

Paranormal Beliefs Mediate External Locus of Control and Religiosity

Iqra Safdar,

Department of Psychology, University of Sargodha

Sadia Niazi

Department of Psychology, University of Sargodha

Dr. Adnan Adil, PhD

Department of Psychology, University of Sargodha

The present research aimed at examining the mediating role of paranormal beliefs between external locus of control and religiosity. Associations in urban men and women and rural men and women were also sought. A sample of 153 adult men and 156 adult women from urban and rural areas of Sargodha District through a convenient sample was collected. Paranormal Beliefs Scale (Tobayck, 2004) revised in Urdu (PBS-R) by Tahir and Ghayas ¹(2014); Multidimensional Locus of Control Scale (Levenson, 1981) translated in Urdu (2019); and Religiosity Practice and Beliefs Scale (Amjad, 2007) were used. Results revealed significant positive relationship among external locus of control, paranormal beliefs and religiosity, and it was evident in greater degree in rural people. Regression analysis revealed external locus of control and paranormal beliefs emerged as significant predictors of religiosity; and paranormal beliefs and this relationship mediated between external locus of control and religiosity.

Keywords: Paranormal beliefs, external locus of control and religiosity

Emergence of religion is as old as human history marked by behaviours such as prayer (Kuhl et al., 2016). This behaviour inherently portrays the belief in the unseen, and with uncanny events that may be deemed as paranormal. Religious beliefs and ideas like these are

Correspondence concerning this article should be addressed to Iqra Safdar, (Department of Psychology, University of Sargodha)

Sadia Niazi, (Department of Psychology, University of Sargodha) Email address: sadiaqas@gmail.com

Dr. Adnan Adil (Department of Psychology, University of Sargodha)

underpinnings of intuitive mental systems that were harboured from paranormal beliefs and spirituality (Kelemen, 2004). Paranormal beliefs are extraordinary beliefs on spirits, ghosts, demons, jinn and are culturally universal (Pyysiainen, 2008), and play an important role in religious concepts (Atran & Norenzayan, 2004). These investigators described them as events that violate basic values of common sense and science. Growing attention towards paranormal beliefs in popular media and journalism has influenced cognitive, affective, motivational and demographic factors (Teesdale, 2011). Present study aims at associating external locus of control (Beck & Miller, 2001; Orenstein, 2002), with religiosity (Wilsona, Bulbulia & Sibley, 2014) through paranormal beliefs.

External locus of control is cognitive style of attributing life events to external factors (Kozhevnikov, 2007), where people with its higher levels believe that an event is the product of luck, chance or the influence of other people (Ross & Mirowsky, 2002). Such external locus of control brews paranormal beliefs like premonitions, luck, and black magic etc. where people judge events externally (Norris & Epstein, 2011), and believe in high levels of superstitious beliefs (Bisht, Sardar & Pandey, 2016). Some studies suggest, external locus of control are the reasons paranormal beliefs, which leads to religiosity, for example Teesdale (2011) claimed that such beliefs increased religiosity (also see Czech, Wrisberg, Fisher, Thompson, & Hayes, 2004; Ofori & Lavalley 2017). Likewise, Farooq and Kiyani (2012) suggested that people with stronger beliefs on external forces may develop paranormal beliefs such as breaking mirror or itching palms can bring bad luck which can further increase their becoming religious; and in order to diminish the effect of superstitions they perform more religious rituals. Fiori, Brown, Cortina and Antonucci (2006) suggested that personal attributions can increase or decrease religiosity, and added, people having high external locus of control have high level of religiosity, and display strong faith on their religious rituals (Fiori, Hays & Meador, 2004).

