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Psychological Distress and Life Satisfaction during COVID-19 Pandemic among Pakistani University Students: The Protective Role of Spiritual Intelligence

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ABSTRACT

The global mental health and psychological well-being of the general population were affected by the outbreak of COVID-19 and the subsequent worldwide lockdown. Numerous studies have sought to examine the factors, both protective and risk-related, associated with psychological distress and life satisfaction during the pandemic. The purpose of this study was to investigate the psychological distress and life satisfaction during the COVID-19 pandemic among Pakistani university students: the protective role of spiritual intelligence. The sample of 379 university students was collected from five public and private universities in Punjab Pakistan using convenient sampling. Three questionnaires were used to collect the data; Kessler Psychological Distress Scale, Spiritual Intelligence Self-Report Inventory, and Satisfaction with Life Scale. The SPSS (Version 23) was used to calculate the results. The results of Bivariate Correlation Analysis showed a significant positive relationship between spiritual intelligence and life satisfaction. While psychological distress was found a significant negative association with spiritual intelligence and life satisfaction. The results of Linear Regression Analysis confirmed that spiritual intelligence was a significant negative predictor of psychological distress and a significant positive predictor of life satisfaction among Pakistani university students during the COVID-19 pandemic. This research highlights the protective role of spiritual intelligence on psychological distress and life satisfaction during the COVID-19 pandemic; adding to the body of knowledge regarding factors that enhance positive mental health during emergencies and offering valuable insights for the development and implementation of effective public health policies and programs.

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1. Introduction

The coronavirus was not a newfound virus worldwide but rather an emerging microorganism related to severe acute respiratory syndrome (SARS), a type of coronavirus that was documented in southern China in 2002–2003. Which quickly spread to 29 countries in North and South America, Asia, and Europe, resulting in 8,098 cases and 774 deaths (Kahn & McIntosh, 2005). While, on December 31, 2019, China initially reported to the World Health Organization (2020a) about the occurrence of a form of pneumonia of unknown origin in Wuhan city, which was the capital city of Hubei State. The outbreak of this pandemic rapidly expanded from China to nearly 20 other nations. Consequently, the Director-General of the World Health Organization (WHO), an authority in such critical situations, declared a Public Health Emergency (PHE) on January 30, 2020. The WHO named this novel coronavirus outbreak COVID-19 and later classified it as a pandemic when it had spread to more than 110 other countries worldwide by that point (World Health Organization, 2020b).

The first case of the coronavirus in Pakistan was identified on February 25, and the first fatality was reported on March 29, 2020 (Nafees & Khan, 2020). The primary sources of the novel coronavirus in Pakistan were individuals returning from neighboring countries, such as Saudi Arabia (pilgrims), Iran (Zaireen), Malaysia (Tablighi), and Pakistani students returning from China. In March 2020, a Tablighi group of around 14,500 preachers in Malaysia had an impact on approximately 1,400 individuals, most of whom were from Pakistan (Arumugam, 2020).

Undoubtedly, the COVID-19 pandemic was an unprecedented occurrence, catching the world off guard and posing a significant global public health challenge. Stringent public health measures were swiftly implemented to curb the worldwide spread of the SARS-CoV-2 virus, leading to its declaration as a pandemic by the WHO on March 11, 2020 (World Health Organization, 2020c).

As the number of cases and fatalities continued to rise, authorities enforced measures such as social distancing and home confinement (Chavez et al., 2021). In addition to concerns about financial stability, individuals found their daily routines indefinitely disrupted, and they were suddenly cut off from the people and places that had been integral to their lives (Counted et al., 2022). These changes had a profound impact on people's mental well-being, particularly in terms of psychological and emotional distress (Flesia et al., 2023; Khurram et al., 2021) and overall life satisfaction (Rogowska et al., 2021).

National governments around the world compelled millions of individuals, including researchers, academics, corporate employees, and students, to prioritize their safety by either isolating themselves or instituting comprehensive or partial lockdowns on a global scale (Cooper et al., 2020). As a result of the prolonged lockdown measures, traditional access to physical classrooms were severely limited. Students at both the school and university levels were endured hardships due to the closure of educational institutions stemming from the COVID-19 outbreak (Hasan & Bao, 2020). The closures of educational institutions primarily impact children and young adults (Araújo et al., 2020).

