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Research Article

Social Support and Empathy as Predictors of Life Satisfaction in Brazilian University Students

Tamara Sousa Santos[1]

Josué E. Turpo-Chaparro[1]

Edison Effer Apaza-Tarqui[2]

Abel Apaza-Romero[1]

Sanny Raquel Huanca López[3]

[1]Escuela de Posgrado,
Universidad Peruana Unión,
Lima, Perú
[2]Maestría en Ciencia de los Datos,
Universidad Ricardo Palma,
Lima, Perú
[3]Facultad de Negocios,
Universidad Tecnológica del Peru,
Lima, Perú

Abstract

The objective of this paper was to study if social support and empathy predict life satisfaction in Brazilian university students. Through a non-probabilistic sampling for convenience, the voluntary participation of 374 Brazilian university students over 18 years of age from public and private universities was sought. The questionnaires applied were the Zimet Social Support scale, the Jolliffe and Farrington Basic Empathy scale (BES) and the SWLS Life Satisfaction Scale by Diener. The results showed a relationship between the variables Social Support and Empathy with a result of 0.217 (p<0.01), relationship between Social Support and Satisfaction with life is 0.415 (p<0.01). Likewise, a relationship was found between empathy in its Affective dimension -0.103 (p<0.05), and in its Cognitive dimension 0.104 (p<0.05) with satisfaction with life. The regression analysis showed that 18.9% of the variability of Satisfaction with life is explained by the variables Social Support and Empathy. The result of the t test shows that the dimensions of friends and important people of the social support variable and the affective dimension of the empathy variable are significant and has a significant effect for the criterion variable, which is Satisfaction with life. It is concluded that social support and empathy are predictors of life satisfaction with Brazilian university students. This indicates the importance of developing a social support intervention program to improve life satisfaction in students.

Keywords: Social Support, Empathy, Predictors of Life Satisfaction, Brazilian University Students

1. Introduction

The crisis caused by COVID-19 has raised concerns about mental health of the world population (Pfefferbaum & North, 2020). In Brazil, various studies show symptoms of depression and anxiety (Krishnamoorthy et al., 2020). In addition to this, studies show that university students are vulnerable to factors related to academic life (Graner & Cerqueira, 2019) and that COVID-19 psychologically affected Brazilian university students (Lopes & Nihei, 2021). In this sense, and, knowing that academic life affects life satisfaction (Powers, 2008), it is important to carry out studies that analyze the predictive factors of life satisfaction (Bardagi & Hutz, 2010), especially in post-pandemic times and that are related to Ryan and Deci's (2011) self-determination theory, in which it is important to analyze motivating factors such as social support and empathy as predictors of life satisfaction.

Social support is the perception that there are people who provide emotional or economic resources and who give them a sense of belonging and acceptance in relation to the people who are part of their social network (Martins et al., 2017). Likewise, empathy is defined as understanding and sharing the emotional state of another person (Cohen & Strayer, 1996). Finally, life satisfaction is defined as a judgment process by which a person evaluates their quality of life based on a unique set of criteria. (Shin & Johnson, 1978).

Several studies have been developed on the variables analyzed in this research. His et al. (2022) reported trends and patterns of life satisfaction from 2009 to 2018 finding a positive correlation between social support and life satisfaction in Canadian communities. Chen et al. (2022) in another study in 2047 people reported family support and life satisfaction to be stronger for older men than for women. Another study reported the effects of kindness and compassion on the growth of life satisfaction in more than 23 empirical studies (Gu et al., 2022). Studies from positive psychology highlight that empathy and emotional intelligence are part of the theory of self-determination that supports the variable, satisfaction with life (Stanley & Schutte, 2023). Another study in 1187 people in the country of Iran reported that the predictors of life satisfaction were marriage, trust, and empathy (Rajabi Gilan et al., 2021).

Recent studies in youth found that empathy skills benefit both family relationship and life satisfaction in Chinese students (Chen-Bouck et al., 2021). In Peru, studies in 1,356 students reported that empathy moderated the effect of gratitude on life satisfaction (Oriol et al., 2020). Qualitative studies reported in participants from three countries, the United States, Hungary, and South Korea, that expressions of emotions, including empathy, increase life satisfaction (Kim et al., 2020). In Spain, reports on 991 students found that empathy and emotional clarity led to higher levels of self-esteem and life satisfaction (Guasp Coll et al., 2020). In Brazil, in a sample of 228 students, it was found that the greater the empathy, the greater the satisfaction with life (Nesi de Mello et al., 2019). Another study in Brazil showed that students with social support indicators presented greater satisfaction with life (Achkar et al., 2019). Also another study in 1588 Brazilian students reported that social support is related to satisfaction with life mediated by subjective well-being (Castellá Sarriera et al., 2015). Finally, studies in 155 children reported that the social support network significantly predicted satisfaction with life (Siqueira et al., 2011).

