

## **Thinking Styles and Belief in Superstitions: Moderating Role of Gender in Young Adults**

**Aisha Maqsood, Farhat Jamil, and Ruhi Khalid**

Beaconhouse National University

Superstitious beliefs prevail in our society despite current modernization and enlightenment. This research investigated thinking styles and gender in relation to belief in superstitions among young adults. Following hypotheses were proposed: a.) rational or analytical thinking will negatively predict belief in superstitions. Moderating role of gender was also hypothesized. The sample consisted of 260 undergraduate students (i.e., men = 130, women = 130) from private universities in Lahore. Mean age of the participants was 21.4 (1.52) years. Rational Experiential Inventory (Pacini & Epstein, 1999) was administered to measure thinking styles. Belief in Superstitions Scale (Maqsood, 2015) was used to measure belief in superstitions. A self developed demographic information questionnaire was also administered. Hierarchical Regression Analysis was applied to identify predictors of belief in superstitions. The results showed that gender significantly predicted belief in superstitions indicating that women reported significantly more superstitious beliefs than men. Higher tendency of experiential thinking predicted more belief in superstitions; however, higher tendency of rational thinking predicted lesser belief in superstitions. Low levels of rational thinking predicted higher superstitious beliefs in women but not in men.

**Keywords:** Belief in superstitions, rational thinking style, experiential thinking style, gender

Superstition is defined as an irrational and unfounded phenomenon (Vyse, 1997). It is defined as a belief that one event is happening because of other without any natural process that links the two (Jahoda, 2007). It is basically a blind belief that some events bring good luck and some bring the bad luck or that future events can be foretold by unrelated prior happenings. For example, crow perched on a wall is an indication of guests coming. Individuals who are

---

Aisha Maqsood, Farhat Jamil, and Ruhi Khalid, Institute of Psychology, Beaconhouse National University Lahore, Pakistan.

Correspondence concerning this article should be addressed to Aisha Maqsood, Institute of Psychology, Beaconhouse National University, Lahore, Pakistan. Email: aisha.maqsood786@gmail.com

superstitious believe in luck, omens, supernatural powers, etc. Superstitious beliefs have been found in a wide range of societies and cultures, in fact belief in superstition is a universal phenomenon however the degree and type may differ across different regions cultures (Farooq & Kayani, 2012).

Superstitions still prevail in today's developed world despite the fact that one does not need to rely on these nonscientific beliefs to deal with daily life situations. Indeed, the basis of these beliefs lies in fear and insecurity at unconscious level of human mind (Dhillon, 2014). Additionally, one may be superstitious despite one's socioeconomic or educational status (Žeželj, Pavlov, Vladislavljevi, & Radivojevi, 2009). After all this transformation and progression in science, superstitions still exist in our society. Literate youth from rural and urban areas are also found to be superstitious (Mundala, 2013). Despite increase in scientific knowledge and educational advancements, growing body of empirical evidence indicates substantial number of people believing in paranormal beliefs across globe. Pew Forum on Religion and Public Life Survey (2012) in America reported 25% of the Asian Americans believed in astrology, 16% believed in evil eye, 18% reported ghost experiences and 24% believed in reincarnation. Pakistani society is still under the thick cloud of superstitious beliefs, which are present since Neolithic times and have gone through little modification (Bukhari et al., 2002).

Farooq and Kayani (2012) found that 50% of people still believe in most of the superstitions in rural Punjab. Some of the participants believed that an itchy palm was associated with financial gains. Most of the women believed that sweeping and cleaning floor at sunset holds negative implications for the family members. Crowing of the crow at the wall or roof of the house is indication of guests. Most of the respondents believed that some days are not lucky for example, Tuesday. Farooq and Kayani (2012) further examined reasons for these superstitious beliefs and they observed that religious connotation was a common factor among the various other reasons for belief in superstitions. Men reported their observation as a factor for superstitious beliefs. In terms of literacy too, 73.5% of educated and 94.1% uneducated individuals were found to believe in superstitions. It indicates that though relatively fewer superstitious beliefs are observed in educated people, they still prevail in our society (Bukhari et al., 2002). Individuals still have more faith in their fortune and destiny more than their own ability, for example, they relate particular occurrence as fortunate or unfortunate as per their belief and take actions likewise (number 13 is deplorable and it should be avoided). Therefore, it is imperative to investigate the factors which make

someone believe in fortunes and destiny or think otherwise. This research focuses on the role of thinking styles and gender in superstitious beliefs.

