

How did the Covid-19 pandemic change religious practices and quality of life among Pakistani and Latvians?

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Abstract: Psychological distress and loneliness were stigmatized high during COVID-19. After the pandemic breakout, many people faced anxiety, depression, and fear of contracting the coronavirus. Moreover, the lockdown, closure of businesses, and restricted social gatherings further created psychological distress among people. This research examines the effects of COVID-19 on people's quality of life and religiosity level between Pakistanis (Muslim) and Latvians (Christian). The study investigates the effects of COVID-19 on quality-of-life measures including social belonging, social connectedness, loneliness, and personal beliefs. In addition, the study analyses how COVID-19 has affected people's religious beliefs and religious practices. Online customer survey forms were used to collect data from Pakistan and Latvia with a total sample size of 60. The Chi-Square test of independence and regression modeling was used to test the research hypothesis. The ANOVA test shows that religious beliefs are a significant predictor of religious practice, whereas COVID-19 did not change the religiosity of people surveyed in both countries. Results also prove that personal beliefs are also significant predictors of religious practice. Regression results indicate social belonging is the only significant predictor of personal beliefs, whereas social contentedness and loneliness have no association with personal beliefs. Finally, study results show a positive relationship between psychological distress and religiosity. However, no difference was found between males and females concerning psychological distress and religiosity. Religious education plays a significant role in coping with psychological distress.

Keywords: COVID-19; information source; religiosity; psychological distress; social connectedness
JEL Classification Codes: D4

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Introduction

After the breakout of the COVID-19 pandemic in early 2020, EU and Asian countries put a ban on people's movements and social gatherings which created panic, unrest, and psychological distress among people. In addition, the closure of businesses, lower income, and loss of loved ones further derived loneliness, psychological distress, deterioration in relationships, and reduced well-being. Lockdown and quarantine created anxiety and fear among people (Lima et al., 2020). The need for social belongingness and connectivity is the basic need of every human being. Lockdowns, social distancing measures, and loss of jobs and businesses during COVID-19 resulted in loneliness, and psychological stress. This research examines the effects of COVID-19 on people's quality of life including social belonging, connectedness, psychological distress, and religious beliefs between Pakistanis (An Islamic country in Asia) and Latvians (EU state following Christianity). Recent literature reveals that nearly half of the world population was involved in religious practice and prayed to end the coronavirus, especially Americans (Pew, 2020b); and Poles in Europe were also observed to take increasing part in religious activities (Boguszewski et al., 2020). The changes in religious practices caused by COVID-19 are real phenomena and need to be explored in a different cultural and religious context. The COVID-19 pandemic affected the quality of life in many ways such as increased anxiety, depression, distress, burnout, grief, and even suicide tendency in healthcare workers (Salvich, Roos & Zaki, 2022). The COVID-19 pandemic can be characterized as an era of socio-psychological problems and religious beliefs tend to play a mediating role between these variables. It is assumed that religion has positive effects on mental health and also helps cope with anxiety and stress caused by the COVID-19 pandemic. Moreover, the fear of contracting COVID-19 and the shortage of essential supplies in supermarkets escalated panic and mistrust among people. Most people tend to rely on their social capital and networking to get possible support they needed to survive in a difficult time. In this situation, COVID-19 has greatly influenced people's psychological well-being (Li et al, 2020; Xiao, et al, 2020) and also has played a positive role in strengthening the religious beliefs of the US citizen (Pew, 2021). In fact, COVID-19 has changed the religious landscape worldwide from the configuration of space to performing rituals at home as well as creating digital space for communication (Chen et al, 2022). Most religious services were suspended in person after the break of COVID-19 which resulted in virtual and online services on various social media platforms (Burke, 2020). In the 21st century, virtual networking and being part of an online community across the globe for millennials not only fulfill their sense of belongingness, and achievement but also serves social identity purpose.

Literature shows the positive relationship between remote worship and social support from neighbors during COVID-19 (Mosave et al., 2022); religious communities play a crucial role in health and well-being (Barrett, 2013); and quality of life (Ten Kate et al., 2017). While, on the other hand, religious beliefs also exhibited unreasonable behavior as vaccination hesitancy, feel reluctant towards vaccination (Garcia, L.L., & Yap 2021); avoiding the use of 5G networks, and stocking toilet paper as compared to people with low religiosity (Kranz et al., 2020). Jacobi et al. (2022) conducted a study to measure the changes in religiosity dimensions (i.e., the importance of religion, frequency of prayers, and sense of connectedness to the community) after the COVID-19 pandemic. The results showed lower religiosity which was associated with a lower score on overall flourishing which provides evidence for the existence of religious coping. It implies that religion can play a great role in seeking comfort, relief, and reduced anxiety that have positive consequences on people's behavior. Further, current literature shows religiosity association with coronavirus anxiety and preventive behavior (Kranz et al., 2020). In fact, religious coping has gained considerable attention from researchers in the past (e.g Belloc, Drago & Galbiata, 2016; Ager et al., 2014; Bentzen, 2019).

