

Regional Variations in Superstitious Beliefs and Locus of Control Among Students in India: A Cross-Cultural Analysis

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Abstract

Superstitious beliefs are irrational beliefs that certain actions or objects can influence future events. While students, like others, may hold superstitious beliefs, their training in scientific theories and critical thinking might lead them to approach such beliefs with greater skepticism. The present study investigates the relationship between superstitious beliefs and locus of control among students in northern and southern states of India. The study involved 206 students aged 18-25, with 106 from southern states and 100 from northern states. Participants were drawn from the population by applying a convenient sampling method. Measures related to superstitious beliefs and locus of control were used to assess the variables of interest. Descriptive statistics, correlation analysis, and stepwise multiple regression were applied to analyze the data collected from the participants. The findings of the study revealed that students from the northern states scored slightly higher on the internal aspect of locus of control compared to their southern counterparts. Additionally, individuals with a more external locus of control were found to be more likely to hold superstitious beliefs. Findings related to correlational analysis demonstrated a significant positive relationship between locus of control factors with the superstitious beliefs of the participants.

INTRODUCTION

According to psychology, an individual's life outcomes are under his or her personal control and are influenced by one's own decisions and efforts (internal locus of control), as opposed to being determined by good luck and chance or other people (external locus of control). The fundamental tenet of psychology is that each person is responsible for their own learning and destiny. People with superstitious beliefs frequently have external rather than internal attributions (Belter & Brinkman 1981; Sagone & De Caroli 2014; Stanke & Taylor

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2004). Irwin (1994) made the important observation that people with an external locus of control may attempt to cope with seemingly uncontrollable circumstances by holding on to superstitious beliefs. All civilizations and communities are reported to have a high prevalence of superstitious beliefs. Even if science and technology have advanced, our culture still holds irrational and groundless beliefs. The term “superstitious” should be used in relation to beliefs or practices that are in themselves unreasonable and contrary to the level of enlightenment achieved by the society to which a person belongs. The illogical attitude that a person has toward nature, god, or other supernatural elements that have the capacity to affect their well-being is known as superstitious belief (Parida, 1962).

The very nature of the supernatural and its impact on the natural and social worlds have always been hotly debated academic topics (Dawkins 2006; Fireston 2014; Kemp 2000; Shook 2017). The validity of these defenses is proof that people have the mental ability to accept, a potential that once we declare our beliefs and once we declare our lack of belief. Superstitious beliefs, which have been around for a very long time, are at odds with both natural laws and common sense (Kramer, & Block 2008; Jahoda 1969). People generally strive to maximize positive outcomes and minimize negative outcomes. They can continue to do so without knowing superstitious strategies.

People of lower socio-economic status attend horoscope readers and fortune tellers more frequently than people with high socio-economic status. An unemployed holds a stronger superstitious belief than the workers. People who have a greater need for material goods show a greater need for superstitious beliefs. Similarly, rich countries have higher rates of superstitious belief (Mowen & Carlson 2003). Between these negative consequences and the progress of scientific experimentation, superstitious belief remains strongest among its viewers. Why? The positive aspect of superstitious belief arrives. Superstitious belief has causal effects on task fulfillment when we activate positive superstitious belief before the activity improves the individual performance of the activity when we are expected to give our all in certain situations (for example,

exams, sports, risky practices) instead of hoping and counting on another chance, which could help you get expected performance and prevent bad luck.

Locus of Control

The locus of control (LOC) gauges how much a person's sense of control over their life. LOC has been divided into categories of internal and external control (Rotter 1966). A person who exercises internal LOC thinks that their actions are what causes events to happen, while a person exercising external LOC believes that chance, luck, or the impact of other people are what cause events to happen. In a similar spirit, “Internalizes” makes use of instrumentation to try and take over. One key characteristic of “Externalizes” is that their primary control mechanisms are weak or nonexistent; as a result, superstitious beliefs are seen by them as a supplementary form of control.

