Schnittler Morales, Berta; Denegri Coria, Marianela; Miranda Vargas, Horacio; Sepúlveda Maldonado, José; Mora González, Marcos; Lobos Andrade, Germán
Satisfaction with life and with food-related life in central Chile
Universidad de Oviedo
Oviedo, España

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Background: Eating is one of the most frequent human behaviors, but there are few studies that relate eating and subjective well-being. Typologies of people were distinguished and characterized according to their level of satisfaction with life and food in central Chile. Method: A survey was applied to a sample of 1,277 people in the main municipalities of this area, distributed proportionally by municipality. The questionnaire included the SWLS scales (Satisfaction with Life Scale), SWFL (Satisfaction with Food-related Life), Health-Related Quality of Life Index (HRQOL), Subjective Happiness Scale (SHS), and respondents’ demographic characteristics and eating habits were also ascertained. Results: Using hierarchical cluster analysis, three typologies were distinguished with significant differences in the scores on the SWLS, SWFL, SHS, self-perception of health, days with physical or mental problems in the last month, sociodemographic characteristics and frequency with which the family eats together. Conclusions: The results suggest that a higher level of general subjective well-being, and eating is associated with better health, greater family interaction around meals, higher levels of happiness, and with some sociodemographic characteristics.

Keywords: Family meals, domains of life, life satisfaction, typologies.

Abstract

Satisfaction with life and with food-related life in central Chile

Berta Schnettler Morales¹, Marianela Denegri Coria¹, Horacio Miranda Vargas¹, José Sepúlveda Maldonado¹, Marcos Mora González² and Germán Lobos Andrade³

¹ Universidad de La Frontera, ² Universidad de Chile and ³ Universidad de Talca

The subjective well-being (SWB) construct is a tripartite category of phenomena, which includes: emotional responses (i.e., positive affect [joy, optimism] and negative affect [sadness, anger]), domain satisfactions (e.g., work satisfaction, relationship satisfaction), and global judgments of life satisfaction (Diener, Suh, Lucas, & Smith, 1999). In general, positive evaluations of life satisfaction are linked to happiness and the achievement of the ‘good life’, whereas negative evaluations of life satisfaction are associated with depression and unhappiness (Proctor, Linley, & Maltby, 2009).

Numerous studies have addressed overall satisfaction with life (Moyano & Ramos, 2007; Gómez, Villegas de Posada, Barrera, & Cruz, 2007; Moyano, Flores, & Soromaa, 2011; Puente & Cavazos, 2013) in Latin America. These investigations have generally found positive levels of satisfaction with life in the study samples consistent with cross-national data examining life satisfaction in different countries around the world (Proctor et al., 2009). At the same time, several studies have dealt with satisfaction in certain domains, such as work (Gómez et al., 2007; Moyano & Ramos, 2007; López-Cabarcos, Vázquez-Rodríguez, & Montes-Piñéiro, 2010), family (Gómez et al., 2007; Moyano & Ramos, 2007; Domínguez, Salas, Contreras, & Procidano, 2011), marital status (Gómez et al., 2007; Guzmán & Contreras, 2012) or health (Gómez et al., 2007; Moyano & Ramos, 2007; Puente & Cavazos, 2013), among others, but to date, very little research has been done in relation to eating. For a long time, eating and drinking behavior has been studied very little by psychology, although it is one of the most important human behaviors and certainly the most frequent (Köster, 2009). Indeed, there is a lot of research into the effects of nutrition on physical health, but hardly any research into the effects of diet on satisfaction with life (Veenhoven, 2008).
Food as a domain can be expected to be related to satisfaction with life for several reasons. Food is an essential component of quality of life; an unacceptable or unpalatable diet can lead to poor food and fluid intake, resulting in weight loss and malnutrition and a series of negative health effects (American Dietetic Association’s, 2005). Although food fulfills a utilitarian function for the body, at the same time, it acts as a product for pleasure and social construction, supporting the construction of personal identity (Hauserman, 2005). Hargreaves, Schlundt, and Buchowski (2002) stress the emotional dimension of food associated with celebrations and social interaction. Other investigations demonstrate that eating is an important source of happiness (Berenbaum, 2002; Macht, MeIninger, & Roth, 2005).

