Original article

Stressful situations affecting the perception of happiness: Love as a stressor

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A B S T R A C T

The purpose of this study was to analyze the association between subjective happiness, perceived stress and number of stressors, and to identify which of the latter have greater influence on subjective happiness and perceived stress. It was a transversal study carried out with 238 women and 52 men from the general population with an age range from 25 to 44 years, residents of the city of Monterrey or metropolitan area of the state of Nuevo León, Mexico. The Subjective Happiness Scale, the Perceived Stress Scale and a question about stressful situations were used as assessment instruments. Results showed a negative correlation between happiness and perceived stress. Likewise, the group of participants who reported love and partner relations as major stressful situations were the ones who also reported lower levels of happiness and higher levels of perceived stress. We conclude that, in our sample, situations related to love and partner relations had a higher impact on happiness, regardless of marital status and sex.

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Situciones estresantes que afectan la percepción de la felicidad: el amor como estresor

R E S U M E N

Los propósitos de este estudio fueron conocer la relación entre la felicidad subjetiva, el estrés percibido y el número de estresores, e identificar aquellos sucesos vitales con más influencia sobre la felicidad subjetiva y el estrés percibido. Fue un estudio transversal donde participaron 238 mujeres y 52 hombres de población general de 25 a 44 años de edad, residentes en la ciudad de Monterrey o área metropolitana del estado de Nuevo León, México. Como medidas de evaluación se utilizaron la Escala de Felicidad Subjetiva, la Escala de Estrés Percibido y una pregunta sobre situaciones estresantes. Los resultados mostraron una relación negativa entre la felicidad y el estrés percibido de los participantes. Las personas del grupo que reportó las situaciones de amor y pareja como eventos generadores de estrés fueron quienes reportaron menor felicidad y mayor estrés percibido. Puede concluirse que las situaciones relacionadas con el amor y la pareja son las que tuvieron un mayor impacto en la felicidad, independientemente del estado civil y el sexo.

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Recently, the interest to conduct researches about happiness and subjective wellbeing has increased (Luhmann, Hofmann, Eid, & Lucas, 2012). Seligman (2002) proposes to include three elements when defining happiness: experiencing positive emotions (the pleasant life), being engaged in life activities (the engaged life), and finding a sense of purpose or meaning (the meaningful life). Pozos, Rivera, Reidl, Vargas, and López (2013), after performing a study with semantic networks in Mexico, state that happiness is a positive emotion strongly linked to love, which occurs when a

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person assesses life or a particular life event; in the case of Mexican culture, this is related to support networks including family, partner, children, and friends.

Recent studies indicate that increasing the level of perceived happiness has several benefits (Schiffrin & Nelson, 2010). According to Lyubomirsky, King, and Diener (2005), happy people are successful in several areas of their lives, including marriage, friendship, income, job performance, and health. Other studies show that having a partner and formalizing the relationship through marriage increases happiness – married people are happier – (Pozos et al., 2013). However, it is important to mention that marriage can also be considered a stressful life event. Life events are those circumstances that require an adjustment due to changes in the environment (Peñacoba & Moreno, 1999).

Considering the above, the present study takes stressors into consideration. According to Cohen, Kamarck, and Mermelstein (1983), people interpret environmental events based on their values and resources, and then reacts biologically, psychologically, and behaviorally. Accordingly, the events are only interpreted as stressful when the environmental demands exceed the person’s available resources.

Stressors are also the first element of the stress process according to the transactional stress theory. This theory postulates that a person who faces a stressful event can experience stress depending on the evaluation they make of themselves, their available resources, and the situation (whether they see it as a threat, a challenge, or something that will harm them or cause loss) (González-Ramírez & Landero-Hernández, 2006).

