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Relationship Between Religious Beliefs and Professional Ethics with the Mediating Role of Spiritual Intelligence and School Ethical Climate Among Male Secondary School Teachers in Jahrom

ABSTRACT

The present study aimed to examine the relationship between religious beliefs and professional ethics with the mediating role of spiritual intelligence and school ethical climate among male secondary school teachers in Jahrom. In terms of purpose, this study was applied research. Furthermore, it was a descriptive-correlational study employing a structural equation modeling approach. Regarding the method of data collection, the study was classified as field research. The statistical population included all male secondary school teachers in Jahrom, comprising 470 teachers across 31 male secondary schools. Based on the Morgan Table, a sample size of 211 participants was selected. Data collection instruments included the Professional Ethics Questionnaire developed by Ghasemzadeh (2014), the Islamic Religiosity Questionnaire developed by Safdel (2014), the Spiritual Intelligence Questionnaire developed by Farhoush (2019), and the Ethical Climate Questionnaire developed by Victor and Cullen (1988). After analyzing the research data using SmartPLS version 3.5, the results indicated that the mediating role of ethical climate in the relationship between religious beliefs and professional ethics was confirmed with a coefficient of 0.213 ($p < .05$). However, the mediating role of spiritual intelligence in the relationship between religious beliefs and professional ethics was rejected ($p > .05$). The relationship between religious beliefs and professional ethics was confirmed with a coefficient of 0.362 ($p < .05$). The relationship between religious beliefs and ethical climate was confirmed with a coefficient of 0.356 ($p < .05$). The relationship between religious beliefs and spiritual intelligence was confirmed with a coefficient of 0.717 ($p < .05$). In addition, the relationship between ethical climate and professional ethics was confirmed with a coefficient of 0.599 ($p < .05$). The findings of this study emphasize that teachers' religious beliefs and the ethical climate of the educational environment have a significant impact on teachers' professional ethics. Therefore, strengthening these factors may contribute to improving teachers' ethical performance and ultimately enhancing the quality of education.

Keywords: Religious Beliefs, Professional Ethics, Spiritual Intelligence, Ethical Climate.

Introduction

Professional ethics has become one of the central foundations of educational quality, institutional trust, and sustainable human development in contemporary school systems. In education, professional ethics is not limited to formal compliance with rules; rather, it represents a multidimensional set of moral commitments, professional responsibilities, interpersonal obligations,

justice-oriented behaviors, and value-based decisions that guide teachers' interactions with students, colleagues, parents, and the wider educational community. Teachers are not merely transmitters of knowledge; they are moral agents whose daily judgments shape students' academic experiences, social development, and ethical orientations. For this reason, the quality of teachers' professional ethics is directly connected with the credibility of schools, the legitimacy of educational leadership, and the effectiveness of teaching and learning processes. Recent studies have emphasized that responsibility, professional commitment, ethical sensitivity, and value-based decision-making are among the most important factors influencing teachers' success and the quality of education (1, 2). In a similar direction, the moral and ethical culture of future teachers has been introduced as a key element in preparing educators who can respond to the complex ethical demands of modern classrooms (3). Therefore, understanding the factors that strengthen or weaken teachers' professional ethics is an important concern in educational management and teacher development.

The teaching profession is inherently ethical because it is built on asymmetrical relationships in which teachers possess authority, knowledge, evaluative power, and institutional influence over students. This ethical character becomes even more important in secondary education, where students experience identity formation, moral reasoning development, academic pressure, and social transition. Teachers' professional ethics includes responsibility, honesty, fairness, loyalty, respect for others, empathy, professional competence, and commitment to educational justice. These dimensions influence classroom management, assessment practices, student motivation, and the emotional climate of learning. Empirical evidence indicates that professional ethics is associated with self-efficacy and job performance among teachers, suggesting that ethical conduct is not an abstract moral ideal but a practical resource for improving educational performance (4). Similarly, studies in educational organizations have shown that professional ethics can enhance job performance through the mediating function of ethical climate, indicating that ethical behavior develops more effectively when supported by an appropriate organizational context (5). Thus, professional ethics should be understood as both an individual characteristic of teachers and an organizational outcome shaped by the culture and climate of the school.

