Socio-Ecological Factors Associated with the Psychological Well-Being of Pakistani University Students

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Research focusing on understanding and promoting well-being in non-Western countries is on the rise. The present study investigated the relationship between socio-ecological factors and Pakistani University students' well-being. The students (N = 280) completed various questionnaires in a face-to-face group setting. Their responses were subjected to statistical analyses. A series of multiple regressions were conducted to examine how intra-individual, interpersonal, community, and larger society systems are associated with eudemonic and hedonic aspects of well-being. Emotional regulation, strong familial and interpersonal relations, social support and network, religious beliefs and practices, sense of community, and local facilities appeared to be associated with the well-being of the university students. The results have theoretical and practical implications. The findings support the multidimensional nature of well-being and the importance of the socio-ecological framework in Pakistan. The outcome highlights how parents, university authorities, and other stakeholders can enhance the well-being of university students.

Keywords

life satisfaction • psychological distress • well-being • socio-ecological model • university students

Introduction

Well-being is considered vital for one's health and development (Diener et al., 2018). The research on understanding and promoting the well-being of populations has increased globally. University students are one of the populations that has received immense research attention (Bye et al., 2020). A decrease in their well-being can lead to emotional and mental health problems, such as depression, anxiety, and substance abuse (McCann & Hicks, 2011). These challenges can hinder academic achievement and precipitate a discontinuation of education (Willcoxson et al., 2011). It is therefore important to explore factors that can promote the well-being of students.

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Despite this interest in the Western world, research on well-being is limited in developing countries like Pakistan. It is important to investigate the socio-ecological factors associated with their well-being to promote the optimal functioning of university students in Pakistan.

A review of the literature highlights well-being as a highly debated concept. Despite varying definitions, there is consensus that it includes eudemonic and hedonic aspects. Eudemonic well-being has evolved into psychological, social, emotional, mental, and spiritual well-being (Maulana et al., 2021). Psychological well-being is highlighted by a sense of actualization, personal growth and development, acceptance, and positive attitudes toward self and others (Marcinko, 2015). Individuals show environmental mastery and autonomy in making decisions compatible with their needs (Papalia et al., 2002). Social well-being is reflected by a desire to build relations and a sense of belonging and integration in society (Lu & Gilmour, 2004). Social well-being is also reflected by the opportunities and abilities to influence society (Zhang et al., 2011). Emotional and mental well-being is manifested by a sense of happiness, contentment, and one's ability to solve problems and respond to stress in healthy ways (Jafarnejad, 2016; Hills & Argyle, 2002). Further, it is also evidenced by one's ability to regulate emotions and the absence of depression, anxiety, or other mental health concerns (Berking & Wupperman, 2012). Finally, spiritual well-being is a feeling of peace and having a sense of purpose and meaning in life (Cresswell-Smith, 2019).

Hedonic well-being refers to subjective positive experiences and satisfaction with life (Diener et al., 1985). Diener et al. (2017) define subjective well-being as "people's overall evaluations of their lives and their emotional experiences" (p. 87). According to Diener and colleagues (1999), well-being refers to life satisfaction and includes the individuals' emotional and cognitive evaluations of their lives, and the absence of psychological distress. High levels of life satisfaction are shown to be associated with better physical health and longevity (Diener & Chan, 2011), fewer mental health problems (Fergusson et al., 2015), and better social relationships (Proctor et al., 2009). Life satisfaction has been used as an indicator of quality of life (Diener & Suh, 1997). There is substantial evidence that well-being is a multifaceted concept that is dynamic and continuously developing (Lomas, 2015). Subsequently, research has increasingly focused on the factors associated with well-being (Trudel-Fitzgerald et al., 2019). Bronfenbrenner proposed a socio-ecological model of human development in which the person is surrounded by various sociocultural interactions and environments referred to as levels (Bronfenbrenner, 1979). These levels, or systems, are labelled as the micro-system, the meso-system, the exo-system, and the macro-system (Bronfenbrenner, 2005). Factors at each of these levels can influence a person's well-being (Lomas, 2015). Furthermore, changes or conflicts in any one layer can ripple through other layers, hence impacting the well-being of an individual (Bronfenbrenner & Ceci, 1994).