As a response to these closures during this unprecedented period, online classes had gained significant popularity as an alternative. However, due to limitations in this learning approach, both students and educators encountered a range of challenges and difficulties, including psychological issues (Maatuk et al., 2022; Bao, 2020). In light of these challenges, it becomes pertinent to explore the resilience and protective factors related to individuals' mental well-being during the COVID-19

outbreak. In line with this objective, this paper aims to investigate the psychological distress and life satisfaction during COVID-19 pandemic among Pakistani university students: the protective role of spiritual intelligence.

Spiritual intelligence can be described as an awareness of the world and the place of humans within it, manifesting when individuals live their lives in a state of complete spirituality (Pant & Srivastava, 2019). Drigas and Mitsea (2020) provide a definition of spiritual intelligence as the capacity to exhibit intellectual and compassionate behaviors while maintaining inner and outer peace, regardless of external circumstances. It is a facet of spiritual well-being that aids individuals in adapting to their surroundings. Given that beliefs, cultural values, and spiritual commitments can be linked to positive outcomes such as physical and psychological well-being, life satisfaction, improved interpersonal relationships, and an enhanced quality of life (Anwar & Rana, 2023; Malhotra & Gupta, 2018; Rajabi et al., 2023), it is worth noting that spiritual intelligence is inversely associated with psychological distress (Ilyas & Arshad, 2017).

Psychological distress is characterized as a state of emotional anguish marked by symptoms of depression, such as feelings of sadness, hopelessness, and a loss of interest, as well as symptoms of anxiety, such as tension and restlessness. It often includes somatic symptoms like headaches and insomnia and arises as a result of exposure to a stressful event that poses a threat to one's physical or mental well-being (Horwitz, 2007; Ridner, 2004). In the context of COVID-19, psychological distress specifically pertains to behaviors, emotions, thoughts, and symptoms associated with stress arising from the COVID-19 pandemic (Costantini & Mazzotti, 2020). Previous studies have established an inverse relationship between psychological distress and life satisfaction among university students, both during and before the COVID-19 era (Kumar et al., 2016; Lathabhavan, 2022).

While, life satisfaction refers to the level of personal contentment derived from the fulfillment of individual needs and desires across various aspects of life (Diener et al., 1985). In recent times, the importance of life satisfaction among students, as a crucial factor in their physical and mental well-being, has garnered increasing attention from educational institutions and scholars globally (Xu & Choi, 2023). Recent research has indicated that young people's life satisfaction is positively associated with traits such as spiritual intelligence, hope, and narcissism (Adeeb et al., 2020; Santilli et al., 2017; Senmar et al., 2023), these attributes have the capacity to foster a positive outlook on life and contribute to increased satisfaction among individuals.

Previous research conducted among students has consistently demonstrated a direct link between one's spiritual attitude and their overall life satisfaction (Salmani et al., 2020). Findings from a study by Koohbanani et al. (2013) among students further supported this notion, indicating that individuals with higher levels of spiritual intelligence tend to experience greater life satisfaction. Additionally, Senmar et al. (2023) highlighted the positive impact of spiritual intelligence on the life satisfaction of university students. Moreover, it's worth noting that spiritual intelligence not only contributes to heightened life satisfaction but also serves as a protective factor against mental health issues, including psychological distress (Giannone & Kaplin, 2020; Khosravi & Nikmanesh, 2014). The above cited literature provides evidence that spiritual intelligence is an important protective factor against psychological distress and life among university students during COVID-19. So this research hypotheses that:

H₁: There would be a significant negative correlation between spiritual intelligence and psychological

distress during COVID-19 pandemic among university students.

H₂: There would be a significant positive correlation between spiritual intelligence and life satisfaction during COVID-19 pandemic among university students.

H₃: There would be spiritual intelligence is a significant predictor in psychological distress and life satisfaction during COVID-19 pandemic among university students.