Religious beliefs are among the important value-based factors that may influence professional ethics, especially in educational contexts where moral conduct, social responsibility, and spiritual meaning are culturally significant. Religious beliefs can provide teachers with a framework for interpreting responsibility, justice, honesty, compassion, and accountability. In many societies, religion functions as a source of moral motivation, ethical self-regulation, and commitment to duties beyond formal obligations. From this perspective, teachers with stronger religious beliefs may be more inclined to perceive teaching as a moral mission rather than merely an occupational role. Research on Islamic teachings and teacher ethics has emphasized that ethical training based on Islamic values can contribute to the formation of responsible, committed, and morally sensitive teachers (6). Furthermore, studies have shown that religious orientation is structurally related to teachers' professional ethics, particularly when moral transformation operates as a mediating mechanism (7). In the same line, the professional and Islamic ethics of religious education teachers have been shown to influence students' religious knowledge and beliefs, indicating that teachers' ethical and religious orientations may affect both their own professional behavior and students' value formation (8).

Religious beliefs may also shape ethical conduct by reinforcing internalized standards of behavior. When ethical behavior is grounded in religious conviction, teachers may experience a stronger sense of accountability, not only to the institution but also to transcendent moral principles. Such accountability can strengthen honesty, fairness, self-control, and empathy in professional interactions. In broader social and behavioral studies, religious beliefs have been linked to value-based conduct and adherence to religiously informed norms, such as the predictability of adherence to Islamic hijab based on religious beliefs and media use (9). Although such findings are located outside the teaching profession, they support the idea that religious beliefs can influence ethical decision-making and behavioral commitment. In organizational settings, Islamic work ethics has

also been discussed as a moderator of the relationship between employees' spiritual values, corporate social responsibility perceptions, and organizational citizenship behavior, showing that religiously grounded ethics can shape pro-organizational and socially responsible behavior (10). Therefore, religious beliefs may provide a motivational and normative foundation for teachers' professional ethics.

Despite the potential influence of religious beliefs, the relationship between religiosity and professional ethics is rarely simple or direct. The translation of religious belief into ethical professional behavior may depend on psychological and organizational mechanisms. One of the most important psychological mechanisms in this regard is spiritual intelligence. Spiritual intelligence refers to the capacity to use spiritual resources, existential reflection, meaning-making, moral awareness, and transcendent values to solve problems, regulate behavior, and pursue purposeful action. In professional settings, spiritual intelligence may help individuals interpret work as meaningful, manage ethical tensions, strengthen resilience, and align behavior with higher-order values. Studies have shown that spiritual intelligence is related to employee outcomes, suggesting that it can function as an important psychological resource in organizational behavior (11). In educational contexts, spiritual intelligence has been associated with teachers' work conscience and career success, indicating its relevance to teachers' professional functioning (12). Similarly, research has reported relationships between spiritual intelligence and professional ethics among school administrators and teachers, suggesting that spiritually intelligent educators may be more capable of ethical reflection and value-based decision-making (13, 14).

Spiritual intelligence may mediate the relationship between religious beliefs and professional ethics because religious beliefs can strengthen spiritual awareness, while spiritual intelligence can transform such awareness into practical ethical conduct. Religious beliefs may increase a person's attention to meaning, moral responsibility, and relationship with God; spiritual intelligence may then help the person apply these beliefs in complex professional situations. For example, spiritual intelligence training based on Islamic education principles has been shown to influence afterlife thinking and religious orientation among male students at Farhangian University, indicating that spiritual capacities can be developed and connected with religious orientation (15). In organizational and service contexts, spiritual intelligence has been linked to customer satisfaction through the mediating role of Islamic ethics, demonstrating that spiritual capacities may influence professional outcomes when they are connected with ethical frameworks (16). Moreover, studies on Islamic leadership, emotional intelligence, and spiritual intelligence have shown that spiritual intelligence can affect passion for work and performance, further supporting its relevance to ethical and professional behavior (17). Therefore, spiritual intelligence may operate as an internal pathway through which religious beliefs contribute to professional ethics.

In addition to spiritual intelligence, the ethical climate of the school may serve as a crucial organizational mechanism linking religious beliefs to professional ethics. Ethical climate refers to shared perceptions of ethical norms, expectations, decision-making standards, and moral priorities within an organization. In schools, ethical climate determines how teachers perceive fairness, responsibility, care, rule observance, professional accountability, and ethical leadership. Even teachers with strong personal values may find it difficult to maintain ethical behavior in an organizational environment that does not support justice, respect, transparency, and accountability. Conversely, a positive ethical climate can strengthen teachers' professional ethics by making moral behavior visible, expected, and institutionally supported. Research has shown that professional ethics is related to organizational virtues and ethical climate among teachers, indicating that ethical conduct is reinforced within morally supportive school environments (18). Evidence from health organizations also confirms the importance of ethical climate, as hospital ethical climate has been associated with nurses' ethical courage, suggesting that ethical environments can strengthen professionals' willingness to act morally under pressure (19). Although the context differs, this finding is highly relevant to schools, where teachers also face ethical conflicts and institutional pressures.