Superstitious belief is also described as “a form of mental reflection of the surrounding and inner world that does not require logical proofs and that is satisfied with every proposed solution.” This needs to be emphasized that superstitious belief is not an innate character trait but a socially shaped trait trend. This tendency is assimilated in human and cultural relationships and communication in infancy before the child learns conceptual thinking in school. During a time of crisis, when social groups, nations, or even the entire world's populations experience sentiments of fear, uncertainty, and hopelessness on a daily basis, superstitious tendencies emerge quickly (Taher *et al.*, 2020; Foster & Kokko, 2009).

Keinan (2002) suggests that superstitious and magical thinking may lower perceived stress and create self-fulfilling prophecies, potentially enhancing performance and well-being, as supported by Dawn and Dawn (1989) and Bandura (1997). High involvement in superstitious beliefs noted in sports (Bleak & Frederick, 1998) and popular culture (Vyse, 1997). MacDonald (1995) critiques research inconsistencies and the impact of different methodological approaches on predictions. Studies on astrology and other paranormal beliefs (Rice, 2003) highlight the paradox of superstitious behaviors in contrast to logical thinking (Rozin, Millman & Nemeroff, 1986; Wilson, 2001).

The study aims to examine the attitudes of adults towards superstitious beliefs and their locus of control. The World Health Organization (WHO, 2016) defines adults as individuals who are over the age of 19 unless specified otherwise by national laws. Adults are generally characterized by qualities such as maturity, self-confidence, autonomy, strong decision-making skills, and a practical approach. They tend to be multitaskers, purpose-driven, self-directed, and experienced. However, they may also be less open-minded and resistant to change. These characteristics have an impact on their motivation and learning abilities. Consequently, it is crucial for instructional designers to comprehend the cognitive and communal characteristics of adult learners in order to create appropriate course content structures and adjust their approach accordingly. Adult learners often have numerous responsibilities to juggle, including work, family, hobbies, health, and home. They are skilled at multitasking and are more selective with their time, prioritizing their own needs and commitments.

Superstitious beliefs relate to perceived control and coping strategies. Studies show varied impacts: Van Raalte *et al.* (1991) and Groth-Marnat & Pegden (1998) highlight control's role in superstitious belief, while Akbirova *et al.* (2020) and Balkis & Duru (2019) explore superstitious belief effect on coping and procrastination. Kramer & Block (2008) and Whitson & Galinsky (2008) demonstrate how superstitious belief influences consumer behavior and perception under control loss.

Rationale of the Study

Despite extensive research on superstitious beliefs and locus of control, limited studies have explored their regional variations within India, a country characterized by diverse cultural, linguistic, and socio-economic backgrounds. Existing literature primarily focuses on these constructs at a general or national level, overlooking the potential influence of regional socio-cultural factors on their development and manifestation. Furthermore, while cross-cultural studies have examined superstitious beliefs and locus of control across different countries, research comparing these psychological constructs among students from different Indian regions remains

scarce. The interplay between local traditions, religious beliefs, education systems, and societal norms in shaping superstitious tendencies and perceived control over life outcomes remains underexplored. Additionally, most studies emphasize either superstitious beliefs or locus of control independently without analyzing their interrelationship across different cultural contexts within India. Understanding whether specific regional factors contribute to variations in this relationship can provide deeper insights into cognitive and behavioral differences among students. Based on the literature reviewed in this study and the observation of the researcher, the major objectives of this study were to assess and compare the superstitious beliefs and locus of control among students of southern and northern states of India. It also aimed to explore the relationship between superstitious beliefs and the locus of control of students to understand the role of internal and external locus of control in the superstitious beliefs of students residing in these two regions of India.

Further, it was hypothesized that no significant difference would be found between students of southern and northern states in India as no study was found comparing these two populations. It was also hypothesized that superstitious beliefs would be positively associated with the locus of control of the students residing in these two regions of India. Therefore, to verify these objectives and hypotheses following methods, measures and statistical analysis have been applied in the present study.