The concept of stressors refers to problems, threats, or conflicts that most people experience in their everyday life, and that are relatively long-lasting. Many of these stressors are chronic and are related to social roles, for example, difficulties at work, relationship problems, or complications between parents and children (Sandín, 2003). The impact of these types of stressors has been studied in relation to other variables such as wellbeing and depression. For example, Luhmann et al. (2012a,b) mentioned that unemployment and bereavement had a more negative initial effect on subjective well-being than divorce or retirement. In this regard, it has been found that unemployment can cause negative psychological consequences, especially in people living in developing countries (Paul & Moser, 2009). Several studies have also documented that losing one’s job results in the loss of one’s social circle, which may lead to less contact with people outside the family circle, this in turn can lead to a decrease in self-esteem, motivation, and personal productivity (Clark, Knabe, & Ratzel, 2009; Latif, 2010).

In addition, Anderson, Salk, and Hyde (2015) found that perceived romantic stress predicts depressive symptoms in adolescent girls and boys. Some studies have found that being in a romantic relationship is beneficial for one’s mental health and well-being, as long as these relationships are rewarding and offer mutual support. On the other hand, being in a dysfunctional relationship could be worse than not having a relationship (Dush & Amato, 2005; Ross, 1995).

In accordance with the proposed definitions of happiness (Seligman, 2002) and stress (Cohen et al., 1983; González-Ramírez & Landero-Hernández, 2006), these two constructs could be seen as independent. However, research has shown an inverse correlation between these variables, and that is why it has been recommended to study the variables that affect the association between happiness and perceived stress. This could be helpful to develop future interventions that increase the level of happiness (Schiffrin & Nelson, 2010).

Currently, Mexico is ranked number 14 among the 20 happiest countries in the world (above the United States, England, and Germany) and it is number two in Latin America only after Costa Rica (Helliwell, Layard, & Sachs, 2015). In 2012, a happiness survey was conducted in Mexico. The results revealed that health, family relationships, and financial income were the most important topics to achieve happiness. Nevertheless, this information is surprising when taking into account the present context of the country (high levels of unemployment, poverty, insecurity, and corruption) (Ordorica & Prud’homme, 2012).

In view of the above, the objectives of the present study were (1) to analyze the association between perceived stress, subjective happiness, and number of stressors, and (2) to compare the level of perceived stress and subjective happiness in relation to the type of stressor, in order to identify which of the stressors have a major effect on subjective happiness and perceived stress.

Method

Procedure

Men and women were invited to participate if they lived in the city of Monterrey or metropolitan area of the State of Nuevo León, Mexico, and whose age ranged from 25 to 44 years. The age range of the sample was determined based on the age groups established for the normative values of the measure instruments used. People who met the inclusion criteria for age and residence were asked to answer an online questionnaire.

The questionnaire was answered through SurveyMonkey.com and distributed through social networks using snowball sampling technique. The survey link, as well as an invitation to participate, was published on the personal profile of the authors. Likewise, participants were encouraged to share their profile link, to be able to reach more people. The questionnaire was online from March 10, 2015 to May 14, 2015.

At the beginning of the questionnaire participants were asked to answer the full survey, so those participants who did not fill it in completely were excluded from the analyses. Instructions for the survey included an informed consent statement including general information about the content of the survey. Participants signed the consent form indicating their willingness to participate. Data was treated confidentially.

Participants

The sample consisted of 290 participants who completed the online questionnaire. Participants were 238 women (82.1%) and 52 men (17.9%), with a mean age of 32.4 years (SD = 5.3). In relation to marital status, 43.4% were single, 36.6% were married, 15.9% lived in cohabitation, 3.1% were divorced, and 1.0% were separated. Most participants did not have children (77.6%). Also, most participants had a formal job (79.7%), and all of them had at least bachelor’s degree.

Instruments

To measure happiness, the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999) was used, in its validated version for Mexican population (Quezada-Berumen, Landero-Hernández, & González-Ramírez, 2016). This 4-item Likert-type scale measures global subjective happiness through a series of statements with which participants either rate themselves or compare themselves to others. The normative data of subjective happiness for the 25–34 year old group was 4.55–6.65, and for the 35–44 years old group was 4.57–6.75. The scale showed an adequate Cronbach’s alpha coefficient (α = .77) (Quezada-Berumen et al., 2016). Cronbach’s alpha was .76 for the present study.