These studies show relationships between social support and empathy with life satisfaction on an individual basis. Therefore, it is important that these variables can be analyzed in relation to their explanatory power on satisfaction with life in Brazilian students. In this sense, the aim of the study was to research whether social support and empathy predict life satisfaction in Brazilian university students.

2. Methodology

2.1 Methodological design

Cross-sectional predictive design research. It allows knowing the degree of influence of the predictor variables (Social Support and Empathy) on the criterion variable (Life Satisfaction) from statistical analyzes (Ato et al., 2013).

2.2 Sample design

A non-probabilistic, purposive sampling was used (Hernández, Fernández and Baptista, 2015), achieving the voluntary participation of 350 Brazilian university students of both sexes, where 188 are female (50.3%) and 186 male (49.7%), whose ages range from 18 to 65 years.

2.3 Data collection techniques

The research design was presented and approved by the Ethics Committee of the Universidad Peruana Unión, Peru (Approval certificate number 2022-CE-EPG-000182). Each of the survey participants provided their informed consent through a Google form and were duly informed about the confidentiality and anonymity of the information provided. Once the instruments were applied, the data were entered into the Statistical Package for the Social Sciences (SPSS 27) for the analysis of the descriptive statistics part (M=Mean, DS=Standard Deviation, A=Asymmetry Coefficient, K=Kurtosis Coefficient) in each of the sociodemographic variables in order to infer certain characteristics of the study sample. In addition, a preliminary correlation analysis was performed between the 3 variables using the Pearson correlation coefficient. Then the multiple correlation coefficient ($R2$) was analyzed. Finally, the proposed model was determined using the multiple linear regression coefficient.

The Social Support scale was measured through the Multidimensional Scale of Perceived Social Support (MSPSS) by Zimet et al. (1988) and validated for the Brazilian context by Martins et al. (2017). Composed of three factors (friends, family, important people) with four items each. With 7-point Likert-type response options ranging from 1= "strongly disagree" to 7 = "strongly agree". The MSPSS has been shown to be valid (CFI = .98; TLI= .99; RMSEA= .009) and reliable (α=.92).This questionnaire was used in the post-pandemic period by Matrangolo et al.(2022) and Orellana et al.(2022).

The Empathy scale was measured through the Basic Empathy Scale (BES) by Jolliffe and Farrington (2006) validated for the Brazilian context by Pechorro et al. (2018). Composed of two factors (affective and cognitive) with three for the first dimension and 4 for the second dimension. With Likert-type response options ranging from totally disagree to totally agree. The BES-A has been shown to be valid (CFI = .98; RMSEA= .07; IFI= .97) and reliable (ω= .88). This questionnaire was also used in the post-pandemic period by Stevens Rodríguez and Moral Jiménez (2022) and De Los Reyes et al. (2022).

The SWLS Life Satisfaction Scale was designed by Diener et al. (1985) and validated for the Brazilian context by Sancho et al. (2014). Unifactorial model with 7 items with Likert-type response options where 1 is "totally disagree" and 7 "totally agree". The SWLS questionnaire has been shown to be valid (CFI= .97; GFI= .91; SRMR = .03) and reliable (α=.92). This instrument was used in the post-pandemic period by Martinez-Marin and Martínez (2022) and Suárez Rodríguez et al. (2022).

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3. Results

3.1 Descriptive analysis

3.1.1 Sociodemographic Data

Table 1 shows that 50.3% Brazilian university students are women and 49.7% are men; 26.2% are between 18 and 22 years of age and 73.6% is 23 years of age or older.

Table 1: Characteristics of the participants

		Frequency	Percentage
Sex	Man	186	49.7%
	Woman	188	50.3%
	Total	374	100.0%
Age	Between 18 y 22	98	26.2%
	From 23 years to more	276	73.8%
	Total	374	100.0%

3.2 Descriptive statistics

Table 2 shows descriptive statistics, such as the mean, standard deviation (SD), skewness, and kurtosis. Where the highest averages are in the Social Support variable, with men being higher compared to women, however, it is not significant, and the lowest average is in the Satisfaction with life variable, being the average for women the minor, however, do not have a significant difference. Only in the Empathy variable, there is a significant difference between men and women, the perception being higher in women. And the coefficient of asymmetry does not exceed the range of being greater than 1.5 and less than -1.5, so it is estimated that it is symmetric and on kurtosis the values of ±1.5 are not exceeded, so it is estimated that they have a symmetric distribution.

