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Analysis of the Influence of Personal Lifestyle on Well-Being

Siying Lin[1,a,*]

[1]*Guangdong University of Finance and Economics, Guangzhou, 510000, China*
a. smellypencake@outlook.com
**corresponding author*

Abstract: Although current research has concluded that a person's happiness is related to many factors, such as the amount of sleep, exercise and so on; But there are many factors that have not been taken into account. In this study, a total of 15,977 subjects were included in the multiple linear regression equation, and the step-up regression method was used to reduce the correlation between variables. The results show that people should try more to enter "flow" in daily life, which is particularly closely related to the improvement of subjective well-being; In addition, life expectancy, travel times, inner circle of friends and alone time have significant effects on individual subjective well-being. In previous studies, many variables related to social attributes have not been considered in detail and properly divided. In this study, the social environment around an individual was clearly defined to provide a more accurate correlation, which provides clearer criteria for identifying mental health in the past and points the way for follow-up research.

Keywords: Subjective well-being, social distance, multiple linear regression model.

1. Introduction

Approximately 20% of adolescents have a diagnosable mental health disorder [1]. There is a significant relationship between personal happiness and mental health [2]. The measurement of subjective well-being can usually be used to estimate the probability of the occurrence of mental health disorders, and at the same time provide a basis for the follow-up treatment of mental health. Therefore, calculating a person's subjective happiness is of great significance for the measurement of mental health level. The purpose of this paper is to analyze various potential factors of subjective well-being, to help people assess which factors have a more significant impact on a person's happiness, so that individuals can take effective improvement measures according to the actual life situation.

Subjective happiness is defined as "a person's evaluation of his or her own life and surroundings" [3]. Because an individual's evaluation of himself is highly related to the environment in which lives in, the evaluation elements of an individual's subjective well-being are very complex. The level of a person's happiness is the result of the mutual influence of internal and external environment. Basic indicators such as marital status, age, working status and health status have a significant impact on mental health scores [4]. On the other hand, people with high self-esteem, internal control tendency and less internal conflict have higher subjective well-being. Good social relations can increase people's subjective well-being, while bad social relations can reduce it [5]. Although it is generally believed that social support is significantly correlated with subjective well-being, most studies do not attach importance to the construction of social indicators. Xu et al. believed that work value has a

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higher impact on subjective well-being than other factors including social environment [6]. Combining the indicators of social environment with anthropological information, Song believed that social environment is more likely to change than other related factors, and the author should pay more attention to the subjective and objective data of individuals on the surrounding environment [7].

Gitto believed that the quality of life can be improved by changing an individual's attitude towards life [8]. While the influence of different factors will vary with the change of gender Considering the endogeneity of different variables, it is further difficult to measure subjective happiness [9].

In terms of model selection, the main method to measure subjective happiness is the stepwise regression method using multiple regression model. Dong took the special working group as the research object when conducting regression, and took the organizational commitment information into consideration to assess the individual's satisfaction with the organization [10]. In this paper, it is refined into the work indicators that actually affect life in order to reflect the individual's satisfaction with the work environment more directly.

Therefore, this paper starts from 24 factors to study whether they have an impact on subjective happiness, and chooses an appropriate model to study the degree of correlation between these factors and subjective happiness.

2. Methods

2.1. Data Source

The dataset used in this paper is fetched from the Kaggle website (Lifestyle_and_Wellbeing_Data). This dataset contains 15,977 survey responses with 24 attributes. This dataset contains the survey responses from www.Authentic-Happiness.com. and this research selected all of them as samples. The original dataset remained in .xlsx format.

2.2. Variable Selection

The original dataset has a very large amount of data. The dataset contains 24 attributes that describe the way people live (Table 1).

Table 1: List of Variables

Variable	Logogram	Meaning
Square	x_1	Total housing area
Living Room	x_2	The living room's number
Drawing Room	x_3	The drawing room's number
Bathroom	x_4	The bathroom's number
Building Type	x_5	Tower (1), bungalow (2), plate-tower construction (3) and plate (4)
Elevator	x_6	Whether it has elevator
Construction Time	x_7	Years of construction
Building Structure	x_8	Unknown (1), mixed (2), brick and wood (3), brick and concrete (4), steel (5) and steel-concrete composite (6)
Renovation Condition	x_9	Other (1), rough (2), simplicity (3), hardcover (4)
Property Rights	x_{10}	Whether the property is less than 5 years
Subway	x_{11}	Whether near the subway
District	x_{12}	Sixteen regions in Beijing
Housing Price	Y	Total Housing prices in Beijing

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A person's subjective happiness today is influenced by many different factors, including your health habits, your mood, your professional knowledge, your social connections, and more. Thus, it is characterized by the strength of an individual's social network and tendency to discover the world, a person's receptivity to positive emotions, and the ability to achieve unique achievements. These factors may play an important role in an individual's subjective happiness index. Based on these considerations, this study integrated these influencing factors into the influence model of people's subjective happiness, and calculated to measure which factors can independently have a significant impact on their subjective happiness index. The description of this dataset is shown in Table 1.