While exploring the concept of belief in superstition, significant gender differences have been observed. Research findings support that women hold more superstitious beliefs than men (Mundala, 2013; Randall & Desrosiers, 1980; Scheidt, 1973). However, identifying gender differences in belief in superstitions do not fully explain the potential variables involved in this phenomenon.

Ram et al. (2016) investigated the role of superstitious beliefs in treatment adherence across gender in south India. They reported that women held significantly more superstitious beliefs than men. According to a research conducted in Hong Kong where men seemed to exhibit fewer superstitions than women (Wong, 2012). Religion had little significance for endorsing superstitious beliefs across gender which suggests that the gender alone can be accounted for belief in superstitions. Also Wong (2012) observed that similar levels of superstitions were held by participants with and without religious beliefs. Further studies suggest that majority of the paranormal beliefs which include religious beliefs are endorsed by women more than men (Stark, 2002; Vyse, 1997).

These findings suggest role of gender in superstitious beliefs. Research also suggests that thinking styles play an important role in developing belief in superstition. Lately, the progress in dual-processes theories of cognition has stimulated a new theory of studying belief in superstitions (Evans, 2006). The theory emphasizes that individuals utilize two basic information-processing systems, i.e., rational or analytical thinking and experiential or intuitive thinking. Analytical thinking is basically logical, relatively slow, and conscious way of thinking that is based upon evidence, whereas, the intuitive thinking is basically gut feeling automatic, relatively fast, mostly preconscious way of thinking in which information is assessed on personal experiences. And due to fact that there are different styles of information processing, individuals are likely to hold diverse interpretation of the same event in their mind. People use both thinking styles interactively, yet individual differences have been found whether they would respond primarily rationally or intuitively in different situations (Epstein, Pacini, Denes-Raj, & Heier, 1996).

Superstitious beliefs give the impression of being a lot like intuitive thinking (Genovese, 2005; Hergovich & Arendasy, 2005; Lindeman & Aarnio, 2006) as it is also associative and depends on subjective interpretation of events that contributes to superstitious

thinking like interpreting environmental cues, so, it can be said that people who give preference to intuitive thinking style exhibit more superstitious beliefs. On the contrary, analytical thinking which is based on logic and reasoning is unlike superstitious thinking or beliefs, so it can be assumed that poor analytical thinking may be positively related to superstitious beliefs although conflicting findings have emerged (Bressan, 2002; Roe, 1999).

Genovese (2005) examined superstitions in relation to thinking styles and concluded that intuitive thinking contributes to superstitious beliefs. Similarly Pennycook et al. (2012) observed that individuals using analytical cognitive styles were less likely to endorse superstitious beliefs.

Research shows that women adopt the intuitive and experiential thinking style more often; on the contrary men tend to adopt the analytical and rational thinking styles (Epstein, 2003; Sladek, Bond, & Phillips, 2010). As suggested by Epstein et al. (1996) as well as Wolfradt et al. (1999), there seems to be a positive relationship between intuitive thinking and paranormal beliefs. Therefore, it would be interesting to investigate the moderating role of gender between thinking styles and belief in superstitions. In Pakistan there is dearth of published research on the belief in superstitions. Hence, identifying and understanding these beliefs in Pakistani socio-cultural context would facilitate a better understanding of this phenomenon. While intriguing in their own particular right, if superstitious beliefs get to be excessively persuasive, they can equally get to be unsafe. Belief in bad luck or bad omens, for example, belief in unfortunate numbers or events can create undue anxiety which may prompt to decrease the performance and can lead to stress and wellbeing issues (Hughes & French, 2002). For example, if chronically sick person depends on superstitious belief to get better, he could possibly disregard the cure or treatment plan he really needs to get better.

The aforementioned literature shows a need to conduct a study to serve the following objectives.

1. To determine role of thinking style in belief in superstitions.
2. To identify moderating role of gender in the relationship between superstitious beliefs and thinking styles.