Thus, literature shows an increase in religious practices during COVID-19 (Bentzen, 2021), and also the growing importance of religiosity in relation to improving mental health (Lucchetti et al., 2021). Other

researchers have also highlighted the significance of religiosity in reducing peoples' suffering as well as minimizing social distancing during the pandemic (Hart, 2020; Hart & Koenig, 2020). The research on this topic also helps health professionals to address the religious and spiritual beliefs of patients and their families (Lucchetti et al., 2021). Literature also shows the significance of Muslims' religiosity during the COVID-19 pandemic with respect to many domains including innovation capability for firm survival (Utomo, 2020); psychology on stock market investments (Silalahi et al., 2020); the relationship between religious coping and health anxiety (Mahmood et al., 2021). The scientific literature reveals that there is a significant increase in the study of religion and health (Gall Hong et al. 2020; Mahmood et al., 2021). In addition, Zenker and Kock (2020) have called on researchers to examine the relationships between the COVID-19 pandemic and people's reactions. Therefore, given the context and growing importance of religion and health, research gap, this study examines the effects of the COVID-19 pandemic on social connectedness, social belonging, psychological distress, personal beliefs, and religious beliefs of Pakistani vs Latvians. Pakistan is an Islamic country with a majority of people following Islam and followers participate in organized rituals such as daily prayers, Friday prayer, fasting in Ramadan, etc. In contrast, Latvia is a small Baltic state in Europe, where a majority of people are Christians and they participate in Sunday masses as part of their religious activity.

2.0 Literature Review

2.1 Social belongingness and connectedness

Social belongingness is strongly linked with interpersonal connectedness and improves individual health (Salvich et al, 2022). Social psychology theory explains the phenomena of the need for social belonging and connectedness. Social belongingness deals with deep feelings of connectedness with others (Allen et al., 2021); captures the sense of emptiness or plentifulness (Le Penne, 2017), and is embedded into human nature according to Maslow's hierarchy of need theory. Social connectedness plays a critical role in developing social relationships and subjective well-being (Arslan, 2018); happiness and subjective well-being (Satici and Tekin 2016). Restricted interaction among people leads to isolation or a sense of loneliness. Social belongingness and connectivity with people involve empathy and a sense of understanding others. Perlis (2017) asserts that social belongingness creates a sense of worthiness, self-respect, indispensability, and autonomy in self-perception. Social belonging is essential for living a happy life and it reduces psychological distress. People without social connectedness have less confidence and unpleasant experience. People try to overcome their lack of social belongingness by reappraising relationships. It implies that people are creating their own world by engaging with certain interest groups and people. Community engagement helps individuals to achieve other ends in society. Previous literature also reveals that the need for social belonging improves ongoing relationships, and psychological as well as physical well-being (Holt-Lunstad, Smith, & Layton, 2010). Social connectedness or belongingness from the perspective of psychology is considered a cognitive structure that represents regularities in interpersonal relationships. However, some scholars argue that a high need for social connection creates problems as a result of unmet social needs (Verhagen et al., 2017). Similarly, Leary et al., (2013) comprehend that a high need for belonging can be associated with problems such as high loneliness, low self-esteem, fear of being rejected, high loneliness, and neuroticism. They further; comprehend that scores on the Need to Belong Scale are unrelated to measures of perceived social support. Social belonging plays an important role in coping and the availability of social support that fosters social growth and relationships (Layous & Nelson-Coffey, 2021). Social belonging is a meaningful interaction between people to foster relationships through a range of social activities. Self-esteem is an internal state of an individual that determines the current and potential level of social acceptance (Leary & Baumeister, 2000). It implies that self-esteem increases or decreases with the level of social acceptance or rejection. In general, people tend to defend their self-esteem by avoiding social rejection and social exclusion.