2. Methodology

2.1 Research Design

A correlational research design was used in the current study.

2.2 Participants

In this study, the total sample (N= 379) of male and female university students were selected from three government (Government College University Faisalabad, University of Sargodha & Islamia University of Bahawalpur) and 2 private universities (Riphah International University Faisalabad Campus & National College of Business Administration and Economics Rahim Yar Khan Campus) of Punjab, Pakistan. Data of current research were gathered through convenient sampling, while data were collected from both male and female university students. Furthermore, students having any disability or physical and psychological illness were omitted from this investigation.

2.3 Instruments

Consent Form: Written consent was taken from all the participants using the informed consent sheet regarding their participation in the research.

Demographic Sheet: Self-constructed demographic sheet was obtained from respondents with demographic details, e.g. gender, age, education, home residence, family system, and socioeconomic status.

Kessler Psychological Distress Scale (K10): Kessler Psychological Distress Scale (K10) was used as a measurement tool to assess psychological distress of respondents (Kessler et al., 2003). The (K10) scale has 10 items about the emotional state that evaluates how the participants experienced anxiety and depressive symptoms (e.g., temperament, worthlessness, hopelessness, irritation, and sadness) over past four weeks. The response format of this scale ranged from 1 to 4. The reliability of this scale is (α 0.89 to 0.91). Scores at 10 items are then a total, minimal score of 10 and a maximal of 50. Minimum scores show minimum distress and high scores show higher levels of psychological distress. Ranges also indicate the range of psychological distress, those participants obtain score in range of, 10 to 19 consider no psychological distress (good), between 20 to 24 score indicates minimal psychological distress, 25 to 29 to range indicates moderate and in 30 to 50 shows severe level of psychological distress.

Satisfaction with Life Scale (SWLS): SWLS was used for the evaluation of life satisfaction in this research (Diener et al., 1985). This instrument has five items. It is existed at seven-point Likert type scale and asked to participants they were respond at the point to that they were agree or disagree with the each item of scale. The scale display good psychometric attribute (Pavot et al., 1991). The reliability level of scale was about to 0.75 (Diener et al., 1985)

Spiritual Intelligence Self-Report Inventory (SISRI-24): This inventory was formed by King (2008). This was exist on 24 items that chosen from 42 items original pool which develop to

measure the level of spiritual intelligence in adult population. It comprised on 24 statements and Likert scale method, ranging from 0 to 4, answered at 0 to show not at all true for me and respond at 4 indicate it's completely true for me. Item no 6 to must reversely score. Maximum mark on the scale indicates high spiritual intelligence. The sum of scores on the inventory is from 0-96. The score in range 0.91 perceived as split-half reliability and 0.89 score will be reported at test-retest reliability Scale may valid for several psychological measures and according to represent momentous construct, diverging and convergent credibility (King, 2008).

2.4 Procedure

At the outset, institutional permissions were obtained from the head of each department. The sample was directly approached by the researcher, and for this study, participants were selected from both public and private sector universities in Punjab, Pakistan, using the convenient sampling technique. After obtaining approval from the original authors of the instruments used in the current study, all the scales were provided to the participants. In addition, an informed consent form and a demographic sheet were supplied to the respondents along with the study questionnaires. Clear and explicit instructions were provided to all participants regarding the instruments and the response format. It was emphasized to all participants that their data would be used solely for research purposes, ensuring privacy and confidentiality. At the conclusion of data collection, participants were warmly greeted or thanked for their interest, cooperation, and the valuable time they dedicated to the study. Data collection took place over a span of two months, from April 2021 to June 2021.

2.5 Data Analysis

The collected data of this study were analyzed through SPSS (Version 23). To measure the percentage of demographic variables, frequency distribution was used. Furthermore for measurement of correlation, bivariate correlation analysis, and for prediction effect carried regression analysis were carried out in present research.