### Hypotheses

1. Rational thinking style negatively predicts belief in superstitions.
2. Experiential thinking style positively predicts belief in superstitions.
3. Relationship between thinking style and belief in superstitions is moderated by gender.

### Method

#### Sample

The sample consisted of 260 undergraduates (130 men, 130 women), ages ranged between 18-23 years. Participants were recruited from the private universities. Only Muslim participants were included in the sample. Demographic characteristics of the participants are shown in Table 1.

Table 1

*Descriptive for sample (N = 260)*

| <i>Variables</i>     | <i>f</i> | <i>%</i> | <i>M</i>  | <i>SD</i> |
|----------------------|----------|----------|-----------|-----------|
| Age                  |          |          | 20.4      | 1.52      |
| Family Income (PKR)  |          |          | 126065.38 | 152537.1  |
| Gender               |          |          |           |           |
| Men                  | 130      | 50       |           |           |
| Women                | 130      | 50       |           |           |
| Year in college      |          |          |           |           |
| 1 <sup>st</sup> year | 79       | 30       |           |           |
| 2 <sup>nd</sup> year | 75       | 28.8     |           |           |
| 3 <sup>rd</sup> year | 44       | 16.9     |           |           |
| 4 <sup>th</sup> year | 62       | 23.8     |           |           |
| Family System        |          |          |           |           |
| Nuclear              | 94       | 36.2     |           |           |
| Joint                | 166      | 63.8     |           |           |

According to the results in Table 1, sample include equal number of male and female participants. Majority of the sample belong to joint family system and are students of first two years at their respective universities.

## Measures

**Rational Experiential Inventory (REI).** Experiential thinking and rational thinking were measured by administering Rational-Experiential Inventory (Pacini & Epstein, 1999). This inventory is based primarily on dual-processing theories discussed earlier. It consists of 40-items in the form of a self-report questionnaire. Example items of experiential and rational thinking, respectively, are 'Intuition can be a very good way to solve problems' and 'I enjoy solving problems that require hard thinking'. The items are scored on a 5 point Likert scale ranging from (1 = *Definitely not true of myself* to 5 = *Definitely true of myself*). It has four subscales including Rational Ability (ability to think logically and analytically), Rational Engagement (reliance on and enjoyment of thinking in an analytical or logical manner), Experiential Ability (ability to think based on one's intuitive impressions and feelings) and Experiential Engagement (reliance on and enjoyment of feelings and intuitions in making decisions).

For the purpose of this research, the abovementioned four subscales were reduced to two subscales, namely Rational Thinking Style and Experiential Thinking Style respectively. Rational ability and rational engagement were merged and named as rational thinking style and experiential ability and experiential engagement were merged and named as experiential thinking style.

REI has been used in existing research and found to be a reliable measure of thinking styles. Satisfactory Cronbach's alpha coefficients for Rationality ( $\alpha = .90$ ) and Experientiality ( $\alpha = .87$ ) are reported by authors.

**Belief in Superstitions Scale.** Superstitious beliefs were measured by Belief in Superstitions Scale (Maqsood, 2015). It is an indigenously developed measure and composed of 55 self-report statements. The items are scored on a 7-point Likert type scale ranging between 1 = *No belief at all* to 7 = *Complete belief*. The example items of the scale are 'number 13 is unfortunate' and 'wearing your birthstone will bring you good luck' etc. This scale has excellent Cronbach's Alpha reliability ( $\alpha = .93$ ) as reported by author.

**Demographic Information Questionnaire.** A demographic questionnaire was developed for this research. It contained questions asking age, gender, religion, degree enrolled, educational years, family system (joint/nuclear) and monthly family income of the study participants.

## Procedure

Permission was obtained from higher authorities of different private universities before conducting this research. After that, the nature of the research was explained to them and after taking their consent, the questionnaire booklet was administered on the students of various disciplines. The participants were instructed to rate the items of the scales according to response category which they could relate the most.

Participants were assured of confidentiality of their responses. Participation in study was voluntary. After the questionnaires were filled, they were scored for the subsequent analysis.

## Results

This research explored the predictors of superstitious beliefs among young Muslim adults. First the descriptive statistics of sample and reliability analysis of the instrument was calculated to establish the internal consistency of the measures. The descriptive statistics for the study variable are shown in Table 2.