METHOD

Participants

The present study was conducted on 206 students (106 from southern & 100 from northern states of India) in the age group of 18 to 25 years. Participants from northern states have been drawn from the different districts of Haryana, Delhi NCR, Uttar Pradesh and Rajasthan region and for selecting the participants from southern states, students of Tamil Nadu, Karnataka, Telangana and Andhra Pradesh have been contacted. Voluntary participation was sought, and informed consent was obtained from the relevant authorities, principals, and Heads of

Departments. Data collection employed a convenient sampling method involving personal visits to the participants' locations or classrooms. Convenient sampling was used in survey research for its ease, cost-effectiveness, and quick data collection. It allows researchers to gather responses from readily available participants, making it practical for exploratory studies. Data from the southern states (Kerala, Andhra Pradesh & Tamil Nadu) and northern states (Haryana, Delhi NCR, Uttar Pradesh and Rajasthan) of India were drawn by contacting the participants conveniently and by visiting their places (hostel, classrooms, & home). Participants who were currently studying or had completed their undergraduate, postgraduate, or doctoral education were selected for the study. Since the study focused on students in higher education, only these three groups were contacted based on convenience. Contact numbers were collected from these students, and subsequent communication and participation were arranged according to their convenience. Data from both reasons has been collected in groups by taking care of their distance and other relevant factors that may affect the response. A correlational design was applied to explore the role of superstitious beliefs in the student's locus of control.

Measures

The following measures were employed for collecting data.

Superstitious Belief Questionnaire

The Superstitious Questionnaire (SQ), created by Zebb and Moore (2003), was utilized to assess participants' levels of superstitious belief. The SQ consists of 18 items designed to assess participants' level of superstitious attitudes and behaviors. A 6-point Likert scale, ranging from "strongly agree" to "strongly disagree," was employed to calculate participants' superstitious tendencies. This questionnaire examines both cognitive and behavioral elements of superstitious belief. The SQ has been utilized in earlier research, including those conducted by Lasikiewicz and Teo (2015) and Stanke and Taylor (2004), to explore related phenomena. A subject expert has examined the scale items in this

area to assess their suitability. After verifying the face validity, the scale was used in this study. However, since no study has reported the psychometric properties of this scale, its use in several research studies does not confirm its reliability. This can be considered a limitation of the study.

Locus of Control

The Multidimensional Locus of Control Scale was developed by Rotter in 1966. It comprises twenty-four items designed to assess a person's sense of control. The ratings for each item range from "strongly disagree" (-3) to "strongly agree" (+3) on a six-point Likert scale. The scale evaluates three different elements. The subscale internality included eight items (1, 4, 5, 9, 18, 19, 21, & 23) that measure a person's self-confidence and ability to shape the consequences of their life events (e.g., "My ability is the main factor in becoming a leader."). The powerful Others subscale also includes eight items (2, 6, 7, 10, 12, 14, 16, 24) that measure how much a person believes powerful people who have control over their life, frequently choosing the fate of the less influential (e.g., "Powerful people largely shape what happens in my life."). The subscale Chance also consists of eight items (3, 8, 11, 13, 15, 17, 20, 22) that estimate an individual's perception that luck and destiny play a significant role in their life, giving them little power in a variety of circumstances (e.g., "Accidental events greatly influence my life."). By adding a constant of +24 to account for negative sums and adding the eight-item responses together, each subscale creates a distinct score. As a result, each participant is given three scores, each of which represents their relative perspective on the three dimensions and ranges from 0 to 48. A person can rate well or poorly in all three dimensions. A subject expert has examined the scale items in this area to assess their suitability. After verifying the face validity, the scale was used in this study. However, one limitation of this study is that the factors of this scale have not been validated.

Statistical Analysis

The collected data has been analyzed as per the objective and hypothesis of the study. Descriptive statistics (mean, standard deviation) and inferential

statistical methods (t-test Pearson product-moment correlation, & regression) have been applied to assess, compare and correlate among students' locus of control and superstitious belief. Pearson Product Moment correlation was applied to explore the relationship between superstitious beliefs and locus of control. Multiple stepwise regression analysis was applied to know the contribution of superstitious beliefs in the locus of control among psychology students. The normalcy of the data has been checked and verified before applying the parametric statistical analysis. Multi-collinearity was assessed before applying regression analysis and was found to be within an acceptable range, ensuring the suitability of the data for regression statistics.

