Money, Age and Happiness: Association of Subjective Wellbeing with Socio-Demographic Variables

Dinero, edad y felicidad: Asociación del bienestar subjetivo y variables sociodemográficas.

Abstract

The relationship between happiness and socio-demographic variables (age, sex, socioeconomic status, educational level) was examined, this with a Latin American sample and its association with Subjective wellbeing given the controversial empirical evidence of their relationship. We surveyed a total of 520 people (300 women and 220 men) between the ages of 18 and 29 with an average of 21.26 years and a standard deviation of 2.47 to answer the subjective happiness scale. The happiness variable was categorized, and the subjects were reorganized in happy and non-happy groups. From the use of main component analysis and logistic regressions, the main results show that variables which best characterize the happiness levels are age and socioeconomic status. Specifically, the results indicate that higher age within the sample, predicts lower levels of happiness. On the other side, at a higher

Resumen

Se evaluó la relación entre felicidad y variables socio demográficas (edad, sexo, estatus socioeconómico, nivel educativo) y su asociación con bienestar subjetivo en una muestra latinoamericana encontrando evidencia empírica controversial de su relación. Se encuestó un total de 520 personas (300 mujeres y 220 hombres) con edades entre los 18 y 29 años, con una media de 21.26 años, y una desviación estándar de 2.47 quienes respondieron la escala de felicidad subjetiva. La variable felicidad fue categorizada, y los participantes fueron clasificados en dos grupos: felices y no felices. Se analizaron los datos con un Análisis de Componentes Principales y Regresiones Logísticas, los principales resultados muestran que las variables que mejor caracterizan los niveles de felicidad son la edad y estatus socioeconómico. Puntualmente, los resultados indican que una mayor edad predice bajos niveles de felicidad.
socioeconomic level, people are happier. In addition, there are
no differences between genders.

**Key words:** Happiness, socioeconomic status, age, educational level.

In the past few years, studies about subjective wellbeing have experienced a remarkable increase (Bilbao, Techio & Paéz, 2007; Lyubomirsky & Lepper, 1999; Perez – Villalobos, Bonnefoy – Dibarrat, Cabrera – Flores, Peine – Grandón, Muñoz – Ruiz, Baquedano – Rodriguez, & Jiménez, Espinoza, 2011; Urbúa, Cortés, Vega, Prieto & Tapia, 2009; Vera-Villarroel, Pavez & Silva, 2012; Zegers-Prado, Rojas-Barahona & Förster-Marín, 2009). Because one of the definitions of wellbeing (Blanco & Díaz, 2005) is “happiness”, we will use it as such in this paper.

Wellbeing is not only one of the main goals in the life of a person (Frey & Stutzer, 2001), but it also has important implications for physical and mental health (Barak, 2006; Demerouti & Sanz – Vergel, 2012; Gerstenbluth, Rossi & Triunfo, 2008; Lyubomirsky, King & Diener, 2005; Mustaca, Kametzky & Vera-Villarroel, 2010). Omar, Paris, Aguiar de Souza, Almeida da Silva, & del Pino-Piña, 2009; Piqueras, Kuhne, Vera-Villarroel, van Straten & Cuijpers, 2011). Additionally, it is a powerful variable in social contexts.

Theoretically, the term wellbeing is included within Positive Psychology. Recent studies had shown that it is linked with life expectancy, physical health (Jiménez, Martínez, Miró & Sánchez, 2008; Koopmans, Geleijnse, Zitman & Giltay, 2010), improved performance at work, successful relationships, and general health (Avey, Luthans, Smith & Palmer, 2010; Boehm & Kubzansky, 2012; Cuadra-Peralta, Veloso-Beso, Ibergaray, Rocha, 2010; Retana-Franco & Sánchez-Aragón, 2010; Vera-Villarroel, Córdova-Rubio, & Celis-Atenas, 2009ab; Watson, Clark & Stasik, 2011) as well as stability and satisfaction among family, work settings and interpersonal relationships (Espinoza, Menotti, Bravo, & Procida, 2011; Lyubomirsky et al., 2005; Moreno-Jimenez, Herrer, Rodriguez-Carvajal, Hernandez, 2010): Retana-Franco & Sánchez-Aragón, 2010).