The role of ethical climate becomes especially important when professional ethics is studied through structural equation modeling. Ethical climate can mediate the influence of individual values on professional behavior by creating a normative environment in which ethical choices are supported, rewarded, and sustained. In educational institutions, a strong ethical climate can translate teachers' personal moral and religious commitments into collective professional practices. This means that religious beliefs may influence teachers' professional ethics not only directly but also indirectly by shaping their perceptions of the school's ethical environment. Studies in accounting and auditing have shown that perceived ethical climate, moral reasoning, and exposure to ethics affect auditors' ethical judgment, supporting the broader organizational principle that ethical climate contributes to professional ethical decision-making (20). In education, the structural relationship between professional ethics and teacher emotions through ethical identity further demonstrates that ethical behavior is shaped by both internal moral identity and contextual factors (21). Therefore, examining ethical climate as a mediating variable can provide a more precise explanation of how religious beliefs may become professional ethical behavior in schools.

The contemporary educational environment also presents new ethical challenges that increase the importance of professional ethics among teachers. Teachers are increasingly required to make decisions involving fairness, technology use, diversity, student privacy, assessment integrity, emotional support, and professional boundaries. Comparative research on ethical decision-making in education, including comparisons between teachers and artificial intelligence in ethical dilemmas, has highlighted the complexity of ethical judgment in modern educational settings (22). Such challenges show that professional ethics cannot be reduced to traditional moral instruction; it requires reflective judgment, contextual sensitivity, and ethical competence. Teachers must be able to interpret ethical situations, balance competing responsibilities, and act in ways that protect students' dignity and learning rights. In this context, spiritual intelligence may support reflective and meaning-oriented judgment, while ethical climate may provide institutional guidance for consistent ethical conduct. Therefore, studying religious beliefs, spiritual intelligence, ethical climate, and professional ethics together can respond to a significant theoretical and practical need in educational management.

Teachers' spirituality and religiosity may also influence their professional beliefs about teaching and learning. Recent research has examined whether teachers' spirituality contributes explanatory value to their professional beliefs, suggesting that spiritual and religious orientations may shape how teachers understand pedagogy, student development, and educational purpose (23). This is important because professional ethics is embedded in teachers' broader professional beliefs. A teacher who views teaching as a meaningful moral responsibility may be more likely to demonstrate patience, fairness, care, and commitment. In addition, teachers' professional ethics and responsibility have been linked to educational success and quality, suggesting that ethics is a core component of effective teaching rather than a secondary professional attribute (1). At the same time, the challenges of teaching require educators to maintain ethical stability under pressure, and professional ethics has been identified as an important response to these challenges (2). Thus, teachers' religious and spiritual orientations may contribute to professional ethics by shaping their understanding of the meaning and moral purpose of education.

Although previous studies have separately examined professional ethics, religious beliefs, spiritual intelligence, and ethical climate, there remains a need for integrated models that examine these constructs simultaneously in school settings. Some studies have focused on the relationship between spiritual intelligence and professional ethics (13, 14); others have investigated religious orientation and teachers' professional ethics (7); and still others have examined ethical climate as a contextual factor in professional behavior (5, 18). However, fewer studies have tested a structural model in which religious beliefs function as an antecedent variable, professional ethics as an outcome variable, and spiritual intelligence and school ethical climate as mediating mechanisms. Such a model is important because it allows researchers to distinguish between direct and indirect pathways and to determine whether religious beliefs influence professional ethics mainly through teachers' internal spiritual

capacities or through their perception of the ethical climate of the school. This distinction has practical implications for teacher training, school leadership, and ethical development programs.

In educational management, identifying the mechanisms that connect religious beliefs with professional ethics can help administrators design more effective interventions. If spiritual intelligence functions as a mediator, teacher development programs should focus on strengthening meaning-making, spiritual resilience, moral reflection, and purposeful teaching. If ethical climate functions as a stronger mediator, school leaders should prioritize organizational justice, ethical leadership, transparent regulations, supportive communication, and collective moral norms. Prior research suggests that both individual and organizational dimensions are important. For instance, spiritual intelligence has been associated with employee career success and work outcomes (11, 24), while ethical climate has been shown to affect professional judgment and ethical courage in organizational settings (19, 20). In schools, these findings imply that professional ethics may require both internal moral development and external ethical support. Therefore, the simultaneous examination of spiritual intelligence and ethical climate provides a more comprehensive understanding of teachers' professional ethics.