According to the socio-ecological model, well-being is primarily influenced by various personal characteristics. Demographic characteristics, such as age, gender, education, occupation, and financial stability, appear to be associated with well-being (Joshanloo & Jovanovic, 2021). Evidence suggests that increased age is linked with increased well-being (Huppert, 2009). Some gender-specific experiences can also impact an individual's physical health, mental health, and well-being (Park et al., 2019). For example, in some cultures, women have higher life satisfaction (Capone et al., 2021). Similarly, compared with males, female students have reported higher well-being (Sosik et al., 2017). Education and skills increase the opportunity of securing employment (Ali & Jalal, 2018). Employment status has been regarded as an indicator of students' emotional well-being (Moxham et al., 2018). Intrapersonal resources, such as resilience and emotional regulation, are associated with effective management of stress and mental illnesses (Tugade et al., 2004). Resilience allows individuals to cope effectively with life adversities

(Bacchi & Licinio, 2017). Similarly, one's ability to regulate emotions through cognitive reframing and suppression of emotions can help reduce psychological distress (Vally & Ahmed, 2020). Resilience, coping, and mental toughness are shown to promote university students' well-being (Brooker & Vu, 2020; Liu et al., 2021; Stamp et al., 2015).

Research indicates that at the micro- and meso-levels, in which a person interacts with others, several factors are associated with well-being. Bonding and attachment with family members strengthen identity and connections with others within and outside the family (Duriez, 2021; Reupert et al., 2015). Students' face-to-face meetings, social media interactions, and extra-curricular activities promote their well-being (Brooker & Vu, 2020; Dutta & Chye, 2017; Guilmette et al., 2019). The peer-led interventions provide a positive impact through increased mental health awareness and knowledge of coping strategies for self-help and helping others among university students (Ahorsu et al., 2021). Religious practices, beliefs, and values can provide social and emotional resources that enhance well-being (Ngamaba & Soni, 2018). Participation in religious activity promotes a sense of community, which is important for well-being (Sohi et al., 2018). The frequency of personal prayers is also a strong predictor of spiritual well-being and a key factor in forming individual spirituality (Wilkinson et al., 2018).

At the exo-system level, a range of community factors have been found to influence well-being (Lomas, 2015). For example, neighborhood support, a sense of belonging and safety, recreation and community centers, and connection with local organizations can enhance positive experiences that impact well-being (Burke et al., 2009; Caron et al., 2019; Yu et al., 2019). Furthermore, Kay and Livingstone (2021) found that the socio-economic status of the parents and the neighborhood, as well as the demographics of the educational institutions, account for the cognitive abilities and achievements of the students. At the macro-system level, society resources, such as suitable and affordable dwellings, infrastructure, and access to education and health, are associated with well-being (Pena-López et al., 2017; Salehi et al., 2017). Research also indicates that employment status is one of the indicators of students' well-being (Moxham et al., 2018). Societies that are socially inclusive and allow their members to engage in civil participation appear to promote well-being (Coulombe & Krzesni, 2019; Gibney et al., 2020). Ballard et al. (2020) found a weak but positive relationship between students' political engagement and well-being. However, there is a growing awareness that as the socio-political, economic, and legal systems of countries vary, people can be affected in different ways (Lomas, 2017). Diener has reported that differences between countries, such as income inequality or legal systems, can explain differences in subjective well-being at the country level (Diener et al., 2017). These differences highlight the significance of exploring the well-being of populations in developing countries. University students are a population that requires research attention.

Pakistan is a developing country in South Asia with the fifth largest population in the world. Based on its territory size, it is ranked thirty-third in the world. The GPD per capita is nominal and ranks 146th in the world (World Bank, 2021). Pakistan is a predominantly Muslim country with a collectivistic, hierarchical, and patriarchal culture. Family members have strong bonds, and there is an emphasis on caring for one another (Burki & Ziring, 2021). Religious and socio-cultural beliefs and values appear to impact well-being (Abdullah & Zakar, 2019). The overall health literacy level is low (Ahmed et al., 2018). Education in Pakistan is highly valued, and one in three young adults (18–29 years) are university students (Higher Education Commission, 2016). In the last two decades, the number of universities has grown exponentially in the public and private sectors. Presently, there are more than 200 universities in the country (Higher Education Commission Recognized Universities, n.d.). Most of these universities are in larger metropolitan cities, although the majority of the population resides in rural areas. Despite the high number of students and universities, the infrastructure to support

students is not well developed in Pakistan. The socio-ecological systems required for well-being are unestablished. Contrary to Western countries, students in Pakistan are young and financially supported by their families. These students, who have often had sheltered lives, must relocate from their smaller hometowns to larger cities and may encounter many challenges adapting to the new environment and independent life. These students may come from various educational and psycho-social cultures. Similarly, they may hold different beliefs and values. For many students, university experiences are daunting and can affect their well-being and life satisfaction. These challenges, if not addressed, may lead to an increase in failure and dropout rates (Javed, 2020).

