exerts important role in securing emotional well-being.

Although the results look impressive, the present analysis is not based on theoretical reasoning. Discussions are needed to understand the findings.

Role of self-esteem The present results indicate that, among many variables, self-esteem is the foremost variable differentiating happy and unhappy people. Indeed, self-esteem alone can pull out 63% of variances for emotional well-being and 68% of variances for life satisfaction. The

nature of stepwise statistical analysis adopted here tells us that self-esteem may represent other variables of significance which are regarded important in separate investigations. Therefore it is reasonably expected that people with self-esteem are more likely to experience more instances of positive emotions, less of negative emotions, and greater level of life satisfaction. Self-esteem seems essential for self-determination[25] and serves to form and maintain satisfactory social relationships[26]. Given all the reasoning and evidences, it comes as no surprise that psychologists regard the maintenance and enhancement of self-esteem as a primary motive for human behavior[27][28].

Neuroticism Many studies treated neuroticism as an important personality predictor for subjective well being[2][29]. Eysenck[30] hypothesized that neuroticism represents susceptibility to negative affect. That is, individuals high in neuroticism are more vulnerable to threatening life events and are likely to fall victim of them. There is evidence that stable personality traits can dispose people to experience moderately stable level of favorable and adverse life events and subjective well-being[31]. The current result confirms that neuroticism is a significant factor affecting mainly emotional well-being.

Goal instability. The present analysis shows that goal instability exerts important role in securing emotional well-being. People with high goal instability tend to lack orienting goals and values[32]. Goal instability significantly accounted for adjustment and well-being after injury causing disability[33]. It has been shown to influence depression and social satisfaction among elderly[34]. The present result confirms this.

In conclusion, the current study shows that, compared to the unhappy elderly, the happy elderly have higher level of self-esteem, lower tendency of neuroticism, higher sense of goal directedness, and higher level of income. The present study provides intervention strategies for improving mental wellbeing in Korean elderly people via field research. More research is needed to identify other variables associated with Korean elderly people's mental wellbeing.

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