2.6 Ethical Considerations

The participants were debriefed about the objective, procedure and the reason of this study. This investigation was secured from the totality of the expected damages to someone individually, society, and participant of current research. Meanwhile, all the ethics suggested by American Psychological Association (APA) such as the inform consent, permission from author of instruments, departmental permission and confidentiality were followed. It was warranted to participants that provided information would be not broken and researcher maintain confidentiality. Rapport was developed and assured to participants that confidentiality of their information which will be utilized for only research purpose. Every participant approached personally and their information was not discussed with others.

3. Results

The table 4.1 depicted the frequency and percentage of demographic characteristic of the study sample. The average age mean of the participant ($M = 24.10$ and $SD = 3.92$). In gender, 179(47.2%) were male respondents and 200(52.8%) were females respondents. Data were collected with education levels, 186(49.1%) respondents were from BA/B.Sc/BS, 96(25.3%) respondents were responded M.A/M.Sc and 97(25.6%) responded, respond to MS/M.Phil level of education. According to residence, 218(57.5%) respondents, responded from urban area and 161(42.5%) respondents, answered at residence of rural. Furthermore, in the family system 207(54.6%) respondents were respond to nuclear and 172(45.4%) were belonged to joint family. In marital status, 73(19.3%)

respondents were married, 302(79.7) respondents were unmarried and 4(1.1) respondents were divorced. In monthly income,71 (18.7%) respondents were response that they had less than 20,000 monthly income,124(32.7%) respondents were response that has 21,000 to 50,000 monthly income,135(35.6%) respondents were response that had 51,000 to 1 lac monthly income and 49(12.9%) respondents were response that had more than 1 lac monthly income .

Table 1: Frequencies and Percentages of the Demographics Characteristic of the participants (N=379)

Respondent’s Characteristics		<i>f (%)</i>	<i>M(SD)</i>
Age			24.10 (3.92)
Gender	Male	179 (47.2)	
	Female	200 (52.8)	
Education	BA/B.Sc/BS	186 (49.1)	
	MA/M.Sc	96 (25.3)	
	MS/M.Phil	97(25.6)	
Residence	Urban	218 (57.5)	
	Rural	161 (42.5)	
Family System	Nuclear	207 (54.6)	
	Joint	172 (45.4)	
Marital Status	Married	73(19.3)	
	Single	302(79.7)	
	Divorced	4(1.1)	
Monthly Income	Less than 20,000	71(18.7)	
	21000 to 50,000	124(32.7)	
	51,000 to 1 Lac	135(35.6)	
	More than 1lac	49(12.9)	

The results of Table 2 reported the bivariate correlation, which revealed that spiritual intelligence was positively significantly correlated with life satisfaction ($r = .32, p < .01$), but spiritual intelligence was negatively significantly correlated with ($r = -.30, p < .01$). While, psychological distress was significantly negatively associated with life satisfaction ($r = -.46, p < .01$). The reliability analysis showed the reliability of the scales, Psychological Distress Scale, Spiritual Intelligence Self Report Inventory and Satisfaction with Life scales for this study found acceptable values of Cronbach alpha for internal consistency (.81 to .91). Cortina (1993) said that above 0.70 Cronbach’s alpha is acceptable for reliability. Although, the values at kurtosis (-.47 to 1.03) and skewness (-.51 to .39) of all scales were also showed in acceptable. West et al. (1995) proposed that, for a normal distribution, the Skewness value should fall within the range of -7 to 7, with values closer to zero being more indicative of normal distribution. In the present research, all questionnaire data exhibited Skewness values well within this specified range, suggesting a normal distribution. As for kurtosis, it is expected to be within the range of -3 to 3 for data to adhere to a normal distribution. Larger kurtosis values indicate positive kurtosis, while smaller values indicate negative kurtosis (Kline, 2015). In the current study, the kurtosis values remained within the acceptable range, with none exceeding the specified criteria, further supporting the notion that the data followed a normal distribution.