Religiosity is a state or condition of belief in God, and extensive literature shows its positive relationship with paranormal beliefs. Salleh (2012) suggested that people with greater paranormal beliefs engage in more religious rituals; so as to save them from bad happenings (Hergovich, 2008). Glendinning (2006) also claimed stronger impact of paranormal beliefs on religiosity, and suggested that people with greater paranormal beliefs perform more religious activities such as faith on God,

offering prayers and doing virtuous deeds to be protected by happenings of bad luck. Other studies similarly suggest that religious people are susceptible to paranormal beliefs (Orenstein, 2002; Rudski, 2003), because paranormal beliefs appeal to intuitive mind (Aarnio & Lindeman, 2007).) Religious people have greater tendencies to conceptualize God and other religious objects intuitively and possibly those people's belief includes paranormal beliefs (Teesdale, 2011).

Krause (2003) suggested that people who believe in witchcrafts, irrational beliefs, lucky or unlucky day of week, breaking mirror can bring bad luck. They are more externally oriented they believe that their life is controlled by luck and some other forces. Mauss (2001) suggested that most well-known and traditional statement about the formation of paranormal beliefs and religious beliefs is magical thinking, which is the basic mode of thinking. He claimed that magical thinking comes from paranormal beliefs and followed by religious beliefs. Mostly intuitive thinking is used by a religious person, which is positively correlated with paranormal beliefs.

Literature also lists the impact of other demographic factors along with the variables of interest in this study. Present study therefore explored the effect of rural and urban areas on external locus of control, paranormal beliefs and religiosity. People who have strong religious beliefs are also affected by the environment like people who are living in urban areas are more *internal* as they have strong belief on their own self. They are well educated and have learned from their childhood to trust on their abilities. On the other hand, people who live in rural areas rely little on their self and believe on *external* forces because they are less educated. Previous studies have described, rural people may be more likely to perceive that their lives are controlled by external factors such as God, fate and luck compared to urban folk. The rural adults reported greater feelings of external control over their behaviours than did their urban counterparts (Moore et al., 2016).

In rural areas of Pakistan many tribes are associated with particular saint who converted them to Islam. Therefore, such people perform religious rituals such as visiting shrines, offering prayers and reciting Quranic to avoid bad events (Chaudhary, 2010). On other hand, most of the people who live in urban areas do not believe in superstitions, luck and black magic because they have scientific explanations to offer

and are more internally oriented believing in their own strengths (Wassem, 1991).

Farooq and Kayyani (2012) in Pakistan, recently documented supernatural happenings such as black magic, taweez (amulet) and ghosts in a sociological context; and relation of such happenings with religiosity were evaluated others (Hafeez & Rafique, 2013; Ismail & Desmukh, 2012). However, these studies did not look at cognitive and religious antecedents to paranormal beliefs therefore the present study aims to assess external locus of control and paranormal beliefs on religiosity in a Pakistani context (See also Abbas, 2013, and Figure 1 below as our proposal model).

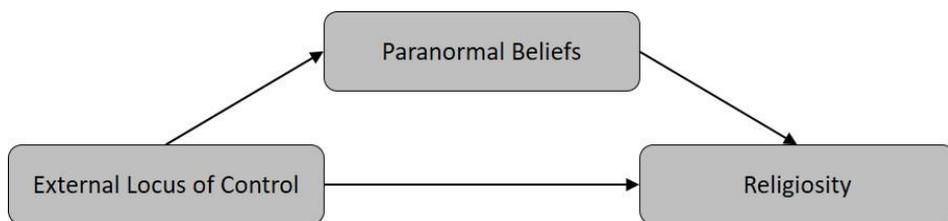


Figure 1. Paranormal beliefs mediate between religiosity and locus of control.

Based on the above discussion we predict a significant relationship among external locus of control, paranormal beliefs and religiosity will exist; and that external locus of control will significantly positively predict religiosity; and paranormal beliefs should do the same, i.e. significantly positively predict religiosity. Paranormal beliefs are therefore expected to mediate external locus of control and religiosity (main hypothesis). And finally rural people will express higher religiosity and paranormal beliefs than urban people.