A recent study explored the impact of the COVID-19 pandemic on the well-being of Pakistani students (Khan et al., 2021). The results revealed that 41.2% of the students reported poor well-being. Predictors of poor well-being were being female, unemployment, being a resident of the Sindh province, fear of COVID-19, a chronic illness, and maladaptive coping strategies (Khan et al., 2021). Nevertheless, a handful of studies have highlighted factors that promote well-being. Bano and Pervaiz (2020) studied medical students in Pakistan and found that their resilience and emotional intelligence contributed to their well-being. In another study, support from teachers at the university was associated with the well-being of students (Bakari & Hunjra, 2018). In a recent study with Pakistani youth, Shah et al. (2021) found that the use of social media increased in Pakistan. According to these researchers, the use of technology and social media increased relationships with fellow students, friends, and teachers. These activities fostered happiness and had a positive effect on well-being.

Aim of the Study

Most of the research on well-being has been conducted predominantly in Western contexts, with many studies emerging from Australia, the United Kingdom, and the United States of America. To date, there are few studies conducted in Pakistan that look at the well-being of university students from the societal and cultural context. This study therefore aimed to investigate socio-ecological factors associated with the psychological well-being of Pakistani university students. In line with the socio-ecological model, the present study included intra-individual (e.g., resilience, emotion regulation, and cognitive reappraisal), interpersonal (e.g., family relations, social support, social capital, and religious activities), community (e.g., neighborhood), and societal (e.g., infrastructure and sense of community) factors to get a comprehensive understanding of students' experiences. Well-being is conceptualized as eudemonic (personal growth, happiness, and absence of distress) and hedonic (a subjective evaluation of one's life satisfaction) (McMahan & Estes, 2011). This study hypothesized that all factors would be associated with well-being, and the expected outcome would enlighten stakeholders on how to promote the well-being of young university students in Pakistan, which is culturally very different from the West.

Method

Participants

The participants were 280 university students residing in Lahore, Pakistan. The average age of the participants was 21.09 years (minimum = 18, maximum = 29, SD = 1.77 years). Demographic details are provided in Table 1.

Table 1. Demographic details of the participants.

	Percentage
Gender	
Males	17
Females	82
Missing data	1
Marital status	
Single	96.1
Married	3.9
Religion	
Islam	99.1
Other	0.9
Occupation	
Student only	83.6
Students with casual jobs	16.4
Financial support	
Supported by family	94.9
Self-supported	5.1
Country of birth	
Pakistan	94.3
Other	5.7

Measures

Demographics

A questionnaire was developed to collect demographics such as age, gender, relationship status, country of birth, religion, education, occupation, and source of financial support.

Resilience

A 10-item unidimensional Connor-Davidson Resilience scale (RISC; Campbell-Sills & Stein, 2007) was used to measure resilience. It is an abbreviated version of the original 25-item scale (Connor & Davidson, 2003) and captures a respondent's ability to cope and bounce back from adversities in life. The scale includes items such as "coping with stress strengthens me" and asks participants to respond on a 5-point Likert scale (0 = not true at all; 4 = true nearly all the time). The 10-item version demonstrates strong psychometric properties, including good internal consistency (α = .85) and a high correlation (.92) with the 25-item version (Campbell-Sills & Stein, 2007).

Emotional Regulation

The 10-item Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) consists of two subscales, Expressive Suppression (ES) and Cognitive Reappraisal (CR), and was used to measure a participant's ability to regulate negative emotions. The cognitive reappraisal subscale has six items and measures the ability to reframe situations to diffuse negative emotions (e.g., "When I want to feel more positive emotions, I change what I am thinking about"). The expressive suppression subscale consists of four items and measures the tendency to avoid and dismiss negative emotions (e.g., "I keep my emotions to myself"). The participants indicate their responses on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). The authors observed satisfactory psychometric properties with an overall test-retest reliability of .69. The average Cronbach alphas across five samples were .79 for Cognitive Reappraisal and .73 for Expressive Suppression (Gross & John, 2003). They also found a sound convergent and discriminant validity for the subscales.