Despite the evidence stated earlier, according to Davidson, Mostofsky & Whang (2010), there is still little information regarding the mechanisms and variables related to happiness. Overall, it appears to be a lack of integrative theoretical formulations which can explain these phenomena. Most importantly, even as the literature about happiness grows, there are still unanswered questions about the basic relations between happiness and environmental, social and demographic variables. The question of whether happiness with external outcomes is relative or absolute has intrigued many students of happiness and generated much debate (Yang, Hsee & Zheng, 2011).

Besides, the concept of subjective wellbeing is a complex one, over which many variations and discrepancies exist (Diener, Oishi & Lucas, 2003; Ryan & Dici, 2001) and interacts with at least seven factors: family relationships, income, work, community and friends, health, freedom, and a philosophy of life (Chyi & Mao, 2011). Recent meta-studies (Dolan, Peasgood & White, 2008) had concluded that there is contradictory evidence, lack of certainty on the direction of causality and concern over the impact on the findings of potentially unobserved variables.

Research had shown that life circumstances (temperature control, feeding, health, environmental control, and social relationships), goals and personal values can influence subjective wellbeing (Diener et al., 2003; Lyubomirsky et al., 2005; Vinaccia & Quiceno, 2011; Urzúa, Pavlov, Cortés & Pino, 2011). However, there is still certain evidence that sustains that this contribution is not total, and its contribution is relevant until a certain level, after which its influence decreases.

These discrepancies can also be found within studies with demographic variables and happiness. Some have found that economic and cultural variables can affect subjective wellbeing (Chang, Asakawa & Sanna, 2001; Chang & Asakawa, 2003; Clark, Frijters & Shields, 2007; Diener, Ng, Harter & Arora, 2010; Diener et al., 2003; Inglehart, Foa, Peterson & Welzel, 2008; Wolfers, 2003). However, studies had shown contradictory information regarding the socioeconomic level (Easterlin, 2010). While Cornelis (2010) and Graham (2010) state that there is no clear
relationship between happiness and socioeconomic level, there is a growing body of evidence (Diener, Helliwell & Kahneman, 2010; Diener et al., 2010; Stutzer, 2004) that supports the opposite view; that is, that money can buy at least some happiness.

Also, no consensus exists regarding basic demographic elements, such as age and sex, and its interaction with subjective wellbeing. Hervás (2009) concluded that both aspects had little or no influence while Lacey, Kierstead & Morey (2011) concluded that age was one of the few variables in which research agreed on the effect that it has on happiness. Easterlin (2001) subsumes the current status of the research in happiness: there’s little agreement on how happiness varies over the course of a lifetime. On the other hand, in regard to civil status (Hervás, 2009) and educational level (Gerstenbluth et al., 2008), studies appear to indicate that happiness increases with support networks, job, income, and higher levels of educational attainment.

This disparity of outcomes regarding subjective wellbeing and socio-demographic variables had been studied by many Ibero-Americans (Bilbao et al., 2007; Gerstenbluth et al., 2008; Schnettler, Miranda, Sepulveda, Denegri, Mora & Lobos, 2012; Silva-Colmenraes, 2008) and anglosaxxon studies (Clark et al., 2007; Graham, 2010; Easterlin, 2001; 2005; Inglehart et al., 2008; Lyubomirsky, 2008; Oswald, 1997, 2002; Stutzer, 2004; Wolfers, 2003), however, the conclusions appear to be antagonistic.

It is in the light of this situation that the objective of this study is drawn: the reevaluation of the relationship between happiness and socio-demographic variables (age, sex, socioeconomic status, educational level). With a Latin American sample from which there is no evidence of such relationships. The hypothesis of this study is to probe the absence or presence of a relation between socio-demographic variables and happiness among the participants.

Method

Participants

Total sample was 520 participants from Santiago de Chile, 300 women and 220 men. The age was between 18 and 29 years with an average of 21.26 years and a standard deviation of 2.47. Sampling was intentional, where the only criteria for exclusion was a diagnosed mental pathology. No gratification was offered to participants. A 15% experimental mortality is estimated. Regarding other socio-demographic variables a 42.9% of the sample was studying a BS or at a graduate level.

Finally, 16.3% of the sample belongs to a very high socioeconomic level, 70.7% belongs a Medium socioeconomic level, and 12.9% characterizes itself as Low socioeconomic level.