Rationale of Study

In Pakistan, majority are Muslims and exhibit strong religious beliefs, which influence accordingly their thinking and perceptions. Many people attribute their successes or failures towards such beliefs. The present study was aimed at replicating Farooq and Kiyani (2012) study who claimed that paranormal and superstitious beliefs effect peoples of rural areas of Punjab. And since they only looked at rural people of Punjab we added rural and urban people of Sargodha District

(Punjab) to differentiate locale differences in paranormal beliefs and religiosity.

The present study also tests the mediational model of religiosity developed on the basis of deprived model of paranormal beliefs (Teesdale, 2001). According to this model the deprived people lack the explanation for discrepancies they experience; therefore, they try to find their explanations from external factors and paranormal beliefs. According to this model, beliefs in people exist in order to provide a way to survivor in the case of physical stressors and psychological uncertainties. Teesdale (2001) in his study tested the deprivation model of paranormal beliefs conducted in western culture that explored the mediating role of paranormal beliefs between religiosity and church beliefs. On the basis of deprivation model the present study developed its own model by proposing that external locus of control feed paranormal beliefs, which make an individual more religious.

Method

Sample

Through nonprobability convenient sampling, a sample of 153 adult men and 156 adult women was selected for this study; wherein 75 men were sampled belonged to urban and 78 men hailed from rural areas; 74 women were from urban and 82 women were from rural areas. All participants were above 20 years ($M = 37.33$, $SD = 11$). They had completed their intermediate-level (12 years) education or above.

A G*Power 3.0 factor (Faul, Erdfelder, Lang & Buchner, 2007) analysis was carried out to estimate effect size. The analyses revealed that for multiple regression analyses based on three predictors ($\alpha = .05$) with power of .95 would generate a small effect size (Cohen's $f^2 = .07$) with a sample size of 250 participants.

Instruments

Paranormal Beliefs Scale-Revised (PBS-R) This scale was developed by Tobayck (2004) and was translated and adapted by Tahir and Ghayas (2014) is a multidimensional scale, comprised of 29 items. The scale measures paranormal beliefs in seven dimensions and include, Traditional religious beliefs, Psi, Witchcraft, Superstition, Spiritualism,

Extraordinary life form, and precognition. The response format for items on the scale ranged from 1 = “strongly disagree” to 7 = “strongly agree”. Item 23 is reversed scored, where composite scores ranged from 29-174, and higher scores represented higher beliefs in the paranormal. The scale tested with good validity ($\alpha = .82$) and reliability ($\alpha = .92$) to measure paranormal beliefs (Tobayck, 2004).

Multidimensional Locus of Control Scale This scale was developed by Levenson (1981) and translated into Urdu by study authors for measuring locus of control in the sample. Back translation was followed for ensuring the semantic and contextual equivalence between the original and translated versions of the scale. Briefly, the scale was translated into Urdu by three independent bilingual experts and three Urdu translations were carried out and compared for differences; various items were reconciled for ensuring the theoretical uniformity of items through a committee of two psychology lecturers and a professor from our Department. Then the reconciled Urdu translation was translated back into English for assessing the conceptual equivalence of the reconciled backward translations and original version. Finally, Urdu translation was compared with original English scale by the committee. The scale consisted of 24 items and each item was measured on a 6-point Likert-type scale ($-3 =$ strongly disagree, $-2 =$ disagree somewhat, $-1 =$ slightly disagree, $+1 =$ slightly agree, $+2 =$ agree somewhat, and $+3 =$ strongly agree). This scale has three subscales that measured: Internality (items 1, 4, 5, 9, 18, 19, 21, and 23), Powerful Others (items 3, 8, 11, 13, 15, 17, 20, and 22) and Chance (items 2, 6, 7, 10, 12, 14, 16, and 24). To calculate the composite score, all ratings were summed for each subscale and a constant 24 was added to it. This would give a score ranges for each subscale from 0-48. The last two subscales constituted external locus of control and we dubbed them as external locus of control scale (ELCS). The composite score range on these two scales equalled 16-96. The reliability of this scale is (Cronbach $\alpha = .68$), and reliability coefficients for Internality is ($\alpha = .58$), Powerful Others ($\alpha = .72$) and Chance ($\alpha = .65$) respectively (Levenson, 1981).