Family Congruence

The 10-item unidimensional Intergenerational Family Congruence Child Scale (FC; Ying & Han, 2007) was used to measure the participants' alliance with their family's values. The scale was intended to be completed twice, once targeting the relationship between the child and their father and again with their mother. However, in the present study, the scale was reworded to target the family. The item, "My family and I agree on how to behave in a predominantly American setting," was excluded from the present study due to its irrelevance to the present research. Participants responded to items such as "My family and I agree on the aims, goals, and things believed to be important in life" on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Ying and Han (2007) reported sound psychometric properties, as the Cronbach alpha was .85 regarding the father and .84 with the mother. The test-retest regarding the father and mother was .90 and .88, respectively. The total score correlated with overall satisfaction, indicating sound convergent validity (Ying & Han, 2007).

Closeness with Family

Three items were adapted from the Family Adaptation and Cohesion Evaluation Scale (FACE; Olson et al., 1979) to measure the participants' feelings of closeness to their family. These items were intended to be answered twice, once regarding a participant's father and once for their mother. However, in the present study, the items were adapted to target family closeness in general. A 5-point Likert scale was used (1 = almost never; 5 = almost always). Previous research has demonstrated good psychometric properties and good reliability (α = .85).

Functional Support

Twelve items out of the original 20-item Social Function Scale (SFS; Dunst et al., 1984) measured the participant's needs for social, emotional, practical, and financial support. These items were therefore retained for the present study. The remaining 18 items, which referred to child-care-related needs, were excluded due to irrelevance. Items such as "Someone to talk about things that worry you" measured a need for support. A 4-point Likert scale (1 = never; 4 = quite often) was used. Good psychometric properties, through high internal consistency (α = .87) and test-retest (.91), were reported by Dunst et al. (1984).

Social Capital

A 10-item Social Capital scale adapted from the Adapted Social Capital Assessment Tool (SC; De Silva et al., 2006) measured emotional and financial help sought by the respondents and was used to measure the participants' support networks. In the De Silva et al. (2006) version, respondents indicated the support received from others with a yes or no. In the present study, the degree of support from others in the past 12 months, such as friends, relatives, neighbors, co-workers, leaders and government, and charitable services, was measured on a 4-point Likert scale (1 = never; 4 = quite often).

Religiosity and Religion

A scale measuring religious beliefs and practices (RB) was designed by taking four items (e.g., "How important would you say that religion and religious beliefs are for you?") from the Walker et al. (2007) scale and five items (e.g., "How important is it for you to be able to rely on religious teachings when you have a problem?") from the Jessor and Jessor (1977) scale. The scale was used to measure participants' religious beliefs and practices. A 5-point Likert scale (1 = not at all; 5 = very important) was used to measure the importance of religious beliefs and practices. One item ("During the past year, how often did you attend religious events?") was slightly modified to elaborate on "religious events" to include Eid prayers, Qur'anic recitation, or other Islamic practices and festivities. This change was made in the present study to reflect the majority Muslim country in which it was held.

Neighborhood

An 8-item Brief Sense of Community Scale (BSCS; Peterson et al., 2008) with four subscales was used to measure the respondents' group membership and fulfillment of social and emotional needs in their neighborhood (e.g., "I belong in this neighborhood"). A 5-point Likert scale (1 = strongly agree; 5 = strongly disagree) was used. The authors reported sound psychometric properties in the form of Cronbach alpha ranging from .77 to .92 for the four subscales. Furthermore, Peterson et al. (2008) supported the validity by demonstrating the scale correlation with a sense of empowerment (.22) and mental health (.32).

Sense of Community

Eleven items relevant to the present study were selected from the 17-item unidimensional Sense of Community within the Sphere of a City scale (SCSC; Davidson & Cotter, 1986). Items such as "I like the house dwelling/unit in which I live" and "It is hard to get around in the city" (reverse scored) measured a sense of belonging, a feeling of safety, and a connection with day-to-day amenities. This scale measured how the participant's day-to-day needs were met by the city's infrastructure and facilities. Responses were recorded on a four-point Likert scale (1 = strongly agree; 4 = strongly disagree). Davidson and Cotter (1986) reported the scale to be highly internally consistent with coefficient alphas ranging from .81 to .85. Considering the power and natural resource shortages in Pakistan, "I have access to electricity, gas and water in this town/city" was added for the present study.