Table 2

*Descriptive Statistics for Study Variables (N = 260)*

| Measures                        | <i>M</i> | <i>SD</i> | Range  |           | <i>α</i> |
|---------------------------------|----------|-----------|--------|-----------|----------|
|                                 |          |           | Actual | Potential |          |
| Rational Experiential Inventory |          |           |        |           |          |
| Rational Thinking               | 55.23    | 13.17     | 23-77  | 20-100    | .77      |
| Experiential Thinking           | 61.30    | 16.92     | 31-92  | 20-100    | .73      |
| Belief in Superstitions         | 191.32   | 81.89     | 55-367 | 55-385    | .93      |

Table 2 shows that Cronbach's Alpha for scales ranged between .77 to .93 which is moderate to high reliability.

Further Pearson correlation to study relationship among the study variables was calculated. Table 3 shows the correlation analysis.

Table 3

*Pearson's Correlation Analysis showing Relationship among Demographic Variables, Thinking Styles and Belief in Superstitions (N = 260)*

| Variables                 | 1 | 2   | 3     | 4     | 5      | 6      | 7      |
|---------------------------|---|-----|-------|-------|--------|--------|--------|
| 1. Age                    | - | .05 | .64** | -.13* | .00    | -.04   | -.01   |
| 2. Monthly family income  |   | -   | -.02  | -.07  | .12    | .07    | -.11   |
| 3. Year in education      |   |     | -     | .03   | -.01   | -.13*  | .34    |
| 4. Gender                 |   |     |       | -     | -.36** | .39**  | .50**  |
| 5. Rational thinking      |   |     |       |       | -      | -.64** | -.65** |
| 6. Experiential thinking  |   |     |       |       |        | -      | .56**  |
| 7. Belief in superstition |   |     |       |       |        |        | -      |

\* $p < .05$ . \*\* $p < .01$ .

The results reveal that experiential thinking is significantly positively related to superstitious beliefs whereas rational thinking is negatively related with superstitious beliefs. The results also showed a significant relationship between gender and rational thinking, gender is significantly positively related with experiential thinking styles and belief in superstitions while it is negatively related with rational thinking styles. Increase in educational years is negatively associated with experiential ability indicating that an increase in education is related with lesser experiential thinking style.

Table 4

*Hierarchical Regression Analysis Predicting Belief in Superstitions from Gender and Thinking Styles (N = 260)*

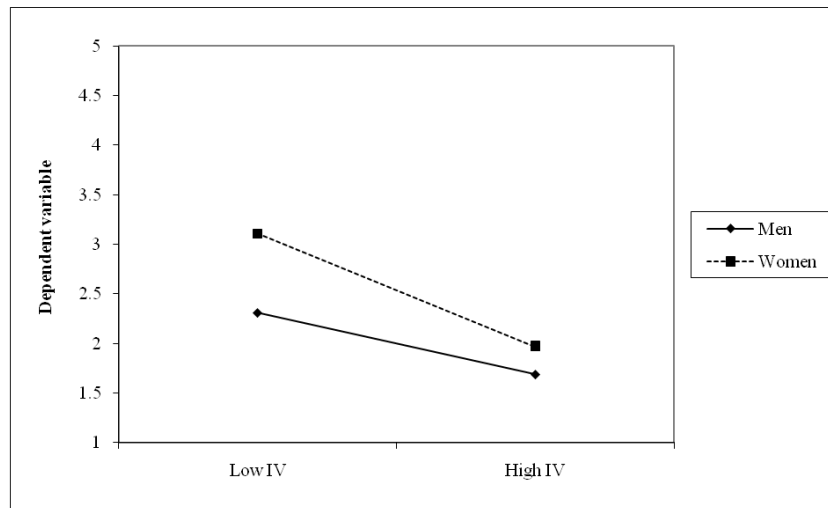
|             |                                       | Belief in Superstitions |         | 95% CI |      |
|-------------|---------------------------------------|-------------------------|---------|--------|------|
|             |                                       | $R^2$                   | $\beta$ | LL     | UL   |
| Step 1      |                                       |                         |         |        |      |
|             | Gender                                | .26                     | .27**   | .35,   | .73  |
| Step 2      |                                       | .52                     |         |        |      |
|             | Thinking Styles                       |                         |         |        |      |
|             | Rational Thinking                     |                         | -.31**  | -.50,  | -.11 |
|             | Experiential Thinking                 |                         | .21*    | .04,   | .36  |
| Step 3      |                                       | .53                     |         |        |      |
|             | Gender $\times$ Rational Thinking     |                         | -.18*   | -.41,  | .21  |
|             | Gender $\times$ Experiential Thinking |                         | .00     | -.22,  | .23  |
| Total $R^2$ |                                       | .53                     |         |        |      |
| N           |                                       | 260                     |         |        |      |

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

\* $p < .05$ . \*\* $p < .01$ .