The present study is particularly significant because it focuses on male secondary school teachers in Jahrom, a context in which teachers' religious beliefs, ethical conduct, and school climate may jointly affect educational quality. Secondary schools are socially and developmentally sensitive environments, and male teachers in boys' schools often play important roles in students' academic discipline, identity formation, moral learning, and social behavior. In such settings, teachers' professional ethics can influence not only instructional quality but also students' trust, motivation, and moral development. Furthermore, the use of structural equation modeling and partial least squares analysis allows for examining complex direct and mediated relationships among the study variables. This methodological approach is consistent with recent research trends in educational management and professional ethics, where latent constructs such as religious beliefs, spiritual intelligence, ethical climate, and professional ethics require simultaneous modeling. Considering the theoretical background and empirical evidence, it is necessary to clarify whether teachers' religious beliefs directly predict professional ethics and whether this relationship is mediated by spiritual intelligence and school ethical climate.

The aim of this study was to examine the relationship between religious beliefs and professional ethics with the mediating role of spiritual intelligence and school ethical climate among male secondary school teachers in Jahrom.

Methods and Materials

The present study was applied research in terms of purpose. Furthermore, it was a descriptive-correlational study employing a structural equation modeling (SEM) approach. In terms of data collection method, the study was classified as field research. The statistical population consisted of all male secondary school teachers in Jahrom, including 470 teachers across 31 male secondary schools. Based on the Morgan Table, a sample of 211 participants was selected. Participants were selected using a multistage cluster random sampling method. The data required for this study were collected using the following questionnaires:

A) Ghasemzadeh's Professional Ethics Questionnaire (2014): The standardized Professional Ethics Questionnaire was developed by Ghasemzadeh in 2014. The questionnaire consists of 16 items and 8 components, including professional ethics, responsibility, honesty, justice and fairness, loyalty, excellence and competitiveness, respect for others, and empathy toward others. The items were scored based on a five-point Likert scale. The reliability of the questionnaire was assessed using Cronbach's alpha coefficient, which was reported as .70.

B) Safdel's Islamic Religiosity Questionnaire (2014): The Islamic Religiosity Questionnaire was developed and validated by Safdel (2014) based on the studies conducted by Shojaei-Zand (2005) and Zamani Farahani (2012). This questionnaire

includes 18 items measured on a five-point Likert scale. The instrument assesses two components: religious beliefs and religious practices. The reliability coefficient calculated using Cronbach’s alpha was .92.

C) Farhoush’s Spiritual Intelligence Questionnaire (2019): The Spiritual Intelligence Questionnaire was developed by Farhoush et al. (2019) to assess the spiritual intelligence of Muslim university students. The questionnaire consists of 15 items and includes three components: spiritual resilience, sense of closeness to God, and spiritual purposefulness. The questionnaire was designed based on a four-point scale, and its reliability coefficient calculated using Cronbach’s alpha was .87.

D) Victor and Cullen’s Ethical Climate Questionnaire (1988): The Organizational Ethical Climate Questionnaire was developed and utilized by Victor and Cullen in 1988. This questionnaire consists of 26 items and 6 components, including caring, rules and regulations, standards, instrumental orientation, efficiency orientation, and independence. The items of this questionnaire are scored on a six-point scale. The reliability of the overall questionnaire was calculated using Cronbach’s alpha coefficient and reported as .82.

In the present study, to assess the validity of the questionnaires, the instruments were reviewed by specialists in educational sciences and psychology. After minor revisions, the content validity of the questionnaires was confirmed. The collected data were analyzed using SPSS version 26 and SmartPLS. Moreover, for hypothesis testing, the Type I error rate was set at .05 and two-tailed tests were employed.

Findings and Results

Table 1 presents demographic characteristics of the participants.

Table 1. Demographic Characteristics of the Participants

Age Group	Frequency	Percentage
19–30 years	39	18
31–41 years	78	37
42–60 years	94	45
Total	211	100
Education Level	Frequency	Percentage
Bachelor’s Degree	134	63
Master’s Degree	76	36
Doctoral Degree	1	1
Total	211	100

The descriptive examination of the research population indicated that the highest frequency of age among male secondary school teachers in Jahrom belonged to the 42–60-year age group, comprising 94 participants (45%). In addition, the highest educational attainment was at the bachelor’s degree level, including 134 participants (63%).