Well-Being

The 14-item Warwick-Edinburgh Mental Well-Being Scale (WEM) (Tennant et al., 2007) was used to measure the participants' psychological needs. The items in the WEM represent hedonic and eudemonic aspects of mental health, including positive affect, functioning, and interpersonal relationships. Respondents used a five-point Likert scale (1 = none of the time; 5 = all of the time) to express their subjective experiences (e.g., "I've been feeling optimistic about the future"). The psychometric properties were supported by its internal consistency (α = .89–.91) and divergent and convergent validity, which revealed a negative correlation with negative affect scores (–.54) and a positive correlation with life satisfaction scales (.73) (Tennant et al., 2007).

Life Satisfaction

A 5-item scale to measure overall cognitive judgments of one's life satisfaction (LS; Diener et al., 1985) was used to measure the participants' subjective perception of their lives. By using a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree), the respondent indicated if they agreed or disagreed with the items (e.g., "In most ways, my life is close to my ideal." The psychometric properties of the scale have been supported by a high internal consistency (.87) and test-retest reliability (.82) (Diener et al., 1985). Its sound concurrent validity is evident by its positive correlation with other well-being and self-esteem measures and negative correlations with neuroticism and emotions (Diener et al., 1985).

Psychological Distress

The Patient Health Questionnaire-2 has two items that measure depressed mood and anhedonia (PHQ-2; Kroenke et al., 2003) and was used to measure the participants' distress. Respondents use a 5-point Likert scale (0 = not at all; 5 = nearly every day) to indicate how often they experienced "Little interest or pleasure in doing things" and how frequently they "felt down, depressed, or hopeless" in the last two weeks. The scale's psychometric properties are supported by high internal consistency (.92) and construct and discriminant validity (Gelaye et al., 2016).

Procedure

Ethical clearances were obtained from two public universities, Punjab University and Government College University, and one private university, Lahore Garrison University, in Lahore, Pakistan. University students pursuing Bachelor's and Master's degrees in Psychology were invited to participate in the study. Authors used their networks to invite students from these departments. Furthermore, it is customary for psychology students to participate in studies as a part of their learning experiences. Those who agreed to volunteer were asked to complete the questionnaires after their lectures. Submission of the completed questionnaires was regarded as a sign of consent. This approach was adopted to enhance anonymity as participants in non-Western countries prefer to refrain from identifying themselves. Participants took 30 to 40 minutes to complete the questionnaires. The principal researcher was available for queries. The participants were debriefed after their participation. All data were collected over one week in November 2019.

Results

Data Screening

The data were screened and cleaned to ensure all necessary conditions were met to continue the analysis. The visual inspection of the residual scatterplots suggested that residuals were homoscedastic for all dependent variables and normally distributed. The highest Variance Inflation Factor value across all models was 2.34; therefore, issues with multicollinearity were undetected. The data were screened for missing data and for accurate inputs, and it was found that 2.86% of the total data were missing. Following the suggestion of Schafer (1999), this was deemed inconsequential in the final analysis. However, three participants with exceptionally high amounts of missing data were removed from the analysis. Additionally, there was no discernible pattern to the missing data.

As all assumptions were considered fulfilled, the study proceeded with a multiple linear regression analysis. During the completion of the analysis, several outliers were identified visually. However, upon calculation of Cook's Distance, they were not found to be influential. The analyses were run, including and excluding these outliers, and the interpretation of results remained the same. A decision was therefore made to report the analysis based on the original data. The bivariate correlations and descriptive statistics were obtained and displayed in Table 2. The internal consistency of all scales and subscales used in the analysis was examined using the present data set. The Cronbach alphas were high for all scales and subscales (RISC: α = .77; CR α = .80; ES α = .63; IFC-CS α = .88; FACE = .78; SFS α = .77; SC α .78; RB α = .86; BSCS α = .90; SCSC α = .84; WEM α = .91 and LS α = .84), except PHQ-2 (α = .26). An examination of the internal consistency indicated the items of all the scales were thematically linked and measured the concept that they were designed to measure.

Hierarchical Regression Models

Three hierarchical regression models were examined, each with a different dependent variable: well-being, life satisfaction, or psychological distress. Due to the relatively homogenous nature of the sample, most of these demographic variables, except age and gender, were excluded from the analysis. The demographic data of the participant's age and gender were therefore included in the first block of each of these models . In the second block, the independent variables—resilience, cognitive reappraisal, expressive suppression, family congruence, family identity, closeness with family, functional support, self-rated religiosity, religious beliefs, neighborhood, and a sense of community—were added to the model. Cases were excluded listwise, resulting in varying sample sizes for each of the tested models.