2.2 Loneliness

Loneliness is an emotional response to social isolation and can be defined in terms of the discrepancy between the desired and actual state of social relationships (Xia and Li, 2017). Previous scholars view this phenomenon in terms of connections, relationship quality, and network and interaction quality (Holt-Lunstad and Smith, 2016). Bavel et al., (2020) define loneliness as a subjective lack of social connections, while social isolation as objective lack of social connections. The need for belongingness depends on individual traits such as a desire for social bonding. However, every human needs a relationship which offers values, and trust and promotes collaboration (Cacioppo et al., 2016). Social distancing measures during COVID-19 conceivably resulted in social isolation which sparked the feeling of loneliness (Bavel et al., 2020). Loneliness captures both social and emotional perspectives and is treated as subjective-negative feelings aroused in response to perceived deficiency of social networking (Valtorta and Hanratty, 2012). In other words, it is a feeling of loss in relationships and interactions. In contrast, other scholars argue that loneliness can even exist in the presence of family members or friends and the opposite is even being alone (Cacioppo et al., 2015; Holt-Lunstad and Smith, 2016). Moreover, older people have reduced social interaction leading to a higher level of loneliness. Lonely people try to spend much time in engaging interpersonal interaction but somehow fail to engage in quality interactions which results in dissatisfaction because of high expectations (Russell et al., 2012). Apart from this, many socio-demographic factors have played a role in the high prevalence of loneliness such as deferred marriages, increased two-income households, and increase single-family homes (Masi et al., 2011). A recent study during the coronavirus reveals that a companion robot can play a positive role in mitigating the feeling of loneliness through supportive relationships (Odekerken-Schröder et al., 2020). Perceived social isolation has a strong link with the physical health of human beings (Holt-Lunstad et al., 2010; Steptoe and Kivimaki, 2013; and Piko et al., 2016); including depression, dementia, and low resistance to infectious disease (Landeiro et al., 2016); decreased health status and quality of life (Dickens et al., 2011); mortality rate (Steptoe et al., 2013) and subjective well-being (Cacioppo and Patrick, 2008; Courtet et al. (2020). Recent literature is quite evident that social distancing measure during the COVID-19 pandemic significantly influences the well-being of people (Henkel et al., 2020). Social support is considered one of the key elements of well-being and it reduces uncertainty; and improves self-esteem and a sense of connectedness (Schwarzer and Knoll, 2007). In the modern day, social support can be obtained from online communities (Van Oerle et al., 2016); robots in frontline interactions (Wirtz et al., 2018), and customer-service operations (Xiao et al., 2019).

2.3 Social Acceptance

Entry restriction and bane on free movement cross boarder during coronavirus influenced people sense of inclusion and social acceptances. Current literature on coronavirus indicated that people faced travel restriction, entry screening, quarantine and self-isolation measures (Anzai et al., 2020). Social acceptance is the signal from others people to accept you in their group or not (Leary, 2010); and refers to individual's sense of inclusion, being valued, and welcomed by others (Duru, 2015). The concept is also conceptualized as key dimension of social belongingness (Malone et al. 2012). Need for belonging demands human to develop and maintain close relationships with others. This highlights the importance and value of a person in the society. People with high social acceptance perceive valuable and important member of the society. Whereas, low connectedness results in failure to develop adequate interpersonal relationship that in turn affects individual security in life. Social acceptance is much dependent on social competence which refers to quality and effectiveness of social skills (Gómez-Ortiz et al., 2019) that involves cognitive and emotional abilities of individual to build effective interpersonal relationships with others. Developing social skills and improving interaction quality can increase the capability of person to develop interpersonal relationships which is the foundation of social acceptance.

Previous literature shows the positive relationship between social acceptance and psychological maltreatment; and social acceptance is considered a significant predictor of subjective well-being (Arslan, 2017). Well-being much rely on social relationships such as social acceptance and social connectedness. Previous literature reveals that people with low connectedness demonstrate dysfunctional interpersonal behavior in order to avoid further rejection which in turn leads to psychological distress (Lee & Robbins, 1995). In contrast, social rejection increases negative emotions like anxiety, anger, sadness and depression (Leary, 2010); and also diminishes self-esteem (Williams et al., 2000). Social rejection is also perceived in the form of social threat which increase the stress level (Dickerson & Kemeny, 2004). Social acceptance of various social measures and policies implemented by governments during coronavirus also remains important issue such as acceptance of entry restrictions (Jones and Nguyen 2021); social acceptance of nurses (Zamanzadeh et al., 2022); public acceptance of coronavirus vaccine (Lindholt et al., 2021). It is quite evident from the literature that people use religion to cope with social rejection (Aydin, Fischer, & Frey, 2010). Thus, based on the literature, this study investigate how religiosity has help people to cope with social isolation and rejection.

2.4 Psychological Distress

Psychological distress is a condition that negatively affects human health but it is not caused by external factors but rather by internal motives such as the inability to meet impossible goals in life (Nesse, 2000). Thus, depression is not linked to external situations but is more closely explained by the mismatch between the person's inner goals or motivations and external circumstances. Social connectedness manifests the cognitive structure or behavior of a person that seeks social identity and there is a strong relationship between depression and social identification (Postmes et al., 2018). Depression causes mental distress and leads to social withdrawal and social isolation (Kupferberg, Bicks, & Hasler, 2016). It implies low social connectedness leads to psychological distress. Psychologically distress in individuals is associated with unfriendly, lacking warmth, and insecurity (Iwaniec, 2006). Covid-19 also affected people in terms of their trust in public institutions such as justice, politics, religion, and government. Distrustfulness is one of the key dimensions of narcissistic behavior (Hyatt et al, 2017). Grandiose narcissism refers to an inflated self-image, while vulnerable narcissism refers to feeling helpless (Gore and Widiger (2016). The literature clearly differentiates between social connectedness and social belongingness. Social connectedness refers to the interconnection and interdependence of people on each other for mutual gains. While social belongingness refers to identity, membership, and affiliation to a particular group. Thus, previous literature shows that social relationships such as social connectedness and social belonging invoke positive emotions

in individuals including contentment, calmness, and happiness, while, low social connectedness creates anxiety, depression, grief, loneliness, and being ignored or rejected (e.g Osterman, 2000; Malone et al. 2012; Yildiz & Duy 2014). People with low connectedness face difficulty in maintaining relationships and thus avoid social interaction because of fear of rejection or exclusion.