Table 2. Descriptive Statistics and Normality Status of the Research Variables

Variable	Item	No.	Outlier	Mean	Median	Min	Max	Standard Deviation	Kurtosis	Skewness
Professional Ethics	1.a1	3.000	1.000	4.167	4.000	1.000	5.000	0.652	1.691	-0.599
Professional Ethics	1.2	4.000	1.000	3.967	4.000	1.000	5.000	0.807	0.905	-0.596
Professional Ethics	1.3	5.000	2.000	4.335	4.000	1.000	5.000	0.589	3.589	-0.819
Professional Ethics	1.4	6.000	5.000	4.369	4.000	1.000	5.000	0.599	3.481	-0.914
Professional Ethics	1.5	7.000	3.000	4.005	4.000	1.000	5.000	0.912	0.512	-0.814
Professional Ethics	1.6	8.000	2.000	2.818	3.000	1.000	5.000	1.375	-1.232	0.187
Professional Ethics	1.7	9.000	4.000	4.029	4.000	1.000	5.000	0.701	1.088	-0.548
Professional Ethics	1.8	10.000	1.000	4.319	4.000	2.000	5.000	0.631	-0.068	-0.494
Professional Ethics	1.9	11.000	1.000	3.752	4.000	1.000	5.000	1.149	-0.039	-0.813
Professional Ethics	1.10	12.000	2.000	3.737	4.000	1.000	5.000	1.104	0.032	-0.775
Professional Ethics	1.11	13.000	2.000	4.177	4.000	2.000	5.000	0.665	0.045	-0.414
Professional Ethics	1.12	14.000	4.000	4.242	4.000	2.000	5.000	0.674	-0.388	-0.430
Professional Ethics	1.13	15.000	1.000	4.386	4.000	2.000	5.000	0.632	0.022	-0.647
Professional Ethics	1.14	16.000	3.000	4.279	4.000	2.000	5.000	0.635	-0.106	-0.428

Professional Ethics	1.15	17.000	1.000	4.148	4.000	1.000	5.000	0.738	1.948	-0.887
Professional Ethics	1.16	18.000	1.000	4.267	4.000	2.000	5.000	0.673	0.070	-0.567
Ethical Climate	2.a1	19.000	2.000	4.852	5.000	1.000	6.000	0.887	3.860	-1.486
Ethical Climate	2.a2	20.000	1.000	5.019	5.000	1.000	6.000	0.873	4.593	-1.553
Ethical Climate	2.3	21.000	1.000	4.762	5.000	1.000	6.000	1.113	1.228	-1.021
Ethical Climate	2.4	22.000	3.000	4.837	5.000	1.000	6.000	0.977	0.944	-0.851
Ethical Climate	2.5	23.000	2.000	4.986	5.000	3.000	6.000	0.798	-0.163	-0.487
Ethical Climate	2.									

To determine whether parametric or nonparametric statistical tests should be employed, the normality of data distribution was examined through skewness and kurtosis indices. The results of the normality assessment indicated that all variables exhibited normal distribution characteristics. Therefore, parametric statistical tests were used for hypothesis testing, considering the acceptable skewness and kurtosis range between -2 and +2.