Hierarchical regression analysis was conducted to identify the predictors of belief in superstition and to investigate the moderating role of gender in thinking styles and belief in superstitions. In the first step, belief in superstition was regressed onto gender followed by the proposed predictors in step 2, and the interactions involving moderator and the predictors in step 3. Table 4 shows results for hierarchical regression analysis indicating predictors of belief in superstition. Rational thinking was hypothesized to be negatively predicting BSS and our hypothesis was approved. It was observed that rational thinking explained 31% of the variance in belief in superstition which was significant. The hypothesis assuming a positive predictive relationship between experiential thinking style and superstitious beliefs was also approved. The results showed that higher levels of experiential thinking significantly predict higher levels of belief in superstition. Experiential thinking explained 21% of the variance in belief in superstitions. The results revealed that high superstitious belief were significantly predicted by gender, implying that women scored significantly higher on superstitious beliefs than men. Also the results revealed that low superstitious beliefs were predicted by high rationality whereas high superstitious beliefs were predicted by high experientiality. Furthermore, gender significantly moderated between rational thinking and belief in superstition. It indicates that low level of rational thinking in women significantly predicts increased belief in superstition as compared to men.



*Figure 1.* Thinking styles predicting belief in superstitions in relation to interaction with gender.

It can be observed in Figure 1 that there are significant gender differences in belief in superstition regarding rational thinking. Men with low rationality still do not score so higher on belief in superstition but women do get a higher score on BSS with the lower levels of Rational Thinking. The overall model was significant explaining 53% of the variance in the belief in superstitions.

## Discussion

The present study investigated the role of thinking styles and gender in predicting beliefs in superstition in young adults. Though it is evident that science, technology, and rationality has increased, we found that irrational beliefs still exist and have deep roots in Pakistani culture.

Previous studies show that our thinking style and personality does play a role in determining the superstitious beliefs. But since these researches are mostly conducted in west, this research was conducted to see whether the same pattern exist in our culture or not. Present results indicated a significantly negative association between rational thinking (rational ability & rational engagement) and superstitious beliefs which indicates that individuals with high rational thinking have less superstitious beliefs. These findings are consistent with the previous findings. Mark, Hine, Blore, and Phillips (2008) found out that rational thinking is associated with less superstitious beliefs. Hergovich and Arendasy (2005) investigated the relationship between paranormal beliefs and critical thinking and observed those who were high on reasoning ability scored low on paranormal belief scale.

Another interesting finding is that the education is significantly positively related to less superstitious belief. It might be due to the fact that with increase in knowledge, rational ability and thinking practically increases and may lead to lesser superstitious beliefs. Future researches may focus on this aspect and see how education may play a role in one's superstitious beliefs. Findings also show that experiential thinking style is positively related to superstitious beliefs. The findings are consistent with the research conducted by Smith (2011) who indicated that intuitive or experiential thinking styles is positively related to superstitious beliefs. It is also in line with Lindeman and Aarnio (2007) who conducted a study to examine the connections between paranormal beliefs, education level, discipline, gender, and thinking styles. Results demonstrated a positive relationship between intuitive thinking and paranormal beliefs. Genovese (2005) also investigated the psychological correlates of

paranormal beliefs among teachers and teachers in training and they observed that intuitive thinking contributed independently to paranormal beliefs. Thus, suggesting that intuitive thinking style is positively related to paranormal or superstitious beliefs. For our hypotheses that rational or analytical thinking negatively predicts superstitious beliefs, there are inconsistent findings; however, a study by Hergovich and Arendasy (2005) supports the notion that low critical thinking has a significant effect on paranormal beliefs. It suggests that low rational thinking is associated with high superstitious beliefs.