2.5 Religious belief and religiosity

World Health Organization (WHO) issued a report which conclude that religious organizations can play important role in saving lives and reducing illness during the COVID-19 pandemic (2020). People use religion to cope with adversity, seek relief and comfort (Norenzayan A, Hansen, 2006); the aftermath of natural disasters (Belloc et al., (2016). Religious coping strategies help in dealing with stressful situations, especially for women during fertility (Aflakseir and Mahdiyar, 2016). Literature suggests that religious coping is more effective than those without religious coping. Jacobi et al., (2022) measured the change in religiosity during Convid-19 on four dimensions including the importance of religion, frequency of prayers, frequency of religious attendance, and sense of community connectedness. The results reveal that self-reported decreases in each dimension of religiosity were associated with lower overall flourishing. Literature reveals that Google search for coronavirus prayers increased after March 2020(Bentzen, 2021). For example, in Pakistan, a call for prayers at midnight was used to cope with pandemic adversity and reinforce a closer relationship with God or Allah. Previous literature shows a positive relationship between religiosity and better mental health conditions (Li et al., 2016), and better social relationships (Wilcox and Wolfinger, 2016).

Further, studies show that prayers and meditation a have positive association with greater self-esteem (You et al.,2019). Religious belief plays an important role in achieving personal goals in life and people hold certain beliefs in life derived from religious framework. Cicirelli (2011) argues that non-religious people are more directional and goal-oriented than religious people. It implies that people demonstrate certain meanings in life derived from religious beliefs and frameworks and it can uniquely affect life goals and satisfaction. People drive perceived meaning and purpose from religious beliefs and link them with their life goals. Underwood et al. (2009) identified two main religious beliefs which influence people's motivations and goals in life deference to God's will and belief in an afterlife. Under the notion of deference to God's will, the maximum life span of an individual or life extension can't be changed. Allport and Ross (1967) define Religiosity as how people subjectively use or experience religion and identify its two types: intrinsic and extrinsic religiosity. Intrinsic religiosity is used to express a certain way of life and it does not satisfy a secondary purpose. In contrast, extrinsic religiosity is used for personal and social gains such as comfort and social support. Intrinsic religiosity is considered a high level as it decreases death anxiety and is positively associated with belief in the hereafter (Cohen et al. 2005). Sahgal & Connaughton (2021) indicated that more American than other people in economically developed countries has prayed to end the coronavirus (Pew, 2021). However, survey results indicate that majority of people do not feel that their religious faith has been strengthened or changed by the COVID-19 pandemic.

3.0 Methodology

The data was collected online from both Pakistani and Latvian people during the first wave of Covid-19 from May to July 2020. Participants participated voluntarily without incentives and provided information on scale items relating to social belongingness, social connectedness, psychological distress, personal values, and religiosity. The total sample size was 60, which is relatively a small sample size under the given circumstances of lockdown, isolation, quarantine, and other social distancing measures. In this scenario, the author had limited resources and no choice in gathering more data (Lakens, 2022) which comes with limitations. However, there is no minimum sample size required for the t-test to hold valid and the data collected in this case met the assumption of approximately normal i.e., two samples were independent of each other. The overall sample is above 40 and justifies the estimate of the variance. Off the total sample,

63 % (n=38) participants from Pakistan and 36.7 % (n=22) from Latvia. Female representation from Latvia and Pakistan was 8 and 11, while, male representation was 14 and 27 respectively. The participants were aged 24-30(50%); 31-39(30%) and 40-49(8.3%). Participants from both countries were selected based on convenience during the peak of the COVID-19 pandemic. Additionally, both countries are culturally distant, which provides the base for comparison. In fact, both countries were least affected by the pandemic in terms of mortality and social restrictions. The Chi-square test of independence and a linear regression model was used for data analysis.