Table 2: Descriptive analyses of Social support, Empathy and Satisfaction with life

Variable	Sex	Mean H	DE	Asymmetry	Kurtosis	Stadistical
Social Support	Man	65.39	11.795	-0.731	0.115	$p = 0.074$
	Woman	63.28	11.906	-0.659	-0.159	
Empathy	Man	24.26	5.363	-0.371	0.045	$p = 0.002$
	Woman	26.02	4.266	-0.218	-0.212	
Satisfaction with life	Man	23.56	6.573	-0.530	-0.309	$p = 0.310$
	Woman	23.11	6.051	-0.397	-0.355	

Note: M=Mean, A= Skewness coefficient, SD= Standar deviation, K= Kurtsos coefficient

3.3 Correlation analysis

Table 3 shows the relationship between the variables Social Support, Empathy and its dimensions with Satisfaction with life. The result of the relationship between Social Support and Satisfaction with life is 0.415 ($p<0.01$), with Friends it is 0.388 ($p<0.01$), with Family it is 0.355 ($p<0.01$), and with important people 0.387 ($p<0.01$), likewise, with the Empathy variable it is -0.008 ($p>0.05$), and its Affective dimension is -0.103 ($p<0.05$), and its Cognitive dimension is 0.104 ($p<0.05$).

Table 3: Correlation analysis between Internal Marketing, Labor Motivation and its dimensions with Life Satisfaction

	Social Support	Friends	Family	Important People	Empathy	Affective	Cognitive	Satisfaction with life
Social support	1							
Friends	,893**	1						
Family	,920**	,726**	1					
Important People	,909**	,702**	,776**	1				
Empathy	,217**	,138**	,172**	,282**	1			
Affective	,107*	0.023	0.100	,170**	,810**	1		
Cognitive	,239**	,205**	,172**	,276**	,744**	,211**	1	
Satisfaction with life	,415**	,388**	,355**	,387**	-0.008	-,103*	,104*	1
**. The correlation is significant at the 0.01 level (bilateral).								
*. The correlation is significant at the 0.05 level (bilateral).								

3.4 Predictive analytics

Table 4 shows the summary of the model, where the corrected determination coefficient (corrected R^2) is 0.178, which indicates that 17.8% of the variability of Satisfaction with life is explained by the variables Social support and Empath, the effect according to the Cohen coefficient is 0.23, which is between 0.15 and 0.35, the effect is medium. While the F value of the ANOVA (F=41.375, p=0.000), indicates that there is a significant linear relationship between Satisfaction with life and Social Support and Empathy as predictor variables as a criterion variable.

Table 4: Multiple correlation coefficients R, R2, corrected R2, EE and F

Model	R	R2	R2 corrected	EE	F	p value
1	0.427	0.182	0.178	5.723	41.375	0.000
a. Predictor variables: Social support, Empathy						
b. Dependent variable: Satisfaction with life						

Table 5 shows the non-standardized regression coefficients (B), and standardized regression coefficients (β). In these results, the β coefficients (0.182, 0.046, 0.244, -0.158 and 0.025) indicate that the Friends dimension, together with the Important people dimension, has a positive and highly significant effect on life satisfaction. The Affective dimension of the Empathy variable has a β of -0.158, with a negative and highly significant effect. While the Family and Cognitive dimensions are not significant because they have a p value greater than 0.05 (p>0.05). The result of the t test shows that these three dimensions are significant and have a significant effect on Satisfaction with life.

Table 5: Multiple regression coefficients B (unstandardized), β (standardized) and t-test

	B	EE	β	T	p value
(Constant)	11.709	2.023		5.788	0.000
Social support	0.232	0.026	0.437	9.095	0.000
Empathy	-0.132	0.062	-0.103	-2.139	0.033
a. Dependent variable: Satisfaction with life					

4. Discussion

In Brazil, higher education is considered the natural path of social advancement and labor insertion (Bardagi & Hutz, 2010). However, recent studies show high levels of dissatisfaction on the part of the

students, evidenced in anxiety, depression, and others. Reports show variations of disorders in students ranging from 18.5% to 44.9% (Graner & Cerqueira, 2019), with the highest prevalence in the first and last years (Padovani et al., 2014). In this sense, we consider it important to develop studies that seek to determine if social support and empathy predict satisfaction with life in Brazilian university students.