2.3. Method Introduction

Firstly, 15,977 valid data from the questionnaire were classified and sorted. Secondly, a total index obtained by summing and averaging the five sub-dimensions in the data table is used as the dependent variable to measure a person's happiness, and the rest of the sorted information is all independent variables. Since some basic anthropological information and related indicators of work environment are discrete variables, regression analysis is performed after regression is converted into dummy variables. Finally, the stepwise regression method is used to incorporate the above variables into the multiple linear regression equation, and the regression model is obtained. The actual model formula is as follows:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_{17} x_{17} + \varepsilon \quad (1)$$

3. Results and Discussion

3.1. Model Results

As can be seen from Table 2, when P<0.01, this variable is not effective in the model; Through the independent P-value of each variable, the author can further infer whether the variable is valid and the degree of correlation with the dependent variable. On the one hand, the P-value of Lost vocation is less than 0.05 but greater than 0.01, which means that this factor has some influence on subjective happiness. On the other hand, the P-value of gender, number of steps per day, sleep time, frequency of anger, and number of times of recognition are all less than 0.01, which means that these variables are very significant and have a strong relationship with subjective well-being. The absolute value of the standardized coefficient can directly reflect the influence of the independent variable on the dependent variable, and whether the influence is positively correlated or negatively correlated depends on the symbol in front of the standardized coefficient. As shown in Table 2, the number of times a person enters flow (=0.237) has the most significant impact on a person's subjective well-being. In the influence relationship, the regression coefficient value combined with the marginal effect showed specific influencing factors, such as the number of flow, helping others to achieve a better life, sufficient income, and clear life vision, each unit increase, individual subjective happiness will increase by 0.237, 0.117, 0.236, and 0.099, respectively. It is undeniable that these data have a significant impact on individual happiness, because these data are relatively large, have certain reference and research value, and can provide a basis for subsequent research. The model can be written as:

$$y = 0.543 + 0.237x_1 + 0.117x_2 + \cdots + 0.008x_{17} \quad (2)$$

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Table 2: Regression coefficient table

	B	S.E.	Beta	T	significance	VIF
Constant	0.543	0.093		5.817	.000	
X1	0.237	0.005	0.288	45.911	.000	1.223
X2	0.117	0.004	0.195	28.674	.000	1.431
X3	0.099	0.004	0.166	26.812	.000	1.184
X4	0.073	0.004	0.124	19.726	.000	1.226
X5	0.056	0.004	0.082	12.772	.000	1.284
X6	0.047	0.004	0.073	11.771	.000	1.180
X7	0.089	0.007	0.085	13.419	.000	1.244
X8	0.038	0.004	0.056	9.198	.000	1.149
X9	0.236	0.026	0.054	9.155	.000	1.082
X10	0.044	0.004	0.069	10.910	.000	1.256
X12	0.073	0.008	0.054	8.689	.000	1.198
X13	-0.046	0.009	0.032	-5.124	.000	1.246
X14	-0.015	0.004	0.021	-3.484	.000	1.111
X15	0.031	0.010	0.019	3.298	.001	1.072
X16	-0.068	0.024	0.017	-2.876	.004	1.087
X17	0.008	0.003	0.015	2.506	.012	1.070

3.2. Model Evaluation

The fitting process of the specific equation is shown in Table 3. The final model is the 16th model obtained by stepwise regression. The good degree of fit between dependent variable and independent variable R=0.696, which reflects the obvious linear relationship between dependent variable and independent variable, and the adjustment coefficient R^2=0.485. Moreover, the variable factors selected in this model can explain 48.5% of individual subjective happiness, which has relatively strong explanatory power. The standard error of regression estimation R^2 estimates =0.485, indicating that the error between the sample's return observation point and the actual result is small. Moreover, during the establishment of the first model to the last model, the P-value in the F-test was less than 0.05 each time after new variables were included, reaching a significant level. This means that the model is feasible and valid, and has high explanatory value. The Durbin-Waston coefficient is 1.5954, which is close to the median value of 2, meaning that the author can rule out the possibility of autocorrelation in the equation. The error terms are independent of each other, and there is no common factor and multicollinearity, which is also one of the presuppositions for the establishment of multiple linear regression equation.