Well-Being

At step 1, gender and age alone accounted for 2.6% (n = 264, p = .032) of the variance in the participants' well-being, with neither independent variable strong enough to contribute a significant, unique amount. The second step in the regression increased the explanatory power of the model by 37.6% (R^2 = .40, p < .001). As displayed in Table 3, at this step, men scored higher on the WEM than women. Resilience, cognitive reappraisal, family congruence, social capital, and a sense of community within the city were positively associated with the WEM and contributed to well-being. However, expressive suppression was negatively associated with the WEM, and its presence appeared to reduce well-being.

Table 2. Bivariate Correlations and Descriptive Statistics.

	M	SD	Gender	Age	RISC	CR	ES	FC	FACE	SFS	SC	HR	RB	BSCS	SCSC	WEM	LS
Gender																	
Age	21.02	1.77	–.10														
RISC	32.36	7.81	.05	.16**													
CR	4.56	1.24	.08	.15**	.40**												
ES	4.09	1.29	.11	–.08	.23**	.40**											
FC	26.60	6.39	.17**	.03	.36**	.21**	.09										
FACE	12.08	2.84	.07	.05	.27**	.27**	.03	.63**									
SFS	31.29	6.82	.28**	.11	.129*	.11	–.03	.25**	.16**								
SC	18.86	5.02	–.07	–.02	.02	–.08	–.02	–.11	–.05	.08							
HR	2.80	0.70	.07	–.09	–.02	.03	.02	.15*	.19**	.05	.08						
RB	35.30	6.87	.07	.03	.21**	.17**	.10	.39**	.33**	.24**	–.03	.41**					
BSCS	21.97	6.81	.08	–.05	.12*	.08	.01	.15*	.16**	.19**	.24**	.03	.11*				
SCSC	44.90	8.89	.13*	.10	.36**	.37**	.133*	.43**	.35**	.32**	–.08	.08	.50**	.22**			
WEM	47.62	10.50	–.09	.12*	.46**	.29**	.00	.37**	.33**	.14*	.14*	.06	.33**	.17**	.42**		
LS	22.62	6.56	–.09	.06	.28**	.19**	.08	.35**	.39**	.02	.11	.23**	.39**	.18**	.41**	.44**	
PHQ-2	21.82	7.33	.01	–.06	–.19**	–.21**	.05	–.19**	–.26**	.12*	–.02	–.01	–.21**	–.01	–.20**	–.33**	–.34**

Note. Gender 1 = Male; Gender 2 = Female; RISC = Resilience, CR = Cognitive Reappraisal, ES = Expressive Suppression, FC = Family Congruence, FACE = Closeness with Family, SFS = Social Functional Support, SC = Social Capital, HR = How Religious, RB = Religious Belief, BSCS = Neighborhood, SCSC = Community, WEM = Well-Being, LS = Life Satisfaction, PHQ-2 = Patient Health Questionnaire, * = p < .05' ** = p < .01.

Table 3. Results of Three Hierarchical Multiple Regression Analyses Predicting Psychological Well-Being, Life Satisfaction, and Psychological Distress.

	Well-Being				Life Satisfaction				Psychological Distress			
			95%CI				95%CI				95%CI	
	β	P	Lower Bound	Upper Bound	β	p	Lower Bound	Upper Bound	β	P	Lower Bound	Upper Bound
Gender	–0.15	.005	–7.05	–1.24	–0.11	.04	–3.81	–0.02	–0.10	.12	–0.89	0.11
Age	0.01	.839	–0.41	0.51	0.07	.18	–0.10	0.50	–0.04	.50	–0.11	0.05
RISC	0.26	0	0.21	0.51	0.05	.39	–0.06	0.14	–0.17	.01	–0.06	–0.01
CR	0.15	.01	0.26	2.32	–0.02	.76	–0.77	0.57	–0.04	.62	–0.22	0.13
ES	–0.18	.001	–2.36	–0.59	0.02	.70	–0.46	0.69	0.17	.01	0.05	0.35
FC	0.20	.005	0.10	0.55	0.09	.22	–0.06	0.24	–0.06	.44	–0.05	0.02
FACE	0.02	.79	–0.41	0.54	0.21	.002	0.18	0.81	–0.06	.47	–0.05	–0.11
SFS	–0.07	.17	–0.30	0.05	–0.16	.005	–0.28	–0.05	0.26	0	0.03	0.09
SC	0.19	0	0.19	0.63	0.15	.005	–0.06	0.35	–0.10	.12	–0.07	0.01
RB	0.13	.02	0.027	0.37	0.20	.001	0.08	0.30	–0.12	.09	–0.06	0.00
BSCS	0.03	.61	–0.12	0.20	0.05	.32	–0.05	0.15	0.06	.31	–0.01	0.04
SCSC	0.17	.01	0.05	0.35	0.24	.000	0.08	0.28	–0.08	.30	–0.04	0.01

Note: Standardized coefficients are representative of the second step in the hierarchical regression.