The results found show that there is a relationship between social support and satisfaction with life. This means that college students who show higher levels of social support have higher levels of life satisfaction. This result is similar to the study on life satisfaction in age groups from 20 to 29 years in the Canadian population where a positive correlation was reported between social support and life satisfaction (Su et al., 2022). Considering that social support is an attribute of positive mental health (Zhou & Lin, 2016) and that life satisfaction measures people as a whole (Lyubomirsky et al., 2005), it is not surprising that students who receive strong social support are benefited with greater satisfaction with life. Another investigation in students showed that students with indicators of social support presented greater satisfaction with life (Achkar et al., 2019). Taking into account that social support promotes self-esteem (Krause, 1987), it is likely that social support has a direct effect on life satisfaction, which has been reported in numerous studies (Novoa & Barra, 2015; Tarkar, 2021). A recent study in China, for example, reported that social support was associated with family satisfaction (Chen et al., 2022). This result has been observed over the years, and shows that life satisfaction is predicted by the social support network (Siqueira et al., 2011).

The results of the regression model show that 18.9% of the variability of Satisfaction with life is explained by the variables social support in its Friends and important people dimension and Empathy in its Affective dimension. This result indicates that life satisfaction is influenced by social support in its friends and significant others dimension and is consistent with similar studies where friends and significant others play an important role in student development and therefore predict their satisfaction with life (Erzen & Ozabaci, 2023). Another study, but in a population of students with disabilities, showed that university students depended on their friends, especially for informational support (Ahmed et al., 2023); Likewise, in Thailand a study showed that the support of friends is essential to improve their well-being (Thanoi et al., 2023). Finally, Empathy in its affective dimension had a negative influence on life satisfaction. This means that Brazilian students who have high levels of empathy tend to show low levels of satisfaction with life. It is likely that students with high levels of empathy tend to feel empathy for their peers, which would lower their level of satisfaction with life, due to emotional overload or mismanagement of emotions (Cohen & Strayer, 1996). Likewise, empathy is a complex process to understand (Jolliffe & Farrington, 2006), and it could promote excessive personal anguish (Eisenberg et al., 1996) or discomfort or personal suffering (Blanco Donoso et al., 2017).

This result is consistent with previous studies in students where empathy is related to positive results in life satisfaction (Guasp Coll et al., 2020). Another study in more than 1,356 university students found that empathy acts as a predictor of life satisfaction (Morelli et al., 2015; Oriol et al., 2020). Recent studies in Brazil show the positive effects of empathy on university social responsibility as an emotional response to the problems caused by the COVID-19 pandemic (Lemos Lourenço et al., 2022).

However, the results of this investigation showed a negative effect of empathy on life satisfaction. Some research shows that the tendency to experience positive empathy is related to the tendency to experience negative empathy (Sallquist et al., 2009) and that in some cases, students may feel emotions in relation to their peers but not necessarily positive empathy (Shiota et al., 2004).

Esta investigación presenta implicancias de naturaleza teórica. En primer lugar, porque a la luz de la teoría de la autodeterminación (Ryan & Deci, 2011) se proporciona un marco integral para comprender la motiación y la personalidad humana (Ryan & Deci, 2011). Este marco teórico muestra que los individuos necesitan la satisfacción de sus necesidades psicológicas básicas, como son autonomía, competencia y relación la cual esta asociada a emociones psicológicas positivas (Deci & Ryan, 2000). Por ello, nuestro estudio evidencia esta conexion de emociones psicológicas positivas

como el apoyo social y la empatia que estan relacionadas con la satisfacción con la vida.

This research presents implications of a theoretical nature. First, because in the light of self-determination theory (Ryan & Deci, 2011) a comprehensive framework is provided to understand human motivation and personality (Ryan & Deci, 2011). This theoretical framework shows that individuals need the satisfaction of their basic psychological needs, such as autonomy, competence, and relationship, which is associated with positive psychological emotions (Deci & Ryan, 2000). Therefore, our study evidences this connection of positive psychological emotions such as social support and empathy that are related to life satisfaction.

Among the practical implications of this research is the fact of knowing the determining factors of satisfaction with life in students, first because with the instruments used important measurements of the analyzed constructs can be developed, likewise, this research can be used for the development of intervention programs that seek to improve student satisfaction, which is one of the most representative indicators of academic quality (Merola et al., 2022; Pedro et al., 2018).

The present study is not wary of limitations. First of all, the study had a transectional design, therefore the data was taken at a single moment, for which longitudinal works are recommended. Second, that the data collection comes from self-reports, and it is probable that there are certain biases such as that some participants have wanted to refer to particular situations. Likewise, the data was collected online and it is likely that there would have been differences if the data were collected in person. Finally, the sample was taken from students from the Brazilian northeast, so it is necessary to make similar replicates in different regions in such a way that they allow generalizing the results found in this research.

Despite these limitations, we consider this study as a contribution to the literature, especially to studies related to life satisfaction. Therefore, we conclude that social support in its dimensions of friends and significant others and empathy in its affective dimension are predictors of life satisfaction in Brazilian university students.

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