RESULTS

The mean score of participants (Table 1) shows that students residing in the northern states scored slightly higher than students residing in the southern state on the dimension of locus of control internality ($t=-.608$, $df=204$, NS), powerful others ($t=2.68^{**}$, $df=204$, $p < 0.01$), and chance (2.65^{**} , $df=204$, $p < 0.01$). For superstitious belief, southern students scored higher than northern students ($t=3.84^{**}$, $df=204$, $p < 0.01$). A significant difference was not found in internality.

Correlational Analysis

Pearson Product Moment correlation was applied to explore the relationship between superstitious beliefs and locus of control among students residing in northern and southern states of India. As evident

with descriptive analysis and t-score, both the groups scored significantly different on superstitious belief and locus of control. Hence, correlation and regression analysis has been applied to both groups separately.

The results presented in Table 2 indicate that powerful others and chance were found to be positively and significantly correlated with superstitious beliefs ($r=.360^{**}$, $p < 0.01$) and ($r= 4.04^{**}$, $p < 0.01$). Although internality was also found to be positively correlated with superstitious belief, the coefficient was not found to be significant.

Results presented in Table 2 show that powerful others and chance factor of locus of control were discovered to be positively and significantly correlated ($r=0.367^{**}$, $p < 0.01$), ($r=0.286^{**}$, $p < 0.01$) with the superstitious beliefs of students residing in the southern states of India. Internality factor of locus of control was found to be negatively correlated with the superstitious beliefs of students but the coefficient was not found significant. Hence, it is evident that students who believe in powerful others and chance factors exhibit more superstitious beliefs as compared to students who believe in internal factors.

Regression Analysis

Multiple stepwise regression analysis was applied to determine the contribution of predictors in the criterion variables. Dimensions of LOC (Internality, Powerful others & Chance) were treated as predictors and superstitious belief as criterion variables.

Multiple stepwise regression analysis was applied to know the contribution of dimensions of locus of control in the superstitious beliefs of students resid-

Table 1: Mean, SD and t score on internality, powerful others and chance factors of LoC and Superstitious beliefs in south and north students

Variables	Domicile	Mean	SD	N	df	t-value
Internality	South	10.24	8.75	106	204	-.608 ^{NS}
	North	10.93	7.30	100		
Powerful others	South	1.42	11.21	106	204	2.68 ^{**}
	north	5.48	10.41	100		
Chance	South	.075	12.20	106	204	2.65 ^{**}
	north	4.19	10.74	100		
Superstitious beliefs	South	13.2	37.75	106	204	3.84 ^{**}
	north	7.49	39.75	100		

^{**}<0.01, NS= Not significant

Table 2: The correlation coefficient of LOC (internality, powerful others & chance) with the superstitious beliefs of students residing in the Northern States of India

Locus of control	Superstitious beliefs
Internality	.132
Powerful others	.360**
Chance	.404**

**<0.01

Table 2.1: Correlation coefficient of LOC (internality, powerful others & chance) with the superstitious beliefs of students residing in the Southern States of India

Variables	Superstitious beliefs
Internality	-.138
Powerful others	.367**
Chance	.286**

**<0.01

ing in the northern states. Results in Table 3 revealed that chance and internality factors accounted for approximately 26% of the variance in the measure of superstitious beliefs, in which chance factor of locus of control accounted for 16.3% of variance ($F_{1, 204}, 19.06, p < 0.01$) and internality contributed 9.7% of the variance in the scores of superstitious belief measure ($F_{1, 204}, 17.00, p < 0.01$). The internality factor of locus of control negatively predicted the superstitious belief among students of northern states as their beta value is showing a negative direction ($b = -.337$) and the chance factor of LoC had increased the superstitious beliefs among students of northern states ($b = .533$).