Table 3: Fitting process

Model	R	R^2	Error	F	P-value	Durbin-Waston(U)
16	0.696	0.485	1.39203	6.281	0.012	15954

As shown in Figure 1, the residual normal distribution is the premise for the establishment of multi-zero regression equation. From the normalized residual histogram of the regression equation, the

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distribution of the standardized residual of the final model fits well with the standard normal distribution overall, satisfying the residual normality hypothesis in regression analysis.

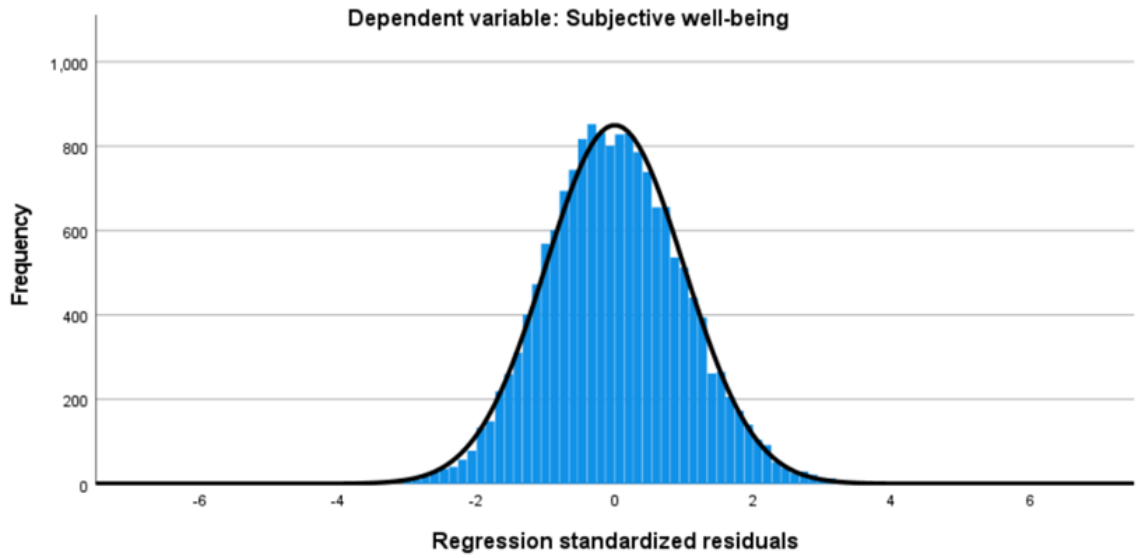

Figure 1: Histogram of the normalized error frequency of the regression equation

Although previous studies divided each indicator into different units for analysis, more direct influencing factors were not considered, and more emphasis was placed on the use of more intuitive and diverse independent variables in this study, such as how often to shout with others and how much recognition was obtained in a lifetime. More accurate and easier to change than structural variables These variables can not only reflect changes in happiness more directly, but also broaden the design ideas for later psychotherapy and questionnaire surveys, helping medical staff to observe more important factors, identify mental illness earlier, and improve life habits more accurately.

4. Conclusion

The current study selected a variety of data, focusing on variables that may affect subjective well-being, and concluded that subjective well-being may be related to flow, life expectations, travel times, inner circle of friends, time to myself, daily steps, income, number of contacts, fruit and vegetable intake, and sleep duration. Trying to increase the number of activities mentioned above can provide a more visible measure of your subjective well-being,

It is undeniable that due to the limited amount of data, apart from the above-mentioned problems, there may be errors in the model. In the selection of samples, the age group classifies people aged 51 and above into one category, and does not consider that the influence of different factors may change for older people. And the sex ratios of the samples themselves are not the same, which may also affect the accuracy of the study. For the case that the influence of the variable vacation used for work is weaker than other variables, the possible reason is that most people in the sample size have not lost their vacation to work, so most of the data cannot reflect the actual relationship between the two. Whether this variable is significant or not needs further conclusions.

However, this study still has great value and advantages. First, the method adopted in this study is innovative. On the one hand, in this study, the author made a more detailed division of important variables, which often do not attract attention. For example, if the author divided social interactions into those individuals, the author considered close to you and broader interactions, the conclusion of this study is that interacting with people who are close to you leads to more happiness than socializing

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in the traditional sense. On the other hand, this experiment did not use the single factor analysis method like many previous experiments, but chose multiple linear regression, which is more comprehensive.

Secondly, it has a certain effect on the treatment of mental illness and the self-detection of ordinary people. In addition to the previously known data that has a clear impact, there are many more factors related to an individual's happiness, such as life expectations, or the amount of flow. How these factors affect subjective well-being needs further research. This means that these studies will further point the way for other research in the future. When other factors are identified that affect individual happiness, this paper can prevent mental illness earlier and improve the quality of life of individuals.

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