Religiosity Practice and Belief Scale (RPBS). Developed by Amjad (2007) the RPBS with 20-items is divided into four subscales: religious practice comprised of 5 items (1, 4, 8, 9, 14, and 10), faith consisted of 5 items (2, 5, 6, 12, and 20), Islamic beliefs comprised 4 items (7, 16, 17 and 18), and general teaching of Islam comprised of 5 items (3, 11, 13, 15 and 19). Each item is measured on a 6-point rating

scale (1 = strongly disagree to 6 = strongly agree). The composite score for the scale ranges from 20-120, where higher scores represented greater religiosity and practice; the scale had high reliability ($\alpha = .87$) in the initial testing and development (Amjad, 2007).

Procedure

Permissions to use and translate scales were sought from all authors, and a pilot study was conducted to check the reliability of the scales. Then participants were approached and a signed informed consent was taken before the beginning of the study. Participants completed the forms in Urdu and the data was tabulated. Great care was taken to ensure that these participants were completely anonymous in the research and all the information they provide will be kept confidential. There was no time restriction on completion of the scales however, they were asked to complete the scales in one sitting. Some participants gave their responses while working in groups and some individually. All participants were thanked for their cooperation and participation in the study.

The data of the present study was analysed by SPSS Version 20 (IBM Corp., 2011). The proposed hypotheses were tested through two-way ANOVA, regression analyses and the direct and indirect effect of external locus of control was measured through PROCESS macro (Hayes, 2017).

Results

Table 1

Descriptive Statistics and Psychometric Properties of Scales

Scale	<i>M</i>	<i>SD</i>	α	Range		Skewness ^a	Kurtosis ^b
				Potential	Actual		
PBS-R	96.68	20.68	.87	29-174	35-155	.01	.19
ELCS	57.13	11.08	.76	16-96	19-82	-.32	.14
RPBS	94.36	7.06	.60	20-120	69-120	-.34	.93

Note. PBS-R= Paranormal Beliefs Scale-Revised, ELCS = External Locus of Control Scale, RPBS = Revised Practice and Belief Scale

^aStandard error of skewness = .13

^bStandard error of kurtosis = .27

Table 1 shows psychometric properties scales, actual and potential range of data and skewness and kurtosis for data collected. For

all scales data shows a kurtosis less than 1 which indicates that univariate normality.

Table 2

Two-Way ANOVA Showing the Effects of Gender and Location on Paranormal Beliefs, External Locus of Control and Religiosity

DV	Source	SS	df	MS	F	η^2
PB	Gender	108	1	108	.25	.00
	Location	267	1	267	6.3**	.02
	Gender x location	4.1	1	4.1	.01	.00
	Error	128	305	422		
	Total	302	309			
	ECL	Gender	859	1	859	7.8**
Location		343	1	343	31.5***	.09
Gender x location		133	1	133	1.2	.00
Error		332	3.5	109		
Total		104	309			
REL		Gender	23.4	1	23.4	.46
	Location	73.9	1	73.9	1.4	.00
	Gender x location	38.4	1	38.4	.77	.00
	Error	152	3.5	49.9		
	Total	276	309			

Note. PBS = Paranormal Beliefs, ELC = External Locus of Control, REL = Religiosity
 ** $p < .01$

Results in Table 2 shows significant effect of gender on external locus of control and its non-significant effect on paranormal beliefs and religiosity. The Table 2 also reveals significant effect of location on paranormal beliefs and external locus of control and its non-significant effect on religiosity. No two-way interactive effect of gender and location on the dependent variables of present study was found.