Gender 1 = Male; 2 = Female; RISC = Resilience; CR = Cognitive Reappraisal, ES = Expressive Suppression, FC = Family Congruence, FACE = Closeness with Family, SFS = Social Functional Support, SC = Social Capital, RB = Religious Belief, BSCS = Neighborhood, SCSC = Community, WEM = Well-Being, LS = Life Satisfaction, PHQ-2 = Patient Health Questionnaire, 95%, CI = 95% Confidence Intervals.

Life Satisfaction

The first step in the hierarchical regression, age and gender, accounted for 1.9% of the variance in life satisfaction. These variables did not reach significance (n = 265, p = .07) and did not emerge as a strong variable contributing to the life satisfaction of the participants. However, in the second step, the model's predictive power increased by 37.6% (R^2 = .35 (p < .001). As shown in Table 3, gender became a significant predictor when the additional independent variables were included, with males once again scoring higher on the life satisfaction scale. Closeness with family, religious beliefs, and a sense of community within the city were all positively related to life satisfaction and appeared to contribute to the participants' subjective experiences. However, functional support, which measures the needs for social, emotional, and practical needs, was negatively related to life satisfaction. It is possible that if these needs are high, life satisfaction can decrease.

Psychological Distress

When predicting psychological distress, the first step of the hierarchical regression model, which included age and gender, accounted for 1.1% of the variance in psychological distress. As this did not meet a significant amount (n = 249, p = .27), it was concluded to be unassociated with participants' distress. In the second step of the analysis, the model's predictive power increased by 21.5% (R^2 = .22 (p < .000). In this model, neither gender nor age became significant. However, as displayed in Table 3, both subscales of emotional regulation were significant predictors of psychological distress. Cognitive reappraisal was negatively associated with the dependent variable, which indicated that an increase in this emotion regulation style was associated with a drop in distress. Nevertheless, higher levels of expressive suppression, which involved avoiding or dismissing one's emotions, were associated with higher levels of psychological distress. Functional support, in the form of needs, was positively correlated with psychological distress, while social capital was negatively related to psychological distress. It seems that a connection and reliance on others was seen to be associated with lower levels of distress.

Discussion

The present study investigated the factors associated with the well-being of Pakistani university students. The overall contentment was reflected by hedonic and eudemonic well-being, life satisfaction, and the absence of psychological distress. In line with the socio-ecological model, a combination of the micro-, meso-, exo-, and macro-level systems contributed to various aspects of well-being (Bacchi & Licinio, 2017; Brunsting et al., 2021; Joshanloo & Jovanovic, 2021). Family and interpersonal factors appeared to be the most salient. Nevertheless, a sense of community and neighborhood played a limited role in the well-being and happiness of Pakistani university students. Thus, the hypothesis was partially supported.

An examination of the relationship between personal factors and dependent variables indicated that men, compared to women, appeared to experience a higher level of well-being and life satisfaction. Although it is contrary to the previous literature (Capone et al., 2021; Park et al., 2019; Sosik et al., 2017), which showed women reporting higher levels of well-being, it is in line with a patriarchal society in which men have more influence in society (Abdullah & Zakar, 2019). It is interesting to note that gender did not correlate with psychological distress. This does not align with substantial international literature, which highlights women as