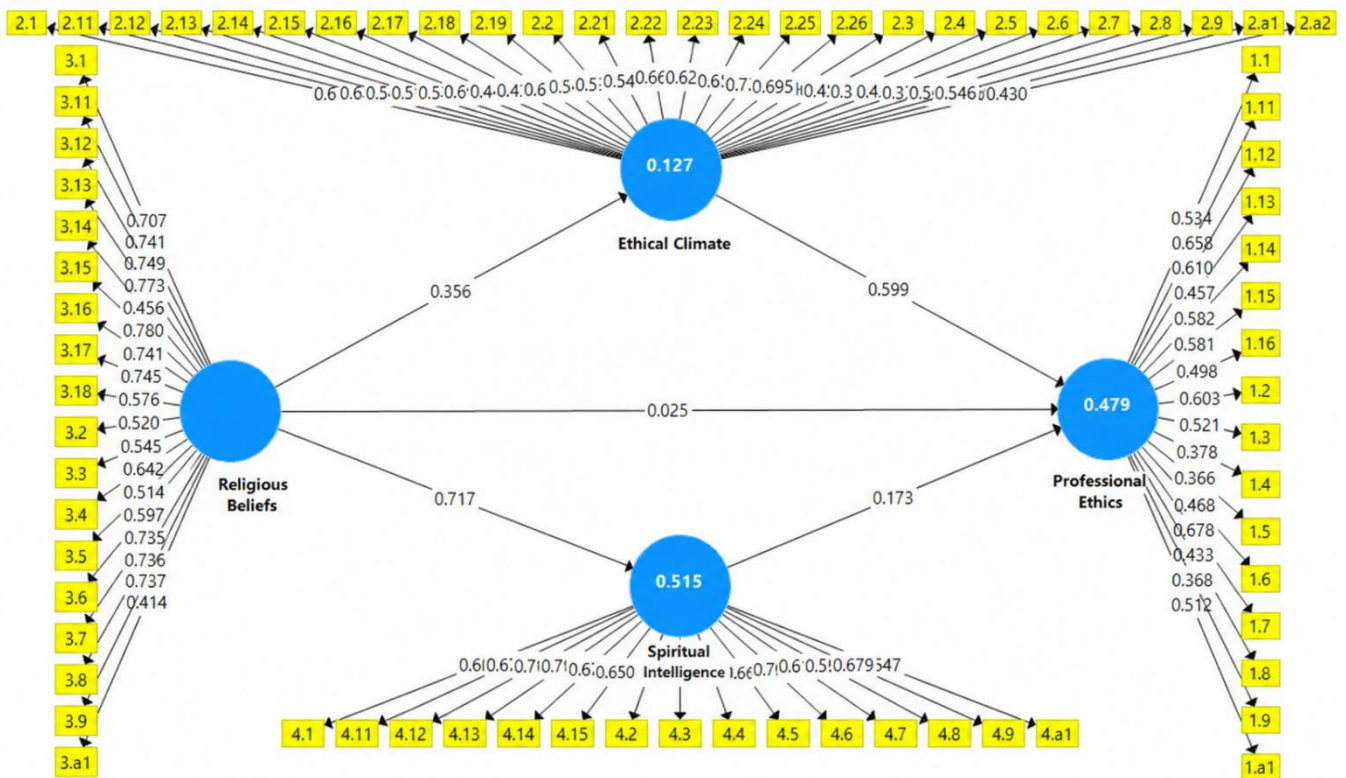


Figure 1. Model with Factor Loadings

In this study, SmartPLS 3.5 software was used to measure four variables: professional ethics, ethical climate, religious beliefs, and spiritual intelligence. Structural equation modeling (SEM) and partial least squares (PLS) were used to analyze the data, and model fit was confirmed through hypothesis testing. The assessment of model fit consists of three sections: measurement model fit, structural model fit, and overall model fit. The measurement model section includes the questions (indicators) for each construct and examines the relationship between the indicators and the intended construct. Both the measurement and structural model sections were evaluated, and the relationships between them are analyzed below. The evaluation and fit of the two sections of the measurement model and structural model are presented below.

The correlation coefficient in the measurement model between the latent variable and the observed variable is called the factor loading coefficient. This coefficient indicates the extent to which the latent variable determines the variance of the observed variable; therefore, the higher and more significant this coefficient is, the stronger the correlation will be. According to some researchers, if the coefficient value between a construct and its related indicators is greater than .40, the values are

generally considered appropriate for explaining a desirable correlation (Holland, 1999). This indicates that the measurement error variance between the construct and its indicators in this measurement model has acceptable reliability (Davari et al., 2013). These values are shown in Figure 1. As shown in Figure 1, all item factor loadings at the value of .40 generally indicate measurement adequacy.