The hypothesis stating that belief in superstitions is positively predicted through experiential thinking was supported by the present results. These findings were consistent with previous findings of Aarnio (2007) who found that experiential or intuitive thinking is the best indicator of superstitious beliefs, whereas low analytical or rational thinking was a relatively less important indicator. Another study by Genovese (2005) examined the psychological variables that correlate with paranormal beliefs among school instructors and found that paranormal beliefs of instructors were associated with experiential thinking style.

For the hypothesis stating that relationship between thinking style and belief in superstitions is moderated by gender, significant gender differences in belief in superstition regarding rational thinking were found. Men with low rationality did not score high for belief in superstition but women did. Our findings supported the hypothesis partially as gender moderated significantly between rational thinking and superstitious beliefs; however, it did not moderate between experiential or intuitive thinking and superstitious beliefs. It may be due to the fact that men generally use analytical skills for appraising a situation and they are less likely to use intuitive thinking. Also the sample consisted of participants from university, who are trained to think critically and logically. This was an interesting finding and future studies can focus on other factors that can explain the cause of the difference between the two.

### **Limitations and Suggestions**

Small sample size can be one of the major limitations for this study which can affect the generalizability of the findings. The sample was taken from two private universities of Lahore. Therefore, research should be done on a bigger sample drawn from the general population so that more reliable deductions could be made. Also thinking styles

were measured by using a scale which has not been previously standardized for indigenous sample.

In the present study, only educated individuals were taken to see the correlates of superstitious beliefs, and most of them belonged to upper-middle class while a very few were from lower class. Research on other socio-economic classes must be conducted to see whether the same pattern emerges. Further, factors like child rearing, parent's education, family background also need to be investigated.

### Conclusion

Superstitions are a universal phenomenon. It is present in the developed world and Pakistan also. Pakistani culture endorses many superstitious beliefs and these beliefs are linked with thinking styles of both men and women.

Our findings also reveal that rational thinking style is negatively associated with superstitious beliefs and experiential thinking is positively related to superstitious beliefs. Furthermore, gender also plays a role in superstitious beliefs as the results revealed that women are more superstitious than men which is also consistent with the previous findings. The results also showed that women use experiential thinking style more often than rational or analytical thinking style. Gender also played a moderating role between belief in superstitions and thinking styles.

### References

- Aarnio, K. (2007). *Paranormal, superstitious, magical, and religious beliefs* (Doctoral dissertation). Retrieved from <http://urn.fi/URN:ISBN:978-952-10-4202-7>
- Bressan, P. (2002). The connections between random sequences, everyday coincidences, and belief in the paranormal. *Applied Cognitive Psychology*, 16(1), 17-34.
- Bukhari, S. S., Pardhan. A., Khan. A.S., Ahmed. A., Choudry, F. J., Pardhan, K., Nayeem, K., & Khan, M. (2002). Superstitions regarding health problems in different ethnic groups in Karachi. *Journal of Pakistan Medical Association*, 52(8), 383-7.
- Dhillon, C. K. (2014). Superstitions among female adolescent. *Scholarly Researched Journal for Interdisciplinary Studies*, 8(2), 1640-1648.