In view of the importance of food for satisfaction or dissatisfaction with life, Grunert, Dean, Raats, Nielsen, and Lumbers (2007) developed and tested the Satisfaction with Food-related Life Scale (SWFL) in three studies in eight European countries. These authors determined relationships between SWFL and other quality of life indicators, including satisfaction with life. Schnettler, Miranda, Sepúlveda, Denegri, Mora, and Lobos (2012) found a positive relation between people’s food-related satisfaction and their satisfaction with life. Recently, Schnettler et al. (2013a) evaluated the psychometric properties of the SWFL and its relation to the Satisfaction with Life Scale (SWLS) using a confirmatory factor analysis. The results obtained showed an adequate level of internal consistency and a good fit to the SWFL data. The evaluation of a causal covariance structure analysis model composed of the SWFL as the antecedent construct and the SWLS as the consequent construct indicates a medium level of relationship between the two constructs.

The aims of this study were: to distinguish consumer typologies according to their satisfaction with life and satisfaction with their food-related life, and to characterize the typologies according to sociodemographic characteristics, level of subjective happiness, health and eating habits with the family. According to the results from previous studies (Grunert et al., 2007; Schnettler et al., 2012; Schnettler et al., 2013a), we expected to confirm the existence of a positive relation between satisfaction with life and satisfaction with food-related life. Also, considering the relation between health and food (American Dietetic Association’s, 2005), between social interaction and food (Hargreaves et al., 2002), and between happiness and food (Berenbaum, 2002; Macht et al., 2005), the present work is intended to demonstrate that the level of satisfaction with life and with food-related life are related to happiness and other domains of life, such as health and family.

**Methods**

**Participants**

Personal interviews were conducted with a sample of 1,277 people from the Valparaíso, Metropolitan, Libertador Bernardo O’Higgins and Maule Regions in central Chile. The surveys were conducted in the principal municipalities of these regions (more than 100,000 inhabitants), with the number of respondents set proportionally to the number of inhabitants of the municipalities of Valparaíso, Viña del Mar (Valparaíso Region), El Bosque, La Florida, La Pintana, Las Condes, Maipú, Ñuñoa, Peñalolén, Pudahue, Puente Alto, Recoleta, San Bernardo, Santiago (Metropolitan Region), Rancagua (Libertador Bernardo O’Higgins Region) and Talca (Maule Region).

Of the entire sample (Table 1), the largest proportion were women, married or living with a partner, resident in urban areas, from families with three to four members, without children, with university studies, employed, belonging to socioeconomic level ABC1 (high and upper-middle), with a man being the main breadwinner. The average age of the participants was 37.4 years ($SD = 13.6$).

**Instrument**

The questionnaire applied included the following scales:

- **SWLS (Satisfaction with Life Scale):** developed by Diener et al. (1985), this is a scale consisting of 5 items grouped into a single factor to evaluate overall cognitive judgments about a person’s own life. The reliability estimate (Cronbach’s alpha) in various studies has ranged between 0.79 and 0.89 and a one-factor structure (Pavot & Diener, 1993). Studies conducted in Spain also report a high internal consistency of the scale in its Spanish-language version with a Cronbach’s $\alpha$ values between 0.82 and 0.84 (Atienza, Pons, Balaguer, & García-Merita, 2000; Chico & Ferrando, 2008). Studies performed in Mexico, Brazil and Colombia have reported Cronbach’s $\alpha$ between 0.77 and 0.84 (Gómez et al., 2007;...
The survey was conducted personally by trained interviewers in malls with a supermarket and a food court, located in different socioeconomic areas of the cities included in the study in May and July 2011. The interviewers intercepted people as they were coming out of the malls, explained the objectives of the survey to them and the strictly confidential treatment of the information obtained, and then asked if they were prepared to answer the questionnaire. The response rate was 56%. Prior to the application of the survey, the questionnaire was validated by a preliminary test with 5% of the survey sample. The preliminary test was done using the same method of addressing the participants as in the definitive survey. As the validation of the instrument proved satisfactory, no changes were required in either the questionnaire or the interview procedure. The participants signed informed consent statements before responding. The execution of the study was approved by the Bio-ethics Committee of the Universidad de La Frontera.