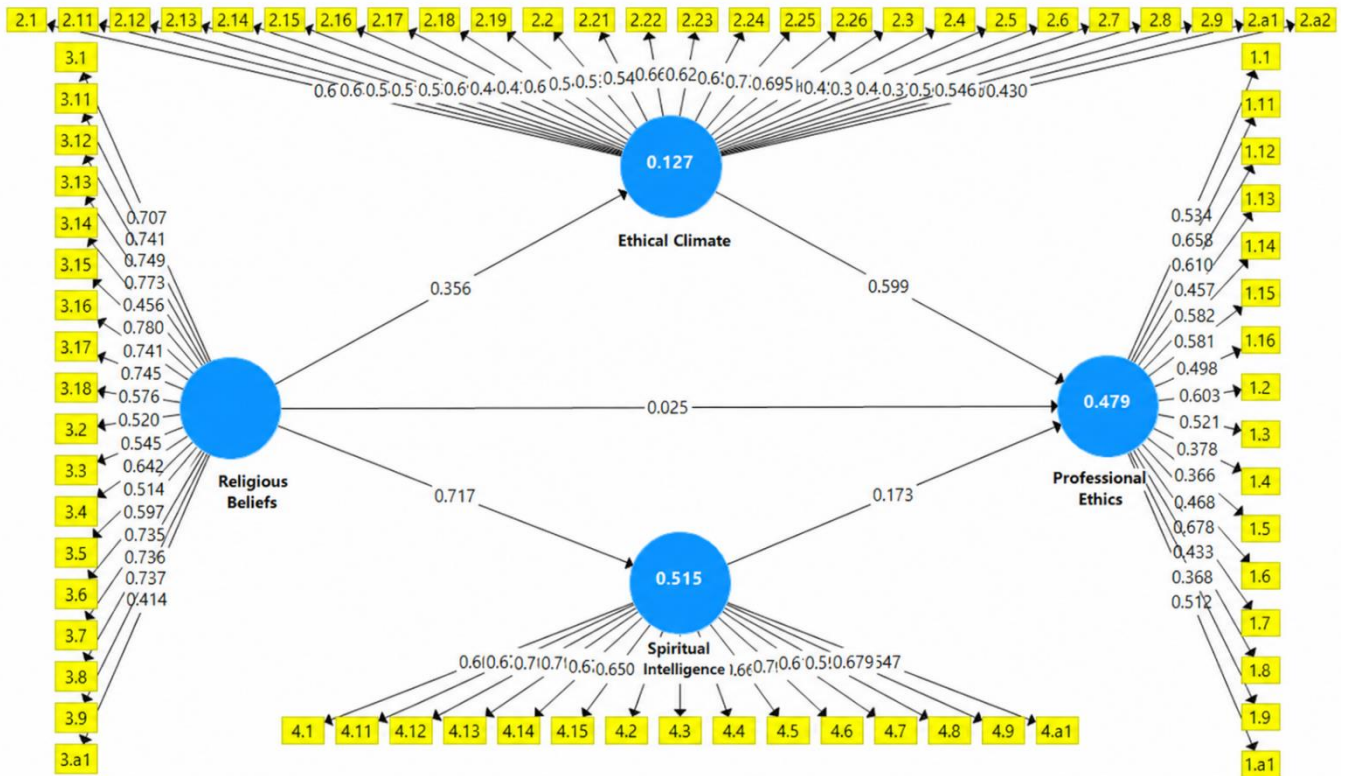


Figure 2. Factor Loadings

Cronbach’s alpha reliability was used to assess the reliability of the structural equation model. This internal reliability indicates the degree of correlation between a construct and its indicators. If this value is greater than .70, it indicates acceptable reliability (Davari et al., 2012). In addition, another criterion commonly used for this evaluation is composite reliability (CR). If this value is greater than .70, it indicates the proper internal reliability of the measurement model. This criterion is presented in Table 3 and indicates the reliability of the model.

Table 3. Cronbach’s Alpha and Composite Reliability

Variable	Cronbach’s Alpha	Composite Reliability
Professional Ethics	0.819	0.854
Religious Beliefs	0.924	0.931
Ethical Climate	0.905	0.917
Spiritual Intelligence	0.907	0.920

The optimal value of this criterion is .50, meaning that a value greater than this threshold indicates optimal convergent validity. As shown in the table below, the values obtained from this measurement indicate its usefulness. This criterion is average variance extracted (AVE).

Table 4. Convergent Validity or Average Variance Extracted (AVE)

Variable	Average Variance Extracted (AVE)
Professional Ethics	0.275
Religious Beliefs	0.436
Ethical Climate	0.306
Spiritual Intelligence	0.434

Another criterion used to assess the fit of measurement models is discriminant validity. In this study, the Fornell–Larcker method was used to obtain discriminant validity. The results in Table 5 show that the measurement model has appropriate discriminant validity and good fit.

Table 5. Fornell–Larcker Criterion for Discriminant Validity

Variable	Professional Ethics	Religious Beliefs	Ethical Climate	Spiritual Intelligence
Professional Ethics	0.524			
Religious Beliefs	0.362	0.661		
Ethical Climate	0.669	0.356	0.553	
Spiritual Intelligence	0.402	0.717	0.352	0.659

Following the modification of the research model, the structural model was evaluated after assessing the measurement model. In this section, the main focus is on the latent variables of the research model, with emphasis only on the relationships between constructs. Five criteria can be used to measure the relationships between constructs: significance values (t-values), coefficient of determination (R^2), effect size criterion (f^2), and predictive relevance criterion (Q^2). Each of these criteria is explained below.