- Epstein, S., Pacini, R., Denes-Raj, V., & Heier, H. (1996). Individual differences in intuitive-experiential and analytical-rational thinking styles. *Journal of Personality and Social Psychology*, 71, 390-405.
- Epstein, S. (2003). Cognitive-experiential self-theory of personality. In Millon, T., & Lerner, M. J. (Eds.), *Comprehensive Handbook of Psychology: Personality and Social Psychology* (pp. 159-184). Hoboken, NJ, US: John Wiley & Sons.
- Evans, J. S. B. (2006). Dual system theories of cognition: Some issues. *Proceedings of the Annual Meeting of the Cognitive Science Society*. Retrieved from <https://cloudfront.escholarship.org/dist/prd/content/qt76d4d629/qt76d4d629.pdf>
- Farooq, A., & Kayani, A. K. (2012). Prevalence of superstitions and other super naturals in rural Punjab: A sociological perspective. *A Research Journal of South Asian Studies*, 35(2), 335-344.
- Genovese, J. E. C. (2005). Paranormal belief, schizotypy, and thinking styles among teachers and future teachers. *Personality and Individual Differences*, 39(1), 93-102.
- Hergovich, A., & Arendasy, M. (2005). Critical thinking and belief in paranormal. *Personality and Individual Differences*, 38, 1805-1812.
- Hughes, C., & French, C. (2002). Medicine and magic. *Student BMJ*, 10, 132-133.
- Jahoda, G. (2007). Superstition and belief. *The Psychologist*, 20, 594-595.
- Lakshmikanth, A., & Hema, S. (2016). Superstitions around the world: A truth about Myth. *International Journal of Multidisciplinary Research and Development*, 10(3), 193-196.
- Lindeman, M., & Aarnio, K. (2007). Superstitious, magical, and paranormal beliefs: An integrative model. *Journal of Research in Personality*, 41(4), 731-744.
- Maqsood, A. (2015). *Locus of control and thinking styles in relation to superstitious beliefs among young Muslim adults* (Unpublished master's thesis). Beaconhouse National University, Lahore.
- Marks, A. D., Hine, D. W., Blore, R. L., & Phillips, W. J. (2008). Assessing individual differences in adolescents' preference for rational and experiential cognition. *Personality & Individual Differences*, 44(1), 42-52.
- Mundala, N. D. (2013). Locus of control and superstitions. *International Journal of Humanities and Social Science Invention*, 2(6), 01-04.
- Pacini, R., & Epstein, S. (1999). The relation of rational and experiential information processing styles to personality, basic beliefs, and the ratio-bias phenomenon. *Journal of Personality & Social Psychology*, 76(6), 972-987.

- Pennycook, G., Cheyne, J. A., Seli, P., Koehler, D. J., & Fugelsang, J. A. (2012). Analytic cognitive style predicts religious and paranormal belief. *Cognition, 123*(3), 335-346.
- Pew Forum. (2012). *The world's Muslims: Unity and diversity*. Retrieved from <http://www.pewforum.org/Muslim/the-worlds-muslims-unity-and-diversity-executive-summary.aspx>
- Ram, D., Patil, S., & Gowdappa, H. B. (2016). Level of paranormal beliefs and its relationship with explanatory models, treatment adherence, and satisfaction. *Archives of Clinical Psychiatry, 43*, 51-55.
- Randall, T. M., & Desrosiers, M. (1980). Measurement of supernatural belief: Sex differences and locus of control. *Journal of Personality Assessment, 44*, 493-498.
- Roe, A. C. (1999). Critical thinking and belief in the paranormal: A re-evaluation. *British Journal of Psychology, 90*(1), 85-98.
- Scheidt, R. J. (1973). Belief in supernatural phenomena and locus of control. *Psychological Reports, 32*(3), 1159-1162.
- Sladek, R. M., Bond, M. J., & Phillips, P. A. (2010). Age and gender differences in preferences for rational and experiential thinking. *Personality & Individual Differences, 49*, 907-911.
- Stark, R. (2002). Physiology and faith: Addressing the "universal" gender difference in religious commitment. *Journal for the Scientific Study of Religion, 41*, 495-507.
- Smith, E. S. (2011). The intuitive style: Relationships with local/global and verbal/visual styles, gender, and superstitious reasoning. *Learning & Individual Differences, 21*(3), 263-270.
- Webster, R. (2008). *The encyclopedia of superstitions*. Woodbury, MN: Llewellyn Worldwide.
- Wolfradt, U., Oubaid, V., Straube, E. R., Bischoff, N., & Mischo, J. (1999). Thinking styles, schizotypal traits and anomalous experiences. *Personality and Individual Differences, 27*, 821-830.
- Wong, S. H. (2012). Does Superstition Help? A study of the role of superstitions and death beliefs on death anxiety amongst Chinese undergraduates in Hong Kong. *Journal of Death & Dying, 65*(1), 55-70.
- Vyse, S. A. (1997). *Believing in magic: The psychology of superstition*. New York: Oxford University Press.
- Žeželj, I., Pavlov, M., Vladisavljevi, M., & Radivojevi, B. (2009). Construction and behavioral validation of Superstition Scale. *Psihologija, 42*(2), 148-158.

Received received 24<sup>th</sup> March, 2017

Revision received 4<sup>th</sup> October, 2018