3.1 Measures

Social belongingness and *connectedness* scale items were adopted from previous studies (Lee & Robbins (1995; Malon, Pillow & Osman 2011). For example, “I feel close bonds with family and friends”, and “I feel like an outsider/rejected”. *Psychological Distress* scale items were adopted from Kessler Psychological Distress Scale (K10) as: *how anxious or nervous are you feeling in the last 2 weeks?* The Kessler-10 scale measures non-specific psychological distress but is also used to measure anxiety and depression (Brooks, Beard & Steel, 2006). The scale was developed for specific use in the US National Health Interview Survey. Therefore, a number of studies in the past have used a brief version, the K6 with good reliability and validity for special conditions (Arnaud, et al., 2010; Rush, et al., 2013). As the scale asks questions about the level of nervousness, agitation, psychological fatigue, and depression. This study adopted only four items to cover all three dimensions but did not include any items from psychological fatigue. These four items were believed to be more appropriate to measure the overall psychological distress among Pakistani and Latvian during the coronavirus. *Personal beliefs* are interconnected with the subjective well-being of an individual and the item adopted includes: personal belief has meaning and purpose in life and has the inner strength to deal with difficulties in life (Howden, 1992; Dali et al., 2019). *Religiosity scale* items were adopted from Pearce, Hayward & Pearlman (2017). For example, belief in the afterlife and more attendance. Other items were adopted from Josef and Diduca (2007) such as...think more about God. And “I try to find out a lot about my religion” was adopted from Crocetti et al., (2008). Religious practice items such as prayers, fasting, or meditation from Dali et al., (2019). Similarly, religious belief scale items are also based on the work of Dali et al, (2019) who develop a religiosity scale for Muslims.

4.0 Results and Analysis

Descriptive statistics results show that 80% of the people indicated that they will get financial support from relatives or friends if get into trouble, while 8.3 percent indicated that they don't have anyone who can be approached when getting into trouble. However, 7 percent of respondents were not sure if they can get help in difficult times. People's expectation of financial support from friends or family members was a moderate level with arithmetic mean score $m=3.45$, $Std=1.48$ using a Likert point scale of 1-5. Similarly, 85% of people indicated that they have someone to whom they can discuss their personal problems, while 15% reported against it. About 75% of the respondents who participated in the survey indicated that they believe in a higher power (God or Allah) and the remaining 25% did not believe in a higher power.

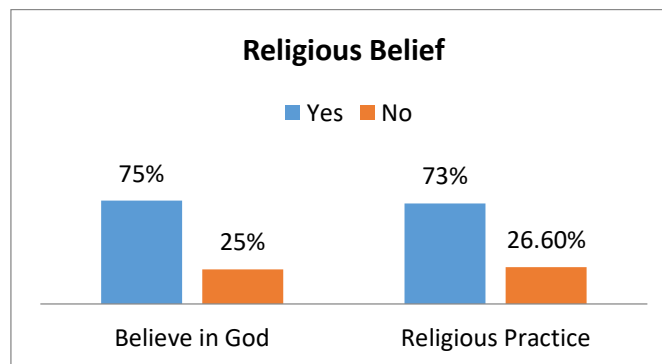


Table 1.0

Key Descriptive Statistics for Questionnaire Items

Social Belongingness	Mean	Std. Deviation
<i>1. I get along with people I come into contact with</i>	3.05	1.126
<i>2. I consider myself close to people I regularly interact with</i>	2.92	1.381
<i>3. People in my life care about me.</i>	3.35	1.300
Social Connectedness		
<i>1. I experience a general sense of emptiness</i>	2.63	1.089
<i>2. There is plenty of people I can rely upon when I have a problem</i>	2.98	1.269
<i>3. There are enough people I feel close to</i>	3.12	1.043
<i>4. I miss having people around</i>	2.93	1.177
<i>5. I often feel rejected</i>	2.32	.911
Psychological Distress		
<i>1. Overall, how happy have you been feeling for the last 2 weeks</i>	5.83	2.451
<i>2. Overall, how anxious/nervous are you feeling for the last 2 weeks?</i>	5.43	2.708
<i>3. How much do you worry that you will contract COVID-19?</i>	2.68	.854
<i>4. Do you feel positive about the future?</i>	3.65	.971
Social Isolation		
<i>1. How often in the previous 2 weeks, you have spent time together with your family?</i>	3.10	1.145
<i>2. How often have you met with your friends or relatives face to face in the last 2 weeks?</i>	1.73	.899
Personal Beliefs		
<i>1. Do you consider personal beliefs meaningful to your life?</i>	3.40	1.028
<i>2. To what extent does your personal belief gives you the strength to face difficulties?</i>	3.58	1.078
<i>3. To what extent do your personal beliefs help you understand difficulties in life?</i>	3.63	.901
Religiosity: Religious activities being performed more after COVID-19		
<i>1. More awareness and knowledge about religious beliefs</i>	2.95	1.346
<i>2. Experienced emotional feeling and realized ultimate reality</i>	3.02	1.372
<i>3. Think more about the existence of divine power(God or Allah)</i>	3.37	1.507
<i>4. Think more about life hereafter or resurrection etc</i>	3.07	1.528
<i>5. More religious rituals and practices</i>	2.88	1.345
Trust on Institutions		
<i>1. Trust... Local government</i>	3.87	.747
<i>2. Trust... Central government</i>	3.98	.725
<i>3. Trust... Private Business</i>	3.87	.791
<i>4. Trust... Legal system</i>	3.70	.766
<i>5. Trust... Religious institutions</i>		

In addition, results reveal that if someone lost a wallet or purse (\$200 equivalent money), his/her chances to get it back are not so high as the arithmetic means score stands $m=3.25, \text{std}=1.297$.