more emotionally distressed (Gilbert-Ouimet et al., 2020; Koopmans et al., 2010). Similarly, inconsistent with research, which shows age to be related to well-being, life satisfaction, and psychological distress (Joshanloo & Jovanovic, 2021), the present data found no relationship. Considering that the participants were young students, limited age variation could have contributed to these results. The examination of the relationship between individual characteristics, such as resilience and emotional regulation, and the dependent variables yielded interesting results. The results indicated that resilience was positively correlated with well-being and life satisfaction and negatively correlated with psychological distress (Bacchi & Licinio, 2017). However, when added to the regression analysis, along with other variables, it did not emerge as a significant predictor for well-being and life satisfaction. Only a high level of resilience reduced psychological distress. As a part of the emotional regulation process, the participant's ability to engage in cognitive reappraisal contributed to their well-being. This is in line with past research, which found that the cognitive process of examining self-defeating thoughts to modify them into more realistic and helpful ideas is a personal strength associated with all dimensions of well-being (Vally & Ahmed, 2020). The students' tendencies to suppress their emotions were negatively correlated with well-being and positively correlated with psychological distress. This finding is consistent with past research, which indicated that harboring negative emotions and refraining from channeling them out in a constructive manner can hinder well-being and induce mental health issues. Moreover, mental toughness was a moderate to strong predictor of psychological well-being (Brooker & Vu, 2020; Liu et al., 2021; Stamp et al., 2015). As Pakistan is a Muslim country where religion is prioritized, students' religious beliefs and practices appear to be linked to their satisfaction with life (Villani et al., 2019).

The present outcome highlighted some family, interpersonal, and social factors associated with the dependent variables. Like past research (Brunsting et al., 2021), a perception of family congruence, in the form of parent and child alignment, appeared to be linked with the subjective feelings of well-being. However, a perception of closeness and bonding with the family members contributed to participants' satisfaction with life. This is consistent with past studies, which indicated attachment was associated with well-being and the subjective evaluation of life (Reupert et al., 2015). In line with past research, social and emotional support contributed to the participants' satisfaction with life (Bye et al., 2020; Holliman et al., 2021). However, the present data did not indicate a high need for social, emotional, or practical support. It is possible that being well-connected with family and friends enabled the participants to capitalize on emotional and financial assistance from a wide range of people, which seemed to promote life satisfaction (Maulana et al., (2018).

Contrary to past research (Burke et al., 2016; Caron et al., 2019; Yu et al., 2019), the students did not see the neighborhood as a source of support or connectivity. It is possible that, due to more engagements on campus, the students may be spending less time with neighbors or at local activities. It may also be due to the current diminished sense of neighborhood (Pinkster, 2016). It is interesting to note that community and larger societal factors played a role in students' well-being and life satisfaction but not psychological distress. Consistent with previous studies (Pena-López et al., 2017; Salehi et al., 2021), facilities, amenities, and the opportunity to participate in civic activities in the city contributed to the participants' well-being and subjective evaluation of their lives. However, they were not linked to psychological distress. While day-to-day facilities in the city are essential, they were not considered as the key factors contributing to mental health. These findings align with studies in which non-Western populations have prioritized family and social relations over and above materialistic gains and the infrastructure of society (Maulana et al., 2021).

Implications

The study has theoretical and practical implications. To the authors' knowledge, this study is the first to examine the relationship between a range of socio-ecological factors and the well-being, life satisfaction, and psychological distress of university students in Pakistan. Some intra-individual factors and the micro-, meso-, exo-, and macro-systems were associated with the participants' psycho-social and emotional well-being and personal evaluations of their lives. The outcome adds to the literature and helps us understand a student population living in a non-Western developing country. Some of the findings are consistent with international literature. The emphasis on social, interpersonal, and family aligns with the cross-cultural findings emerging from non-Western countries (Maulana et al., 2021). The outcome supports that well-being is a multidimensional concept and is salient for people globally (Maulana et al., 2018). At the practical level, the findings are useful for parents, university authorities, and counselors in Pakistan. Mental health professionals must foster emotional regulation and social and familial relationships in the student population to promote their health and well-being.

Limitations and Future Directions

The study is based on a sample of psychology students in one large city in Pakistan. As a result, the findings should be interpreted cautiously, as they may not represent all students across the country. Future studies should collect data from multiple cities and towns and should focus on recruiting students from a range of socio-economic groups enrolled in different courses and degrees. Considering not all students in Pakistan are proficient in the English language, future studies should use scales in Urdu, the national language, or other local languages. A qualitative study that explores the unique cultural factors that may be impacting the well-being of university students in Pakistan could supplement quantitative investigations. It is important to extend the study by examining the relationship of university-related factors, such as the support available at the university, the quality of the education, and the student's abilities and performance.

Conclusion

Considering the significance of well-being for personal and societal growth and development, the present study identifies factors contributing to the well-being of university students in Pakistan. It appears that within the socio-cultural context, the ability to regulate emotions, strong familial and interpersonal relations, social support and network, religious beliefs and practices, and local facilities appear to be associated with the well-being of university students.

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