Table 2: Correlation among Psychological Distress Scale, Spiritual Intelligence Self Report Inventory and Satisfaction with Life Scale (N=379)

Variables	Psychological Distress	Spiritual Intelligence	Life satisfaction
Psychological Distress	-	-.30**	-.46**
Spiritual Intelligence		-	.32**
Life satisfaction			-
Mean	21.94	55.96	23.50
Standard Deviation	7.31	15.17	6.28
Cronbach Alpha	.87	.91	.81
Skewness	.39	-.51	-.48
Kurtosis	-.47	1.03	-.36

** $p < .01$

The Table 3 depicts that spiritual intelligence is significant negative predictor ($B = -0.15$, $\beta = -.31$ $p < 0.001$, $R^2 = 0.09$, $F = 35.65$) of psychological distress and contributes 09% variance in psychological distress. Its means spiritual intelligence has significant protective role against psychological distress in university students during COVID-19 epidemic. While, the results also show that the spiritual intelligence is significant positive predictor ($B = 0.14$, $\beta = .32$ $p < 0.001$, $R^2 = 0.10$, $F = 43.13$) of life satisfaction and contribute 10% variance in life satisfaction. Its mean that spiritual intelligence has significant contribution in increasing life satisfaction among university students during COVID-19 pandemic.

Table 3: Predicting role of Spiritual Intelligence in Psychological Distress among university students (N=379)

Predictors	Psychological Distress			Life Satisfaction		
	B	β	95% CI	B	β	95% CI
Constant	30.16**		[27.46, 32.85]	15.29**		[12.87, 17.71]
Spiritual Intelligence	-.15**	-.31	[-.19, -.10]	.14**	.32	[.10, .18]
R ²	.09			.10		
F	38.65**			43.13**		

** $p < .01$; β for regression coefficient; CI for Confidence interval

4. Discussion

The aim of this research to investigate the psychological distress and life satisfaction during COVID-19 pandemic among Pakistani university students: the protective role of spiritual intelligence. The results of this research for H₁ found that spiritual intelligence has significant negative association with psychological distress among university students during COVID-19 pandemic. Past studies also found similar findings and reported inverse relationship between spiritual intelligence and psychological distress (Giannone & Kaplin, 2020; Khosravi & Nikmanesh, 2014). A person with high spiritual intelligence makes inconveniences of psychological pressures and inevitable deprivations that occur in the life cycle, meaningful and consider them not as disasters but as challenges for the growth human (Zohar & Marshall, 2004). Spiritual intelligence has an impact on the physical and mental health of people and helps them to maintain their own stability; reduce their anxiety and communicate more deeply with others (Bayrami et al., 2014; Tyagi & Sharma, 2018). Praying and spiritual communication with God and being in spiritual life is one of the important factors in creating happiness (Tamannaefar, 2019). The results of present research supported from

previous studies, so this hypothesis (H_1) is accepted.

The results of this research found for H_2 that spiritual intelligence has significant positive correlation with life satisfaction. In previous study by Kousar (2019) showed that spiritual intelligence is positively correlated with life satisfaction. Other results proved positive relationship in both discussed variables, it is also accepted that increment in level of spiritual intelligence and life satisfaction take place with time of life (Ardelt & Jacobs, 2009). Spiritual intelligence often encompasses a profound sense of purpose and life's significance (Sahebalzamani et al., 2013). When students possess a strong sense of purpose, they are more likely to experience life satisfaction, as they perceive their actions and academic pursuits as contributing to a broader good (Huda et al., 2023). Likewise, spiritual intelligence can bolster an individual's capacity to navigate adversity and stress effectively. Given the challenges of university life, students with heightened spiritual intelligence may find themselves better equipped to confront these difficulties, which, in turn, can lead to an improved sense of well-being (Anwar & Rana, 2023). Furthermore, spiritual intelligence can foster a positive mindset, guiding students towards a focus on gratitude, compassion, and empathy. This optimistic perspective can elevate life satisfaction by nurturing feelings of contentment and overall well-being (Salarvand & Jamalouei, 2020). The results of present research supported from previous studies, so this hypothesis (H_2) is accepted.