Table 3.1 indicates that powerful others and internality factors of locus of control emerged as the significant predictors of superstitious beliefs among students of southern states. Powerful others and internality factors accounted for approximately 21.8% of the variance in the scores of superstitious beliefs in which powerful others contributed 13.5% of the variance ($F_{1, 204}, 16.22, p < 0.01$) and internality contributed 8.3% of the variance ($F_{1, 204}, 12.67, p < 0.01$).

measure of students of southern states. Powerful others positively predicted the superstitious beliefs ($b = .477$) (increased superstitious beliefs) and internality negatively predicted the superstitious beliefs ($b = -.308$) (reduced superstitious beliefs) among students of psychology.

DISCUSSION

In this section the findings and outcome of the study have been discussed with the support of the earlier published studies and researcher's observation. The purpose of the study was to discover the superstitious beliefs and locus of control among students in northern and southern states in India.

It was hypothesized that there would be no significant difference between students of southern and northern states of India on superstitious beliefs and locus of control. Results of the research revealed that students residing in the northern and southern states scored almost the same on internality, powerful others and chance factors of locus of control measure. On superstitious beliefs, students residing in southern states of India scored significantly higher than students of northern states. Hence, the null hypothesis has been partially accepted. A recent study was conducted by (Thirunavukarasu *et al.*, 2018) to evaluate the occurrence of superstitious beliefs and locus of control among college students in Tamil Nadu. Findings were found consistent with this study as significant prevalence of superstitious beliefs and an external locus of control among the participants exhibited that highlights the importance of implementing educational interventions to promote scientific thinking and rationality. Another study conducted in Kerala state of India found that a substantial portion of the elderly population held superstitious beliefs, which influenced their decision-making and daily activities. Additionally, it observed an external locus of control among the participants (Dwivedi *et al.*, 2020).

Table 3: Stepwise regression analysis of internality, powerful others and chance factors of LOC as predictor variables and superstitious belief as criterion variable of students residing in the Northern States

Predictors	R	R ²	Adjusted R ²	R ² change	Beta	F	F-change	t-score
Chance (LOC)	.404	.163	.154	.163	.533	19.06**	19.06**	5.63**
Internality (LOC)	.509	.260	.244	.097	-.337	17.00**	12.67**	3.56**

**<0.01

Table 3.1: Stepwise regression analysis of internality, powerful others and chance factors of LOC as predictor variables and superstitious belief as criterion variable of students residing in the Southern States

Predictors	R	R ²	Adjusted R ²	R ² change	Beta	F	F-change	t-score
Powerful others(LOC)	.367 ^a	.135	.127	.135	.477	16.22**	16.22**	5.12**
Internality (LOC)	.467 ^b	.218	.203	.083	-.308	14.35**	10.93**	3.31**

**<0.01

One of the studies that examines the superstitious beliefs and locus of control in the students of Andhra Pradesh" (Kavitha *et al.*, 2017) focused on analyzing superstitious beliefs and locus of control among individuals in Andhra Pradesh state of India. The research revealed a widespread presence of superstitious beliefs, such as astrology, lucky charms, and ritualistic practices. Furthermore, it found that the participants displayed a combination of both internal and external locus of control.

As far as northern states of India are concerned, researchers have not found any study related to superstitious beliefs and locus of control of students. Northern India is a culturally diverse region comprising states like Uttar Pradesh, Punjab, Haryana, Rajasthan, etc. As per my knowledge, no study has been investigated the regional variations in superstitious beliefs and locus of control within these states, but the aim of the present study to understand the cultural shades of superstitious beliefs and how they influence people's beliefs and perceptions of control. There are several reasons, some of which have been mentioned below;

The superstitious rituals and practices in northern states are prevalent and these rituals often involve belief in charms, amulets, astrology, numerology, and other forms of supernatural or magical elements. Hence, it may be said that these factors are contributing to the persistence of these beliefs and their impact on individuals' decision-making processes. Northern states of India have a significant religious diversity, including Hinduism, Islam, Sikhism, and others. The relationship between religiosity and superstitious beliefs, exploring how religious practices and traditions intersect with superstitious tendencies is important to comprehend the phenomena of superstitious beliefs. Superstitious beliefs and locus of control can have implications for mental health also. Superstitious beliefs, locus of control, and psychological well-being

in northern states are associated with superstitious beliefs that might contribute to anxiety, stress, and other mental health issues, as well as the role of locus of control in coping mechanisms.