Figure 2 shows, women ($M = 59.00, SD = 10.4$) have significantly higher level ($F = 7.8, p < .01$) of external locus of control than men ($M = 55, SD = 11.4$).The findings also depict significantly ($F = 31, p < .001$)

higher level of external locus of control in rural people ($M = 60$, $SD = 9.9$) as compared to people living in urban areas ($M = 53.00$, $SD = 11.10$). The Figure 3 displays non-significant gender differences in paranormal beliefs, whereas significantly ($F = 6.3$, $p < .05$) higher level of paranormal beliefs are found in people living in rural areas ($M = 99$, $SD = 17$) than people living in urban areas ($M = 93$, $SD = 23$). However, non-significant gender differences and impact of area people on religiosity were found in the present study (See Figure 4).

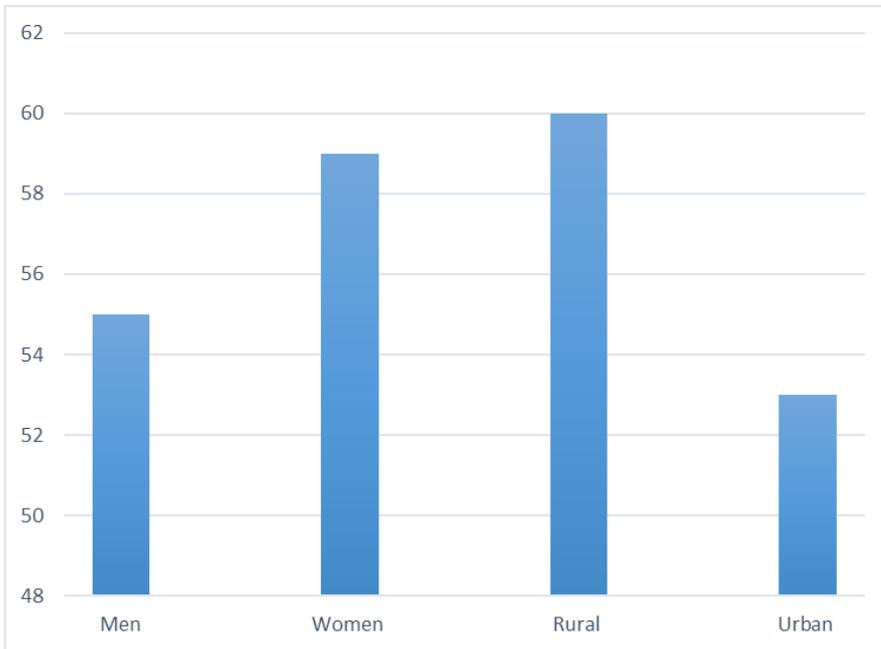


Figure 2. Schematic presentation of findings of 2-way ANOVA on external locus of control.