**Data analysis**

The results were analyzed using the SPSS 16.0 program for Windows in Spanish. A cluster analysis (hierarchical conglomerates) was used to determine typologies of consumers according to their satisfaction with life and satisfaction with food-related life, with linkage by Ward’s method and the squared Euclidian distance as the measure of similarity between objects (Hair, Anderson,
The mean SWLS score of all the participants was 22.5 (SD = 4.4). The mean SWFL score of all the participants was 22.9 (SD = 4.5). The Pearson correlation between SWLS and SWFL was 0.513 (p < 0.01). The mean SHS score of all the participants was 5.1 (SD = 0.78). In the first question that considers the HRQOL, it is worth noting that most participants perceive their health as good or very good. In terms of the number of days with health problems or limitations in the last 30 days, the average was 10.1 days (SD = 16.9). Of the entire sample, participants who have breakfast and lunch with their family only on weekends predominated. Participants mainly have afternoon tea with their family daily and alone on weekends, whereas the greatest proportion have dinner with the family every day (Table 2).

Cluster analysis distinguished three typologies of participants with significant differences in the average values of the SWLS and SWFL scales (p < 0.001). The typologies presented significant differences according to the score on the SHS and in the total number of days with physical or mental problems in the last month (p < 0.001) (Table 3). In addition, the typologies differed in the gender of the main breadwinner, the frequency with which the participant has lunch, afternoon tea or dinner together with their family (p < 0.05), socioeconomic status and in the self-perception of health (p < 0.001) (Table 4). The composition of each typology is shown below.

Satisfied with their life and their food-related life: Group 1 (n = 894), which represented 70.0% of the sample surveyed. This typology presented the highest scores on the SWLS and SWFL, significantly higher than Groups 2 and 3 (Table 3). This typology was composed of the highest proportion of male breadwinners, belonging to socioeconomic status ABC1 (Table 4). The score corresponding to the SHS was significantly higher than the other groups; whereas the total number of days with physical or mental problems was significantly lower (Table 3). Group 1 had the highest proportion of participants with a self-perception of their health that was very good or excellent (Table 4). A greater proportion of these participants only eat lunch with their family on the weekends, and have afternoon tea and dinner with their family every day (Table 4).

Moderately satisfied with their life, unsatisfied with their food-related life: Group 2 (n = 116), which represented 9.1% of the sample. This typology presented the lowest scores on the SWLS and SWFL (Table 3). In this typology the greatest proportion of breadwinners are women, belonging to socioeconomic status C3 (Table 4). The score on the SHS and the number of days affected by physical or mental health problems was statistically similar to Group 3 (Table 3). In this typology, most people have a very bad or fair perception of their health (Table 4). The majority of participants in this group only occasionally have lunch with their family and have afternoon tea alone or not at all (Table 4).

Moderately satisfied with their life and with their food-related life: Group 3 (n = 267), which represented 20.9% of the sample. The scores on the SWLS and SWFL differed significantly from Groups 1 and 2 (Table 3). This typology contains the highest proportion of female breadwinners, belonging to the lowest socioeconomic status and with a lower self-perception of health.
socioeconomic status (Table 4). In this typology, most people have a fair perception of their health (Table 4). With respect to meals with the family, the proportion of people that have dinner with their family group only twice to three times per week was greatest (Table 4).

Discussion and conclusions

The results of the present study confirm the existence of a positive relation between satisfaction with life and satisfaction with food-related life. The correlation between the two scales was significant and similar to that obtained in previous studies in Chile (Schnettler et al., 2012; Schnettler et al., 2013ab) and higher than that obtained in European countries by Grunert et al. (2007), which was 0.36.

Given that in this study a 6-point Likert scale was used (theoretical range 5-30), it was not possible to compare the average score of the SWLS objectively with the results obtained with this scale in other studies performed in the Latin American context. Domínguez et al. (2011) obtained an average of 18.90 (SD = 4.30) in a study conducted in Mexico with a 5-point Likert scale (theoretical range 5-25). In Colombia, Gómez et al. (2007) determined an average of 26.93 (SD = 5.05) for the SWLS with a 7-point Likert scale (theoretical range 5-35). In Chile, Moyano and Ramos (2007) they obtained an average similar (25.26, SD = 5.58) with the same scale and theoretical range. However, more recently Moyano et al. (2011), in another study conducted in Chile using a 5-point scale, reported an average of 18.31 (SD = 4.04). Nevertheless, in these three studies it is concluded that the study samples presented positive levels life satisfaction, which is consistent with the results of this investigation since approximately 75% of the participants were classified in the categories satisfied and extremely satisfied (altogether). In addition, it should be noted that the scores obtained in this investigation are similar to those reported by Schnettler et al. (2013b), who obtained average scores of 23.9 (SD = 4.4) for the SWLS and 24.1 (SD = 3.8) for the SWFL in a study conducted in the south of Chile with the same 6-point response format.