The Chi-Square Test

For testing the research hypothesis, the Chi-Square test of independence was used to measure relationships between two categorical variables and was also considered as a correlation coefficient to test associations

between variables. The Chi-square produces the expected count and observes the count, in the expected count, we expect to observe if there was no association between two categorical variables i.e. gender and religion. Expect counts are different from observed counts and Chi-square helps us determine if those observed counts are different enough for the test to be significant and not the case of random chance. In Table 1.1, the Chi-Square test of independence for “Believe in a higher power” shows a significant association between variables with $(1, N=60) = 4.68, p=.030, \phi= .28$. The value of the Phi coefficient was $.28(<.50)$ which shows small effect size. Thus, we can reject the null hypothesis that there is no association between religion and religiosity level and accept the alternate hypothesis that there is an association between these two variables. It can be concluded that religiosity level depends on religious faith. In this case, Pakistani Muslims were found more religious than Latvian people.

Table 1.1

Frequencies and Chi-Square Results Between Pakistani Muslims and Latvian Christians for Religious Belief in a Higher Power (God) (N=60)

Sources	Practicing payers & meditation		Without prayers & meditation		$\chi^2(1)$
	n	%	n	%	
<i>Latvian-EU Christians</i>	13	21.6	9	15	4.689
<i>Pakistani’s Muslims</i>	32	53.33	6	10	

Results indicate that Pakistani Muslims were found to be more involved in religious practices such as offering prayers and meditation than Latvian-European Christians. Further, Linear regression analysis was also carried out to check the relationship between metric scales such as religious belief and religiosity level. The model summary shows R- Square .199 which means the variability in a dependent variable- religiosity is only 19% percent explained by religious belief. R-square is not so high but it’s meaningful and explains the variability in religiosity is almost 20% explained by individual religious beliefs. ANOVA test shows the independent variable significantly predicted the dependent variable, $F(1, 58) = 14.36, p < .001$, which indicates religious beliefs have a significant impact on individual religiosity levels such as prayers, recitation, and meditation. It is also supported by t-tests which also prove that there is no significant difference in religiosity level between groups Pakistani ($M=3.21, SD=1.26$) and Latvians ($M=2.79, SD=1.24$) conditions; $t(58) = 1.24, p = .219$. Thus, we can claim that

H1: There is a significant impact of religious belief on religiosity level.

In addition, the analysis of the unstandardized coefficient shows the positive impact of religious beliefs on the religiosity level of individuals ($B=1.058, t=3.791, p=.000$). Therefore, it can be concluded that religious practices such as prayers, meditations, and participation in ritual depend on religious beliefs an individual holds. Further, descriptive statistics in Table 1.2 also show that Pakistani’ Muslims reported high religious practice than Latvian Christians before the break-up of the Covid-19 pandemic.

Table 1.2

Frequencies for Religious Practices Between Pakistani Muslims and European Christians Before the Break Out of Covid-19

Source	Never	Occasionally	Often	Regularly	Very Regularly
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Europeans Christian	5	4	6	4	3
Pakistan Muslim	0	7	8	14	9

Further, respondents were asked, “Did your spiritual practices (praying & recitations) change since the COVID-19 state of emergency was declared?” The Chi-Square test of independence shows a non-significant association between variables with $\chi^2(1, N=60) = 4.68, p=.051, \phi = .3794$. As the p-value is just above the threshold level ($p=.051$) and it should be less than $p<.05$. It means the association is statistically not significant and we accept the null hypothesis that there is no relationship or no difference in religious practices before and after the COVID-19 pandemic. The Phi coefficient was $.251(<.50)$ which shows a small effect size. Thus, people’s spiritual practices did not change much after COVID-19 and it can be concluded that COVID-19 did not have a significant impact on the religious practice of Pakistanis as well as Latvians.

H2: COVID-19 did not have a significant impact on religious practices.

Regression Analysis

Further, a regression test was performed to analyze the impact of personal beliefs on religiosity level and ANOVA results show R^2 15% which means the change in religiosity is almost 15% explained by individual personal belief in life. The overall regression model was significant as $F(1, 58) = 10.2, P<.001$. Thus, it can claim that individual personal belief has a positive impact on their religiosity level. Unstandardized coefficient values indicate $B=.536, t=3.196, p=.002$ which means one unit increase in personal values will increase 0.53 in religious beliefs on a scale of 100. However, the effect size is small but shows statistically significant relationships between these two variables.

H3: There is a positive relationship between personal beliefs on religiosity.

Multiple linear regressions were performed to analyze the impact of social distancing, social connectedness, and social belongingness on personal beliefs. The overall model was significant and was $.534$ which indicates 53% of the variability in the model as $F(3, 56) = 21.38, P<.001$. Further beta co-efficient reveals that social belongingness is only the significant predictor in the model and has a significant impact on DV- Personal beliefs. Whereas, social connectedness and social distancing have a non-significant impact on DV.