Instruments

Subjective Happiness Scale. (Lyubomirsky & Lepper, 1999). The objective of this scale is to give a subjective assessment to general happiness using four items. The final score is computed by adding all the items and dividing the result by the total number of items.

Psychometric reports had found high levels of internal consistency, temporal stability, and validity of this scale (Lyubomirsky & Lepper, 1999; Vera – Villarroel, Celis – Atenas & Córdova – Rubio, 2011).

Data Collection

Data collection was made by inviting volunteers to answer questions regarding socio-demographic variables and answering the Subjective Happiness Scale. Previously, participants signed an informed consent form approved by the ethics committee of the sponsor University. All instruments and questions were read and explained to every participant.

Socio-demographic variables considered for this study were age, sex, educational level and socioeconomic level. To assess the last variable, this study adopted the criterion proposed by ESOMAR (Adimark, 2000).

Data Analysis

SPSS 14 was used to handle the entire analysis. Principal Component analysis was used to make a synthesis of all the variables losing the least possible information, grouping the information in dimensions through the variance of the original variables (Kerlinger & Lee, 2002). Principal component analysis (PCA) is a multivariate technique that
analyzes a data table in which observations are described by several inter-correlated quantitative dependent variables. Its goal is to extract the important information from the table, to represent it as a set of new orthogonal variables called principal components, and to display the pattern of similarity of the observations and of the variables as points in maps. The goals of the PCA are to extract the most important information from the data table, compress the size of the data, simplify the description of the data test and analyze the structure of the observations and the variables. (Abdi & Williams, 2010)

Also, to quantify the influence of the socioeconomic variables in Happiness and optimism, logistic regressions, which are adequate when one is trying to assess the impact of multiple variables in on binary variable (Hosmer & Lemeshow, 2000), were used.

Results
To perform the Principal Component Analysis, the happiness variable was dichotomized, grouping cases with scores below the twenty-fifth percentile and cases above the seventy-fifth percentile. Cases with scores below 4.75 (p25) were classified as non-happy, and those cases with average scores above 6 (p75) were classified as happy. Through this procedure, the sample size was reduced to 304 cases. Details on the distribution are shown in Table 1.

<table>
<thead>
<tr>
<th>Happy and non happy groups by gender</th>
<th>Happy</th>
<th>Non happy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>50</td>
<td>72</td>
</tr>
<tr>
<td>Women</td>
<td>92</td>
<td>90</td>
</tr>
</tbody>
</table>

A high, positive correlation was found between the socioeconomic and educational levels (0.81). The rest of the correlations did not surpass values of 0.25. The correlation matrix can be seen in Table 2.

The reduction of the dimensions in the study was achieved through Principal Component Analysis. Two components explain 73% of the total variance. In the next paragraphs, the details about the components distribution for the happy and non-happy categories will be explained. As expected, the socioeconomic and educational levels superpose each other in the plane and load in the first factor, while age loads in the same component but with less intensity. Sex is the only variable of the second component.

<table>
<thead>
<tr>
<th>Table 2. Correlation matrix</th>
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<tbody>
<tr>
<td>Age</td>
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<tr>
<td>-----</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Sex</td>
</tr>
<tr>
<td>Educational Attainment</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
</tr>
<tr>
<td>Happiness</td>
</tr>
</tbody>
</table>

**p <.01  *p < .05
The analysis of the socio-demographic variables for the happy cases shows (in Figure 2) the following distribution, with two components that explain 77% of the variance. The distribution is similar to the general distribution.

For non-happy cases, two components explain 73% of the variance. For the first time, age interacts negatively with component 1, which suggests further exploration on the interaction of this variable for non-happy people.

In order to further explore the interactions of the socio-demographic variables and happiness, logistic regressions were used. This kind of analysis is adequate when one tries to explain a dichotomous variable (Hosmer & Lemeshow, 2000). To explore the variables, a backward stepwise model was used, selecting the best model using maximum likelihood. The best model is shown in Table 3, where two variables are considered significant, age (OR=0.879, p=0.033) and socioeconomic level (OR=1.218, p=0.042).