The results of regression analysis of this study found for H_3 that spiritual intelligence has significant predicting role in psychological distress and life satisfaction of university students during COVID-19 pandemic. Past studies found that spiritual intelligence is leading determining factor on life satisfaction and spiritualism and also to predictor of any work, action and fitting because the spirituality may cause of change in adjustment or settlement and enable to individuals to fulfill their goals and resolve their problems (Jafari & Hesampour, 2017; Mull, 2004). Spiritual intelligence outlined as the power to charge a significant that communicate on sound evidence of existentialism, consciousness and knowledge to exercise in different levels like as power or ability to solution of problems (Alex & Ajawani, 2011; Elias et al., 2010).

Past research has consistently demonstrated that spiritual intelligence plays a protective role against psychological distress among university students (Khosravi & Nikmanesh, 2014; Salehi et al., 2023). Students with higher spiritual intelligence frequently employ effective coping strategies rooted in their spiritual beliefs and practices. These strategies encompass mindfulness meditation, prayer, or seeking guidance from spiritual leaders, all of which have been shown to alleviate stress and anxiety, thereby reducing psychological distress (Moafi et al., 2021; Roming & Howard, 2019). Previous studies have also highlighted the association between spiritual intelligence and increased resilience (Keshtegar & Jenaabadi, 2015), resilience defined as the ability to rebound from adversity. University students with higher spiritual intelligence may exhibit greater resilience, equipping them to better navigate the challenges inherent in academic life and thereby mitigating the negative impact on their mental well-being (Sood et al., 2012). Additionally, spiritual intelligence often encompasses emotional regulation skills (Barghandan & Khalatbari, 2017). Students who possess heightened emotional awareness and proficiency in managing their emotions tend to experience fewer emotional disturbances, ultimately resulting in reduced psychological distress. The results of present research supported from previous studies, so this hypothesis (H_2) is accepted.

5. Recommendations

The collected data for this research was obtained exclusively from four cities in Punjab, Pakistan: Faisalabad, Bahawalpur, Rahim Yar Khan, and Sargodha. Therefore, it is essential to acknowledge that the results of this research may not be representative of the entire Punjab, Pakistan. Consequently, we recommend that future researchers expand their data collection efforts to include other cities in Punjab, such as Chiniot, Liyyah, Multan, Jhang, Rajanpur, and Rawalpindi. This broader sampling approach will enhance the generalizability of the findings. Spiritual intelligence has been identified as a significant predictor of psychological distress and life satisfaction. We suggest that future researchers consider examining the protective role of spiritual intelligence on other outcome variables such as mental health, happiness, adjustment, and relationship satisfaction. Given the link between psychological distress and mental health, psychologists should be organized seminars, conferences, and webinars for university students to address these issues. Additionally, it is advisable to continue monitoring the mental health consequences throughout and after the ongoing epidemic. It is worth noting that individuals who adopt a healthy lifestyle, engage in spiritual or religious activities, and effectively manage negative emotions may experience reduced psychological distress. Our study's findings suggest that spiritual individuals tend to experience fewer psychological distress and mental health issues. Cognitive restructuring is also a valuable technique for individuals struggling with psychological distress, as it can help reduce depression, anxiety, and stress. Implementing such strategies can contribute to overall well-being and improved mental health.

Spiritual intelligence serves as a foundational element in shaping an individual's health-related behaviors, drawing upon their inner reservoir of qualities that encompass positive self-perception, heightened moral values, and personal transcendence (King & DeCicco, 2009). Consequently, spiritual intelligence holds significant importance among university students. This research indicates that a higher level of spiritual intelligence can positively influence healthy behaviors, leading to enhanced life satisfaction and reduced psychological distress. This suggests that individuals with elevated spiritual intelligence not only enhance their spiritual well-being but also exhibit healthier behaviors overall. As a result, the integration of spirituality programs into higher education curricula becomes a crucial consideration.

6. Conclusion

The present research investigates the psychological distress and life satisfaction during the COVID-19 pandemic among Pakistani university students: the protective role of spiritual intelligence. The results of the present study found a significant positive relationship between spiritual intelligence and life satisfaction among university students. While psychological distress was found significant negative association with spiritual intelligence and life satisfaction. Whereas spiritual intelligence was found significant protective factor for psychological distress and life satisfaction during the COVID-19 pandemic among Pakistani university students.

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