The variable “number of stressors” was evaluated using a question based on the threatening situations of the Life Events Questionnaire of Sandin and Chorot (1987), which consists of a
list of 65 events. Due to its length, only eleven areas were evaluated: work (job), health, love, partner, family, children, social, legal, finance (economic), residence (for example, change of address or city), and academic. The following question was: In the last months, have you dealt with a difficult situation which you considered negative or that caused you stress, anxiety, or depression? The study only included people who answered affirmatively to this question; participants were also asked to elaborate which area or areas they were referring to.

Perceived stress was evaluated using González-Ramírez and Landero-Hernández (2007) version of the Perceived Stress Scale (PSS; Cohen et al., 1983), which was culturally adapted for Mexican population. The scale contains 14 Likert-type items with a score ranging from 0 = never to 4 = very often. There are 7 items that need to be reversed before scoring (items 4, 5, 6, 7, 9, 10 and 13). The total score ranges from 0 to 56 points, a higher score corresponds to higher levels of stress.

Scores ranging from 12.16 to 29.7 points (for people aged 25–34 years old), and 15.22–31.48 points (for people aged 35–44 years old) indicate an acceptable stress level – neither low nor high – according to normative values of the questionnaire for Mexican population (González-Ramírez, Rodríguez-Ayán, & Landero-Hernández, 2013). The scale had a Cronbach’s alpha of .83 (González-Ramírez and Landero-Hernández, 2007). The Cronbach’s alpha of the present study was .86.

Statistical analysis

IBM® SPSS® Statistics 20 was used for statistical analysis. Descriptive analysis of the variables was performed. The normal distribution was contrasted with the Kolmogorov–Smirnov test, indicating that scores for subjective happiness, perceived stress, and the number of stressors were not normally distributed (p < .05). Spearman correlation analysis was used to analyze correlations between ordinal and interval variables. To identify group differences, Kruskal–Wallis and Mann–Whitney U tests were used.

Results

The statistical analyses were performed without splitting the sample by sex, due to the scores of the variables being equivalent between men and women (happiness: Z = –.482; p = .630; stress: Z = –.852; p = .393; number of stressors Z = .546; p = .585). Age groups were also equivalent when compared by the age groups used for the normative scores of the PSS and SHS (happiness: Z = –1.602; p = .109; stress: Z = –.703; p = .482; number of stressors Z = –.667; p = .505). Consequently, it was considered a homogeneous sample, and the analyses were carried out with the total sample.

The mean score of subjective happiness was 5.3 (SD = 1.0), perceived stress was 21.3 (SD = 7.8), and number of stressors was 1.9 (SD = 1.3), with stressors ranging from one to eight. Of the 11 stressors proposed by the Life Events Questionnaire, only eight were reported – love, partner, family, academic, health, economic, work, and residence.

The descriptive statistics for stress and happiness, in relation to the type of stressors reported, are shown in Table 1. The means for each group are within the expected values, according to the normative values proposed by González-Ramírez et al. (2013) for perceived stress, and by Quezada-Berumen et al. (2016) for happiness. Table 1 shows that people with higher levels of perceived stress and lower levels of subjective happiness were participants who reported two or more stressors; followed by participants who reported love and partner as stressors. Lower scores of perceived stress and higher scores of happiness correspond to participants who reported work and residence as stressors.

Correlation analysis and groups difference

To analyze correlations a Spearman correlation analysis was performed. A significant negative correlation was found between stress and happiness ($r_s = –.551$; $p = .001$), and between number of stressors and happiness ($r_s = –.268$; $p = .001$). A positive correlation was also found, between stress and number of stressors ($r_s = .311$; $p = .001$).