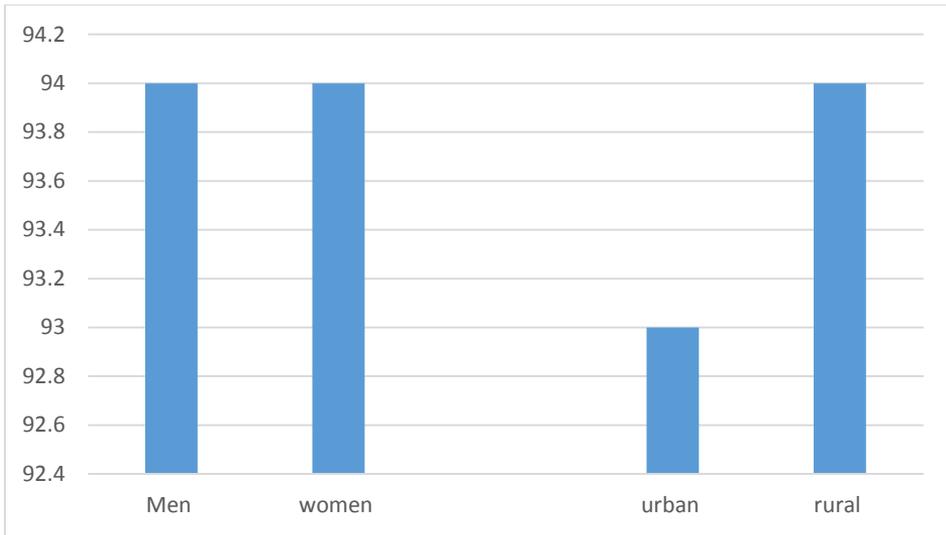


Figure 3. Schematic presentation of findings of 2-way ANOVA on paranormal beliefs.

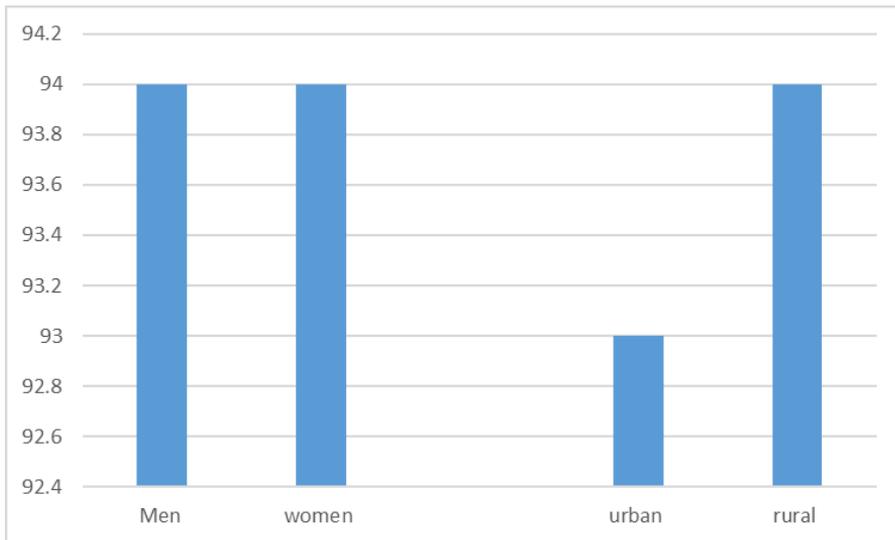


Figure 4 schematic presentations of findings of 2-way ANOVA on religiosity

Table 3 shows Pearson correlation among study variables and all correlations were positive and significant supporting our first hypothesis.

Table 3
Inter-variable Correlations

Variable	External Locus of Control	Paranormal Beliefs	Religiosity Practice and Belief
External Locus of Control	-	.34*	.20*
Paranormal Beliefs		-	.21*
Religiosity Practice and Belief			-

Note. * $p < .001$.

A multiple linear regression was calculated to predict religiosity based on external locus of control and paranormal beliefs. A significant regression equation was found ($F(2, 306) = 10.6, p < .001$) with an $R^2 = .06$. The individual predictors were examined further and indicated that external locus of control ($t = 2.5, p = .05$) and paranormal beliefs ($t = 2.7, p = .01$) were significant predictors in the model that explained 6 % variance in religiosity.

Model in Figure 5 shows standardized direct and indirect effects of predictors of religiosity. Direct effect of external locus of control on religiosity was significant ($\beta = .14, p < .05$) and indirect effect through paranormal beliefs was also significant ($\beta = .05, p < .05$). These findings depict partial mediation, also evident through Sobel's test ($Z = 2.50, p < .05$).