Personal Beliefs = $\beta_0 + \beta_1$ Social Distancing + β_2 Social Connectedness + β_3 Social Belongingness+ E

Personal Beliefs = 1.634 -.174 .260 .514
 (.000) (.169) (.079) (.000)

Thus, results suggest that social belongingness has a significant impact on individual personal beliefs in life. Social belongingness refers to being cared about by others, feeling close, and getting along with people to whom one regularly interacts. While social connections manifest an individual’s social circle/friends available for help in a difficult time. Personal beliefs mean how likely personal beliefs help an individual to achieve goals in his/her life and face challenges. Hence, findings suggest that social belongingness has a positive impact on personal beliefs in one’s life. Thus, it can be claimed that social belongingness has a positive relationship with personal beliefs, while social connectedness has no impact on personal beliefs.

H4: Social belongingness has a positive relationship with personal beliefs

Further, a regression model was run to analyze the impact of social belongingness and psychological distress on religiosity level. ANOVA results show $R^2 = .125(12\%)$ and the model is overall statistically

significant as $F(2, 57) = 4.07, P < .05$. Unstandardized coefficient indicates that psychological distress is the only significant predictor of religiosity in this model with beta value .516 which means one unit increase in psychological distress will lead to .516 unit increase in religiosity on scale 100. While social belongingness has a non-significant impact on religiosity and we accept the null hypothesis. Thus, we can prove the following hypothesis

H5: Psychological distress has a positive relationship with religiosity.

H6: Social belonging is a non-significant predictor of religiosity.

Nominal by Interval analysis

Further, nominal by interval tests were conducted to analyze the relationship between nominal variables (e.g gender and country) and continuous variables i.e. psychological distress, social belongingness, etc using eta, a measure of associations. In the directional measures table, gender or country is considered as the independent variable, and psychological distress or possible support in crisis as the dependent variable. Eta-square is used to explain the proportion of variance in the continuous variable and eta range from zero and one. Zero means no association and 1 means perfect or strong association. The Eta statistic for psychological distress is .104 and we square his value to get the coefficient of determination which is 0.322. The effect size is greater than zero but it's not powerful to establish the association between gender and psychological distress during Covid-19. Thus, it can be summarized that there is no difference between males and females in relation to coping with psychological distress during COVID-19. Thus, we accept the null hypothesis as

H7: There is no difference between males and females in relation to coping with psychological distress during COVID-19.

Similarly, there is no association between gender and religiosity as the Eta value is .065 and its square root is 0.25. The value is close to zero which means there is a weak association between the variables.

H8: There is no association between gender and religiosity during the COVID-19 pandemic.

However, empirical results show that there are moderate associations between country and social belongingness with eta .352 and square root 0.593. Thus, it can be concluded that the social belongingness of a person varies from country to country where he/she lives. The norms, values, religion, and culture tend to play a role in the social belongingness of a person.

H9: Religion/country is a significant predictor of social belonging

Furthermore, the association between country and possible support/help in crisis during covid-19 was recorded as low with eta .062, square root 0.246. However, the association between country and someone to discussing problems has moderate associations with eta .223 and square root 0.472. Further results reveal that there is no difference between Pakistani and Latvian in relation to trust in the institution as 0.18 square roots of eta. Finally, the Chi-square test of association shows a significant association between country and social distancing with asymp.sig .033 which means $p < .005$ and eta 0.240, square root 0.489 suggest moderate relationships between these two variables. Trust in local & central government was recorded as high among Latvian, while low in private business as compared to Pakistani. In addition, trust in the legal system and religious institutions were high among Pakistani compared to Latvians. Pakistani's trust in religious institutions was the highest, while low in the legal system. Similarly, Latvian trust in the central government was highest and low in the legal system as shown in Table 1.3

Table 1.3

Trust in Institutions by Pakistani and Latvian

Items/statements	Pakistan		Latvia	
	Mean	Std. Dev.	Mean	Std. Dev
<i>Trust in local government</i>	3.82	.834	3.95	.575
<i>Trust in central government</i>	3.95	.769	4.05	.653
<i>Trust in private business</i>	3.89	.798	3.82	.795
<i>Trust in the legal system</i>	3.76	.786	3.59	.734
<i>Trust in Religious institutions</i>	4.05	.899	3.86	.834

Further, respondents were asked to indicate the like hood of getting back their lost wallet worth \$200 and the chance of getting it back was low among Pakistani (M=3.08, std. dev=1.238) than Latvian (M=3.55, std. dev=1.299).