Considering that love and partner stressors make reference to similar stressful situations – associated to couple’s relationship, it was explored if the group indicating love as stressor and the group indicating partner as stressor were equivalent in stress and happiness scores. Mann–Whitney U tests showed no significant differences between the love and partner groups for stress ($Z = –.256$; $p = .798$), and for happiness ($Z = –.257$; $p = .797$), therefore they were considered a single group of stressors (love/partner).

When comparing the perception of stress and happiness in relation to the type of stressor, significant group differences were found for happiness ($p = .001$), and for stress ($p = .001$). Mann–Whitney U test was performed to analyze differences between specific groups of stressors in relation to subjective happiness and perceived stress levels. Table 2 shows only the groups of stressors that had significant differences in at least one of the two variables. For the level of subjective happiness, results show that stressors related to love/partner significantly differed from the other stressors.

Since the correlation between levels of stress and happiness, and the stressor love/partner could be mediated by marital status, differences were analyzed taking into account participants who were single (n = 126) and who were married (n = 106). In general, married participants reported higher levels of happiness ($M = 5.5$; $SD = 0.9$) than participants who were single ($M = 5.1$; $SD = 1.1$) ($Z = –3.048$; $p = .002$); no difference was found for perceived stress level ($Z = –.779$; $p = .436$). Likewise, no differences were found between married and cohabitating participants (n = 46) ($p > .05$). Considering that only nine participants were divorced and three were separated, these were not included in the marital status analysis. It should also be noted that no differences were found between single (n = 15) and married participants (n = 10) who reported love or partner as stressors (n = 25, excluding divorced), either in their subjective happiness level ($Z = –.670$; $p = .531$) or in their perceived stress level ($Z = –.778$; $p = .461$).

<table>
<thead>
<tr>
<th>Type of stressor</th>
<th>Happiness</th>
<th>Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Love (n = 12)</td>
<td>Median = 4.9</td>
<td>Mean = 4.8</td>
</tr>
<tr>
<td>Partner (n = 16)</td>
<td>Median = 5.0</td>
<td>Mean = 4.8</td>
</tr>
<tr>
<td>Family (n = 23)</td>
<td>Median = 5.5</td>
<td>Mean = 5.4</td>
</tr>
<tr>
<td>Academic (n = 18)</td>
<td>Median = 5.5</td>
<td>Mean = 5.6</td>
</tr>
<tr>
<td>Health (n = 18)</td>
<td>Median = 5.5</td>
<td>Mean = 5.4</td>
</tr>
<tr>
<td>Economic (n = 21)</td>
<td>Median = 5.7</td>
<td>Mean = 5.7</td>
</tr>
<tr>
<td>Work/Job (n = 48)</td>
<td>Median = 5.9</td>
<td>Mean = 5.8</td>
</tr>
<tr>
<td>Residence (n = 8)</td>
<td>Median = 6.2</td>
<td>Mean = 6.1</td>
</tr>
<tr>
<td>Two or more stressors (n = 135)</td>
<td>Median = 5.2</td>
<td>Mean = 5.1</td>
</tr>
</tbody>
</table>

Note: The expected scores for perceived stress were 12.16–29.27 for the 25–34 years old group, and 15.22–31.48 for the 35–44 years old group. For subjective happiness, the normative data for the 25–34 age group were 4.55–6.65, and for the 35–44 age group were 4.57–6.75.
### Table 2

Differences in perceived stress and subjective happiness in relation to the type of stressor.