India is a diverse country with distinct regional cultures and traditions. The south and north states of India have different socio-cultural backgrounds, languages, customs, and religious practices. Understanding the superstitious beliefs prevalent in these regions helps researchers gain insights into the cultural variations and their impact on people's lives. More empirical studies are required to explore these concepts in the different regions of India.

In the southern population, the variable internality was found to be negatively correlated with superstitious beliefs. So, it is quite possible to infer that individuals with more external locus of control might be more inclined to hold superstitious beliefs. Previous study supports the notion that individuals who have an external locus of control may attempt to handle the apparent unpredictability of their situations by holding superstitious beliefs (Irwin, 1994). Findings of earlier studies conducted by the different researchers were found compatible with the current study findings.

Sachs (2004) made a discovery indicating that Chinese postgraduate students with stronger superstitious beliefs tended to have lower levels of self-confidence. According to a study conducted by Day and Maltby (2003), there was a strong connection between good luck beliefs and optimism and irrational beliefs. Furthermore, good luck beliefs exhibit a negative correlation with depression and anxiety. Individuals experiencing anxiety tended to have higher levels of superstitious beliefs compared to those who did not, as noted by Wolfradt (1997) and Wiseman & Watt (2004).

Darke and Freedman (1997) emphasized that some people continued to have an illogical perspective on luck, seeing it as a constant influence

on occurrence that influenced them favorably. Conversely, others held rational beliefs, perceiving luck as random and unpredictable. Additionally, a significant external locus of control was significantly connected with beliefs in good luck, which showed significant consistency across time.

Highlighting the significance of locus of control, which relates to how individuals perceive their level of personal influence over their events, this concept can be divided into two categories: internal locus of control and external locus of control, as classified by Rotter (1966). Individuals who hold an internal locus of control believe that events occur as a result based on their own deeds, and individuals who hold an external locus of control attribute events to good fortune or the forces of others. In more detail, internality specifically refers to the conviction that one has control over and can influence the regards in their environment, whereas externality specifically refers to the conviction that rewards are luck-based and outside of one's control. Research has shown varying relationships between locus of control, gender, superstitious beliefs, and self-efficacy. Sherman *et al.* (1997) found females to have a more external locus of control, but Sagone and De Caroli (2014) found no gender differences in academic self-efficacy. Vyse (1997) linked an external locus of control to self-focused superstitious beliefs. Optimism was connected to an internal locus of control, while pessimism was related to an external one (Dember *et al.*, 1989; Rudski, 2004). Superstitious beliefs also correlated with low self-efficacy (Tobacyk & Shrader, 1991) but could enhance performance when linked to good luck (Damisch *et al.*, 2010).

Superstitious beliefs can impact people's socio-economic conditions. In some cases, these beliefs might discourage individuals from seeking education, employment opportunities, or engaging in certain economic activities due to fear or adherence to specific rituals. Analyzing the influence of these beliefs helps policymakers and social scientists identify barriers to development and design targeted interventions to promote social progress.

In addition, the powerful others and chance variables of the dimension of locus of control were found to be significantly and positively correlated with superstitious beliefs in students residing in

the northern and southern states of India. This is because superstitious beliefs often involve attributing outcomes to external factors beyond one's control. The findings of this study support earlier studies, those who had an external locus of control believed in superstitious beliefs more strongly (Stanke and Taylor, 2004). Students from the northern and southern states of India scored similarly on the internality factor of LOC and internality was found to be negatively associated with the superstitious beliefs of students. Hence, it can be said that people with an internal locus of control of their destiny are more likely to take personal responsibility for their successes and failures.