Discussions

Current studies show an increase in global religiosity and a positive impact of COVID -19 on religiosity levels, especially among Americans (Pew, 2021); also Google search for religious prayers has increased during covid-19 pandemic (Bentzen, 2021). However, this study's results reveal that COVID-19 did not change the religious practices of Pakistani Muslims as well as Latvians (Christians). Religious practices such as prayers, recitations, and meditation remained the same before and after the break of COVID-19. In fact, the religiosity level of Pakistani Muslims before the break out of COVID-19 was relatively higher than Latvians. The main reason for little or no change in the religiosity level of Pakistani Muslims may be due to the fact that they already had higher religiosity such as offering prayers, recitation of holy Qurān, and fasting during Ramadan. The holy month of Ramadan was observed immediately after the start of the lockdown in 2020. Secondly, Pakistan is located in a volatile region hit by server earthquakes and floods such as the massive earthquake of 2005 and flooding in 2010 and 2022 leaving thousands of people dead and millions displaced. Thus, Pakistani people are used to dealing with natural disasters and pandemics. Thirdly, the lockdown greatly affected the collective and organized religious attendance of Muslims resulting in lower religious practices. Limited access to a place of worship diverted people to look for online platforms in advanced countries. However, this is not the case for Muslims to offer online religious services.

Religious beliefs have also played a role in getting vaccinated and resulted in vaccination hesitation in Pakistan. Pakistan saw a low number of COVID-19-related infections and death as compared to neighboring countries including Iran and India and the same is the case with Latvia. Therefore, the population's religiosity level was least affected by COVID-19. Religiosity is viewed as external, whereas religious belief is treated as an internal factor. People choose religion and participate in religious services to complement their social identity as well as an emotional experience. Next, study results show that not only religious beliefs but also personal beliefs have a positive impact on religiosity. Personal beliefs give strength and meaning to life and also help to deal with difficult situations same as religious practices. Personal beliefs guide ethics and moral values which are also part of religious beliefs. However, religious beliefs are not arbitrary and personal convenience of a person. Thus, both variables are interconnected and positively influence religious services. Further, participation in religious activities creates an individual sense of belonging and gives personal meaning to life. Social identity theory (Tajfel, 1978) presents that self-concept is based on individual belongingness and affiliation to a group or community. Group membership provides identity and increases the sense of belonging. In this study, social belongingness was found significant predictor of personal beliefs. Social belonging has also a strong positive relationship with country/religion. Thus, it can be argued that religion and country influence the social belongingness or group affiliation of a

person which in turn results in personal beliefs. Social belonging complements individual social identity needs and also helps to define who they are including personal interests and values. Thus, based on empirical results as well as literature, it can be concluded that social belonging or group memberships influence personal beliefs. Previous literature shows contradictory results on relationships between religiosity and psychological distress. Association between psychological distress and religious practice is influenced by culture, gender, and religious affiliation (Jarvis et al, 2005). They further assert that participation in religious activities is negatively associated with psychological stress for females and religious practice at home has no link with psychological distress. Raza, H et al, (2016) prove religiosity significant predictor of well-being, while non-significant predictor of psychological distress. However, recent literature establishes a positive relationship between religiosity and psychological distress (Jokela, 2022). This study also shows a significant impact of religiosity on psychological distress which is consistent with previous literature. Further, research findings show no difference between males and females in relation to religiosity and psychological distress. It implies that religious practices such as prayers and meditation reduce psychological distress, and anxiety and provides comfort and relief during a crisis. People going through psychological distress can reduce their suffering by engaging in religious practices.

Conclusion

Covid-19 did not have a significant impact on the religiosity level of Pakistanis as well as Latvians. Both nations were least affected by the pandemic and comparatively saw softer lockdown. Personal beliefs and religious beliefs are interconnected and influence attitudes toward COVID-19. Religious education can help to improve the mental health of people and reduce psychological distress. Pakistani's people trust in religious institutions was high which further suggests the significant role of religious services in coping with psychological stress.

Practical implications

This research has important implications for both health and religious workers to address the psychological problems of people such as distress, anxiety, isolation, and loneliness. Health workers can effectively address the religious and spiritual needs of patients as well as their family members. Religious beliefs and religiosity can play a significant role in coping with psychological distress and mental health issues.

Limitations

The sample size was not so big as the researcher has limited options to collect the data when the coronavirus was at its peak in early 2020. The participants from Pakistan had higher representation than Latvians; however, Levene's test of homogeneity reveals that variance is equal across the groups and suitable for group analysis. The Research findings may not apply to other Muslim or Christian countries which were highly affected by the COVID-19 pandemic as well as with a different religiosity level. As Pakistan and Latvia were least affected by the coronavirus in terms of death and social restrictions.

Future Directions

This study calls the researchers to examine the religious beliefs, religiosity, and psychological distress of people who were affected by the severe flooding of 2022 in Pakistan. This study could be replicated in countries where religion plays less role in people's lives and also in countries where the lockdown situation is long and serious policies are in place to make sure people do not interact with each other. Further, the severe flooding in Pakistan has shaken the world community to take concrete action on environmental protection. In this context, there is a gap to explore the relationships between religiosity and sustainable consumption behavior in Pakistan.

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