<table>
<thead>
<tr>
<th>Groups of comparison (stressors)</th>
<th>Subjective happiness Mean (SD)</th>
<th>Mann–Whitney U test</th>
<th>Perceived stress Mean (SD)</th>
<th>Mann–Whitney U test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Love/partner vs. academic</td>
<td>4.8 (1.0) vs. 5.6 (1.1)</td>
<td>Z = −2.062; p = .040</td>
<td>21.8 (7.5) vs. 25.1 (11.0)</td>
<td>Z = −.426; p = .689</td>
</tr>
<tr>
<td>Love/partner vs. work</td>
<td>4.8 (1.0) vs. 5.8 (0.8)</td>
<td>Z = −4.112; p = .001</td>
<td>21.8 (7.5) vs. 17.5 (6.7)</td>
<td>Z = −2.202; p = .007</td>
</tr>
<tr>
<td>Love/partner vs. health</td>
<td>4.8 (1.0) vs. 5.4 (0.9)</td>
<td>Z = −2.035; p = .042</td>
<td>21.8 (7.5) vs. 19.6 (7.5)</td>
<td>Z = −.992; p = .321</td>
</tr>
<tr>
<td>Love/partner vs. family</td>
<td>4.8 (1.0) vs. 5.4 (1.1)</td>
<td>Z = −2.118; p = .034</td>
<td>21.8 (7.5) vs. 20.5 (7.0)</td>
<td>Z = −.749; p = .454</td>
</tr>
<tr>
<td>Love/partner vs. residence</td>
<td>4.8 (1.0) vs. 6.1 (0.9)</td>
<td>Z = −2.753; p = .005</td>
<td>21.8 (7.5) vs. 16.7 (6.7)</td>
<td>Z = −1.679; p = .188</td>
</tr>
<tr>
<td>Love/partner vs. economic</td>
<td>4.8 (1.0) vs. 5.7 (1.0)</td>
<td>Z = −3.030; p = .002</td>
<td>21.8 (7.5) vs. 19.5 (8.0)</td>
<td>Z = −1.255; p = .210</td>
</tr>
<tr>
<td>Two or more stressors vs. residence</td>
<td>5.1 (1.0) vs. 6.1 (0.9)</td>
<td>Z = −2.497; p = .013</td>
<td>23.2 (7.6) vs. 16.7 (6.7)</td>
<td>Z = −2.186; p = .029</td>
</tr>
<tr>
<td>Two or more stressors vs. economic</td>
<td>5.1 (1.0) vs. 5.7 (1.0)</td>
<td>Z = −2.710; p = .007</td>
<td>23.2 (7.6) vs. 19.5 (8.0)</td>
<td>Z = −2.106; p = .035</td>
</tr>
<tr>
<td>Two or more stressors vs. work</td>
<td>5.1 (1.0) vs. 5.8 (0.8)</td>
<td>Z = −4.225; p = .001</td>
<td>23.2 (7.6) vs. 17.5 (6.7)</td>
<td>Z = −4.649; p = .001</td>
</tr>
</tbody>
</table>

### Discussion

The first objective of this study was to analyze the association between perceived stress, subjective happiness, and number of stressors. A negative correlation was found between happiness and stress, and between happiness and number of stressors. The correlation between stress and happiness is consistent with previous studies reporting a negative association between the SHS and other measures of psychological stress (Iani, Lauriola, Layous, & Sirigatti, 2014; King, Vidourek, Merianos, & Singh, 2014; Lyubomirsky & Lepper, 1999; Schiffrin & Nelson, 2010). However, the coefficient found in the present study was stronger than the previously reported for Mexico by Quezada-Berumen et al. (2016), using the same questionnaires (r = −.37, p < .01). This can confirm the direction and the statistical significance of the findings.

More than half of the sample reported having dealt with two or more stressors. In participants reporting a single stressor, the most common was related to work or job situations (n = 48). However, the stress level in this group was the second lowest. The group with the lowest level of stress was the one reporting stressors related to residence or housing.

It should also be noted that participants who reported love or partner as stressors (n = 28) had higher scores of perceived stress and lower scores of happiness; this group showed an equivalent score in stress and happiness to the group reporting two or more stressors.

An important aspect to mention given the results is that participants who reported love/partner as stressful situations were the only ones to show significant differences with other groups of stressors, mainly in happiness levels. In this regard, the results are consistent with those reported by Diener and Seligman (2002), who proposed that happier people have more satisfying relationships.