Similar to strong irrational beliefs, the external locus of control is characterized by the inclination of a person to blame luck, fate, or other outside factors for the occurrence in their lives (Scheidt 1973). The degree to which people place blame for their own personal life events on other forces or other people (external) rather than their own characteristics and facts (internal) is referred to as locus of control. Several studies have consistently found a strong correlation between an external locus of control and beliefs in illogical, supernatural, and irrational phenomena (Belter and Brinkmann, 1981; Irwin, 1994; Groth-Marnat and Pegden, 1998; Peterson, 1978; Randall and Desrosiers, 1990; Scheidt 1973).

Superstitious beliefs can influence health-related practices and behaviors. In India, traditional beliefs are often intertwined with medical practices, leading to alternative approaches to healthcare. Understanding these beliefs is crucial for promoting evidence-based medical practices and addressing misconceptions that might hinder public health initiatives.

IMPLICATIONS

The current study investigates the correlation between superstitious beliefs and locus of control among psychology students. An externally controlled individual is more susceptible to the influence of chance and powerful individuals, whereas internally controlled individuals have confidence in making their own decisions and are not easily influenced by others. The practical implications of this study are to make people self-evaluate internal and external locus

of control, and findings of this study may be used for those who have a high external locus of control and superstitious beliefs so that proper clinical intervention can be developed to improve their internal locus of control to some extent. Educators may also promote a more evidence-based and skeptical approach to understanding human behavior and psychological phenomena.

Superstitious beliefs and locus of control have notable implications for individuals' psychological well-being. Superstitious beliefs often arise from a perceived lack of control over uncertain events and can affect individuals' decision-making processes and emotional states. By studying these beliefs, researchers can identify the factors that contribute to anxiety, stress, and other psychological challenges in different regions of India. Studying superstitious beliefs and locus of control can contribute to education and awareness campaigns aimed at dispelling myths, encouraging critical thinking, and promoting scientific temper. By understanding the roots and prevalence of superstitious beliefs, educators and policymakers can develop strategies to address these beliefs and foster rational thinking and logical reasoning. While superstitious beliefs can sometimes hinder progress, they also hold cultural significance. Understanding and documenting these beliefs may help in preserving cultural heritage and traditions. It allows for a more nuanced understanding of the diverse belief systems within India and contributes to the study of anthropology and folklore.

Therefore, it may be concluded that studying superstitious beliefs and locus of control in the southern and northern states of India is important to gain insights into cultural variations, psychological well-being, health practices, socio-economic impact, education and awareness, and cultural preservation. Such research can inform interventions, policies, and educational initiatives that promote rational thinking, evidence-based practices, and overall social development.

LIMITATIONS

The sample used in this study is limited to specific geographic regions. The data may be inaccurate due to the respondent's unwillingness to disclose their beliefs and perception accurately. Self-report measures have been used that have its own lim-

itations as participants may have responded erroneously. Studies by applying qualitative methods and mixed methods may be more useful in exploring these aspects in different parts of India. More studies on different age groups, different genders and on different geographical locations is required to generalize these findings in India and the world. The use of convenience sampling may limit the generalizability of the findings, as the sample may not be fully representative of the target population. Future research should consider more robust sampling techniques to enhance external validity. Second, a pilot study was not conducted to assess the psychometric properties of the scale used. While the scale was examined for face validity by a subject expert, the absence of pilot testing means that its reliability and factor structure remain unverified in this context. Future studies should validate the scale through pilot analysis to ensure its measurement accuracy. Finally, the demographic characteristics of the participants were not systematically analyzed, which may limit the understanding of how individual differences influence the study variables. Future research should incorporate demographic analyses to explore potential variations across different population subgroups. Despite these limitations, the findings contribute valuable insights and provide a foundation for further investigation in this area.

ETHICS STATEMENT

The study was approved by the department of Psychology, Central University of Haryana and all aspects of the research were completed without harming to participants or using any invasive techniques. Additionally, all ethical guidelines issued by the American Psychological Association (APA) have been followed diligently throughout the entire process, from data collection to writing the manuscript.

All the authors contributed to the article and approved the submitted version.

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CONFLICT OF INTEREST

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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