Using a cluster analysis, it was possible to distinguish three typologies of participants according to the score obtained on the SWLS and SWFL. The high proportion of the total sample corresponding to the typology “satisfied with their life and their food-related life” (Group 1, 70.0%) indicates that a large part of the sample possesses a positive level of subjective well-being both overall and specifically with respect to food. The significantly higher score of this typology on the SHS confirms that positive evaluations of life satisfaction are linked with happiness (Proctor et al., 2009), and that satisfaction with food related-life is related to people’s happiness, which is consistent with authors who indicate that food is an important source of happiness (Berenbaum, 2002; Macht et al., 2005).

At the same time, the significantly lower number of days with physical and mental health problems and the better self-perception of health (HRQOL) in the typology “satisfied with their life and their food-related life” concurs with studies on satisfaction with life and physical health that show consistently positive relationships (Veenhoven, 2008). Likewise, it agrees with what Cummins (2000) indicated with respect to poor health, most particularly associated with pain or stress, reducing SWB, which is manifest in the typologies “moderately satisfied with their life, unsatisfied with their food-related life” and “moderately satisfied with their life and with their food-related life”, which presented an average higher than 15 days with physical or mental health problems and whose self-perception of health was mainly fair. These results are also in line with a previous study in England, in which Dean, Grunert, Raats, Nielsen, & Lumbers (2008) concluded that there is a relation between a good state of health and a greater satisfaction with food-related life. In its turn, the results of the Human Development Report in Chile (UNDP, 2012) indicate that people’s satisfaction with life tends to increase when they have a positive self-evaluation of their state of health.

One remarkable result is the greater interaction of the participants of the typology “satisfied with their life and their food-related life” in family meals, in contrast to what was observed in the typology “moderately satisfied with their life, unsatisfied with their food-related life”. If it is considered that family meal frequency was positively correlated with perceived

![Table 4](image-url)
Satisfaction with life and with food-related life in central Chile

family cohesion (Casotti, 2005; Welsh, French, & Wall, 2011), this confirms the greater effect of family support on happiness (Moyano & Ramos 2007; North, Holahan, Moos, & Cronkite, 2008) and life satisfaction (North et al., 2008; Hsu, 2010; UNDP, 2012). Indeed, food is prepared in the expectation that it will be shared and enjoyed in company (Kniazzeva & Venkatesh, 2007; Dean et al., 2008) day by day with the family (Casotti, 2005), a situation that not always is possible mainly in the Metropolitan Region (76.1% of the sample) due to the long distances between people’s homes and their places of work. This means that on many occasions, breakfast and lunch are not eaten with the family, which might be compensated by sharing meals in the evening or at night, a situation that occurs more in the typology “satisfied with their life and their food-related life”.

The composition of the typologies with respect to the gender of the main breadwinner indicates that dissatisfaction with life and food-related life is associated with subjects in homes where the main breadwinner is female, which is consistent with previous studies that have tied the family structure to SWB (Chen, 2001; Schnettler, Miranda, Sepulveda, & Denegri, 2011). In addition, this is connected to gender inequality in Chile, since men’s average income far exceeds women’s (UNDP, 2010) and is reflected in the typologies less satisfied with life and food related-life that a greater proportion of people from the lower income socioeconomic status present. In relation to the influence of gender, the UNDP (2010) also indicates that the family is the main referent that defines Chilean women’s self-perception, those which, in fulfilling family roles, form an identity linked to responsibility, effort and sacrifice. This is especially evident in the women who are financially responsible for their family, and is exacerbated in the most economically vulnerable segments, where the difficulties of reconciling work and family is a factor that strongly affects their satisfaction with life.

This also confirms the results of previous studies in India (Agrawald et al., 2011) and Japan (Oshio & Kobayashi, 2011) that indicate that economic resources increase people’s SWB and satisfaction with food-related life (Dean et al., 2008). The latter may be related to the opportunity that people with greater economic resources have to access food of better quality, greater variety and healthier (French, Wall, & Mitchell, 2010). In relation to satisfaction with life, the UNDP (2012) indicates that as the family income increases, so does the declared satisfaction with life.

The principal limitation of the study is that the sample consisted to a large degree of participants from the higher socioeconomic strata, and this is not representative of the socioeconomic distribution in Chile. This means further research is needed on satisfaction with food-related life and its relation to satisfaction with life in samples that are representative of the socioeconomic level of the population.

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References

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