According to the 2012 National Happiness Survey in Mexico, the state of Nuevo León and some of its most important cities are among the happiest places in the country (Imagina México, 2013). This information may seem contradictory with our data; however, the following explanation could help to better understand our findings. According to Diener, Suh, Lucas and Smith (1999), young adults experience a series of changes, for example, the search for a job and unemployment. The participants of this study may have been people with a stable economical and occupational situation; however, there are other important changes in early and middle adulthood which can affect the wellbeing of people, such as the search for a partner, marriage, as well as relationship conflicts. All of these could be considered as stress-generating situations (DePaulo, 2006; Goodwin, Mosher, & Chandra, 2010).

The present study was correlational, and therefore it is not possible to consider causal relations. It is possible that participants had higher levels of happiness before facing the stressors, making their coping successful. To support this explanation we can take into account the results of the longitudinal study by Luhmann, Lucas, Eid, and Diener (2012) with three nationally representative samples from Australia, Germany, and Great Britain. The authors found that satisfied people were more likely than dissatisfied people to get married or become parents within the next five years; they were also less likely to divorce from their partner, to lose their job, to start a new job, or to relocate within the next five years.

Another possible explanation for why the group of participants reporting love or partner as stressful events (regardless of marital status and sex) had lower levels of subjective happiness could be given taking into account the definition of happiness in Mexico. Pozos et al. (2013), in their study with semantic networks, propose that the happiness construct in Mexican culture, regardless of being single or married, is related to the closest support networks (for example, the partner or spouse). Likewise, they report that both women and men indicate the need of love to feel happy. These findings correspond to our results, in which the stressors related to love and/or partner seem to have greater impact in the level of happiness.

Our results showed no group differences related to marital status (single vs. married) of participants who reported love and/or partner as stressors. These findings differ from those by Pozos et al. (2013), who found that married people reported higher levels of happiness compared to single people.

It is important to mention that this study had several limitations. The sample was non-probabilistic and recruited using snowball sampling technique, so our findings cannot be generalized. It is recommended that similar studies be performed with a random sample.

Another important aspect to mention is that the sample was recruited through websites. Although the sample was large and authors have confirmed the reliability of the data obtained through the Internet (Ritter, Lorig, Laurent, & Matthews, 2004), these samples are more likely to be heterogeneous and biased compared to those obtained by a real random sampling. In spite of this claim, several studies within the scientific literature find practicality by this way of collecting data, and its use has been extended to different areas of health such as psychology, nursing, and medicine (Chipas and Mckenna, 2011; Gearhardt, Corbin, & Brownell, 2009;

Another limitation of the study was the uneven number of participants in relation to their marital status. Likewise, it is important to mention that the majority of the sample were women, and even though the results showed no difference in relation to sex, a similar number of women and men could provide results that contribute to a better understanding of the variables of interest in relation to sex and marital status.

We decided to consider the participants who reported love or partner as stressors as a single group; however, the classification used in this research was based on the Life Events Questionnaire by Sandín and Chorot (1987). This questionnaire includes different items for love and for partner; therefore, we suggest that future studies use the complete subscales of the questionnaire to evaluate love and partner as different stressors, and to compare stress and happiness levels between those who report love or partner as sources of stress.

It would be recommendable to assess people who are starting couple therapy or suffering a divorce process, in order to have a group of participants with stressors related to the partner/spouse or love. Likewise, it would be interesting to collect a larger sample of single and married people in order to perform comparisons between them. Lastly, according to the results, it would be interesting to include other variables, such as relationship satisfaction, in order to compare it with happiness.

With respect to this Mexican sample, it can be concluded that situations related to love and partner have greater impact in the level of subjective happiness, regardless of marital status (married and single participants) and sex.

Conflict of Interest

The authors declare that they have no conflict of interest.

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