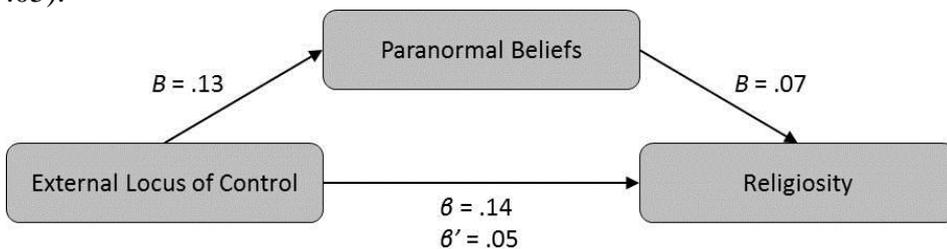


Figure 5 Paranormal beliefs mediate between locus of control and religiosity.

Discussion

The results of present study indicated significant correlations among religiosity, external locus of control and paranormal belief supporting our basic hypothesis. Schieman (2008) has shown religiosity

strongly relates to external locus of control and religious people (like Muslims who have strong faith in Allah) believe on luck and fate. Likewise, Orenstein (2002) reported, religiosity was positively correlated with supernatural and paranormal beliefs. Taken together this suggests, religiosity and paranormal belief emerge in people when phenomena cannot be explained by science, and range from extrasensory perception to psychokinesis to life after death or God. Results from the above two studies culminated with Bisht et al. (2016) when they reported positive correlation of external locus of control with paranormal beliefs. They suggested that people who are externally oriented and believe on luck and superstitions are more likely to have paranormal beliefs.

This study also showed external locus of control was positive predictor of religiosity supporting Scheidt (1973) who demonstrated that external locus of control is the positive predictor of religiosity; and that paranormal belief is positive predictor of religiosity, supported by Sjoberg and Wahlberg (2002) and suggested, religiosity and paranormal beliefs were positively related, because both belief types deal with phenomena that are beyond scientific explanations. The superstitious people develop stronger religious beliefs and ward off black magic, bad omens or witchcrafts by performing religious activities to prevent them. The intensity of this relationship was measured by MacDonald (1995, see also Goode, 2002) who found possessing higher levels of paranormal beliefs led to high level of religiosity.

Finally, rural people had high level of religiosity and paranormal beliefs compared to urban people, which is aligned with literature, for instance Melton (1983) reported that rural people are more religious compared to urban people. The rural adults are living with their grandparents and elders so they learned religious values from their childhood. In Pakistan, Sufi shrines are the common public places of religious rituals and followers consider them to be righteous and pious (Platteau, 2011). Followers of such Sufis exhibit deep emotional attachment to their shrines by endorsing their membership with a *bayat* that connects them to the genealogy to their Sufis or Pirs. The touching the tomb of the Sufi, licking sacred salt offered at shrine tombs, tying thread as prayers contingent on being realized by the barka (blessing) of the Sufi. The offering of ritual prayers, blowing and taking rounds, wearing taweez (amulet) were all those activities more common in rural people as compared to urban (Chaudhary, 2010).

Summary and Conclusion

The current study determined strong positive relationship among religiosity, external locus of control and paranormal beliefs among people of rural and urban areas of Sargodha (Punjab), Pakistan and revealed that a mildly strong mediation was carried by paranormal beliefs between external locus of control and religiosity. In the present study, it was also proposed that people living in rural areas were more likely to have paranormal and religious beliefs because locus of control was in a majority of case was externalized. Taken all of this together suggests, when people rely on external factors controlling their lives they are more likely to have deeper religious beliefs and their beliefs in the paranormal.

Limitations and Suggestions

1. The main limitation of the study was based on the fact that is correlation design which prevented it from drawing causal inferences about the effect of locus of control and paranormal beliefs on religiosity. And though studies with such variables are difficult to manipulate in experimental designs future studies should nevertheless consider experimental designs to causally relate these variables.
2. The sample of the present study was relatively small, produced small effect sizes and was circumscribed to rural and urban areas of Sargodha District. Findings of this study should be generalized with caution, Sargodha is a small region in Punjab and even smaller area in Pakistan. For future studies sample size should be larger to generalize results.
3. Present study is limited to only mediational analysis. Future studies should include moderation analysis on present study variables.

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