**Table 3**  
*Regression, socio-demographic variables and happiness*

<table>
<thead>
<tr>
<th>Variable</th>
<th>p</th>
<th>OR</th>
<th>Confidence Interval (95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.033</td>
<td>0.897</td>
<td>(0.812-0.991)</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>.042</td>
<td>1.218</td>
<td>(1.007-1.474)</td>
</tr>
<tr>
<td>Sex</td>
<td>.710</td>
<td>0.710</td>
<td>(0.444-1.137)</td>
</tr>
<tr>
<td>Educational Attainment</td>
<td>.990</td>
<td>1.002</td>
<td>(0.746-1.345)</td>
</tr>
</tbody>
</table>

*Regression involved three steps. Educational Attainment was eliminated in step 1, and sex in the second step.*
Discussion

Happiness have been studied not only by psychology, but also by other sciences, such as economy, and both have tried to find conclusive evidence regarding happiness and socioeconomic factors (Blanchflower & Oswald, 2004, 2005; Di Tella, MacCulloch & Oswald, 2003; Easterlin, 2001, Frey & Stutzer, 2001).

The relationship between subjective wellbeing and socioeconomic level had been a controversial one. Despite some studies that have found no clear relationships among these variables (Cornelis, 2010; Graham, 2010), this study based on Ibero-American population, provides evidence supporting the link between socioeconomic level and happiness, where higher socioeconomic levels had more happy people. Other studies had also pointed evidence in this direction (Blanchflower & Oswald, 2004, 2005; Diener et al., 2010, Di Tella et al., 2003; Easterlin, 2001; Stutzer, 2004). A recent study by Kanheman & Deaton (2010) suggests that money has a positive relationship with happiness up until US $75,000. After which, more income does not provide more happiness.

Regarding age, the results of this investigation are coherent with the U-Shaped happiness theory, where the higher levels of happiness are experienced before the twenties and after the fifties (Blanchflower & Oswald, 2006). Other studies (Alesina, Di Tella, MacCulloch; Blanchflower & Oswald, 2004; Csikszentmihalyi & Hunter, 2003; Inglehart et al., 2008; Swami, Voracek, Dressler, Eisma, & Furnham, 2009; Yang, 2008; Stone, Schwartz, Broderick & Deaton, 2010) confirm this tendency. Given that the age of the sample goes up only to 29 years, we would have a close up of the first half of the curve.

On the other hand, many studies have found that the variable sex is significant, regarding happiness and wellbeing (Alesina et al., 2004; Barra, 2010; Csikszentmihalyi & Hunter, 2003; Inglehart et al., 2008; Swami et al., 2009; Yang, 2008). However, this study found no difference between genders for any of the analysis. This supports the studies of Lyubomirsky & Lepper (1999) that found no difference between man and woman in regard to happiness levels.

Regarding educational level, the present study found no relation between variables. However, at a theoretical level, research shows that higher levels of human capital in nations are linked with higher levels of happiness (Yasuko, Romano, García & Félix, 2005; Florida, Mellander & Rentfrow 2010). These studies also indicate that this relationship is a complex one and that it varies as a function of the wealth of the country. Highly educated people in less developed countries feel less happy than counterparts in countries with higher levels of income.

As a limitation to this study, it is important to mention that the relations between socioeconomic level and happiness have been based on subjective wellbeing. However, it is important to ask the relation of this variable with positive and negative feelings. This area had been widely ignored, as Diener et al., (2010) pointed out. Besides, Cornelis (2010) and Diener et al., (2010) also stated that there are many theories but little scientific comprehension about the interaction of income and happiness. Different types of wellbeing exist, and most research focuses on subjective wellbeing, discarding psychological wellbeing as a valid research object (Blanco & Díaz, 2005; Díaz et al., 2006; Keyes, Shmotkin & Ryff, 2002; Ryan & Deci, 2001).

Additionally, one cannot ignore the fact that the relation between happiness and the other variables used in this study are subject to the effect of other constructs, and these constructs have different effects depending on the age and the cultural and social context of the individuals (Gerstenbluth et al., 2008; Chang et al., 2001; Chang & Asakawa, 2003; Clark et al., 2007; Diener et al., 2010; Diener et al., 2003; Moyano, Flores & Soromaa, 2011; Inglehart et al., 2008; Wolfers, 2003).

Our results are coincidental with a recent article that studied satisfaction with life and food consumption in ethnic samples (Schnettler, Miranda, Sepulveda, Denegri, Mora & Lobos, 2012). Satisfaction with life was related to the income level of the subject and a higher level of education.

References


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