Following the modification of the research model, the structural model was evaluated after assessing the measurement model. In this section, the main focus is on the latent variables of the research model, with emphasis only on the relationships between constructs. The coefficient of determination (R^2), effect size (f^2), and predictive relevance criterion (Q^2), which are associated with significance values (t-values), can be used to measure the relationships between constructs.

The first step in evaluating and measuring the relationships between constructs in a fitted structural model is examining the significant values related to those measurements. If the value obtained from the structural model fit is greater than 1.96, the relationship between the constructs is significant. Therefore, the significance of the relationship between constructs indicates the validity of the relationship between constructs and the acceptance and fit of the research hypotheses at the 95% confidence interval. However, it should be noted that t-values cannot measure the strength of the relationship between constructs; their only function is to indicate the correctness of the relationship (Davari et al., 2013). The significant values at confidence levels of 95%, 99%, and 99.9% are 1.96, 2.58, and 3.72, respectively.

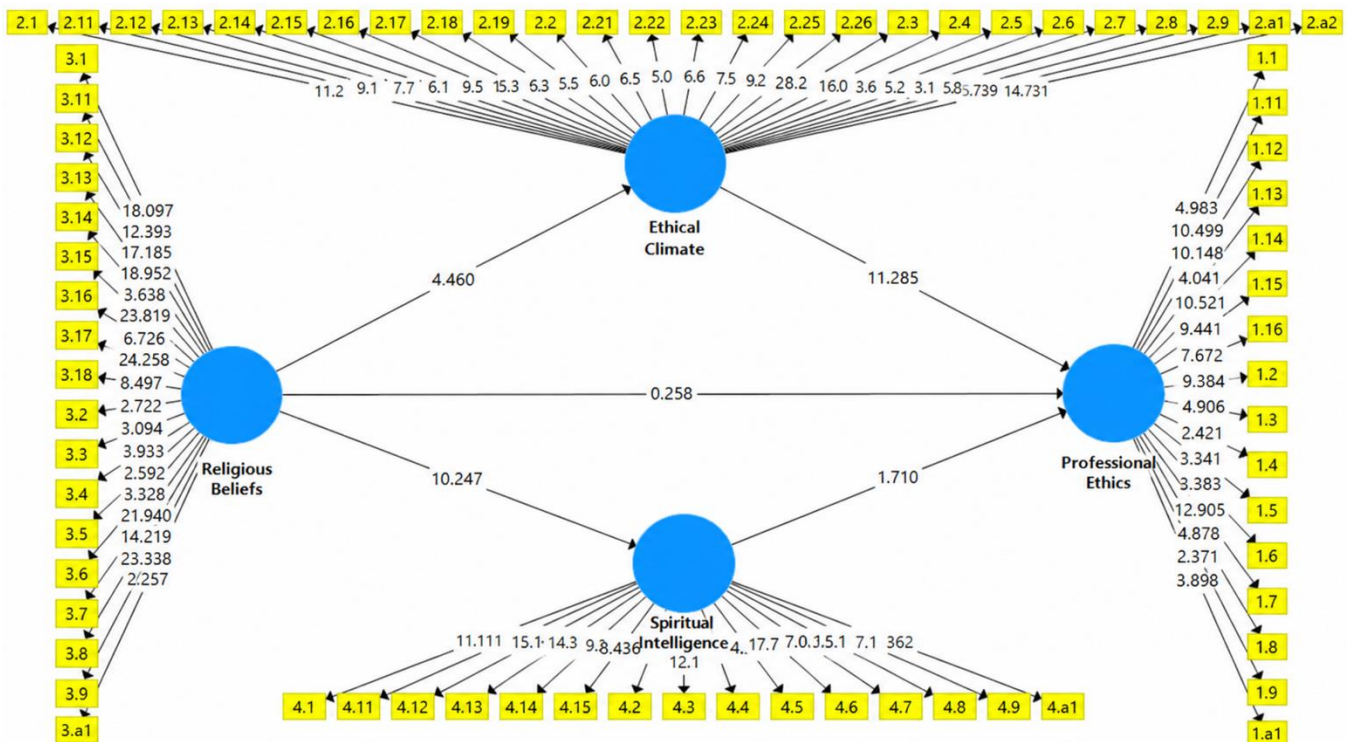


Figure 2. Significance Coefficients of the Research Variables

Table 6. Significance Coefficients of the Research Variables

Effects	Hypothesis	Path	Coefficient	Standard Deviation	t Statistic	p Values	Result
Indirect effects	Main	Religious Beliefs → Ethical Climate → Professional Ethics	0.213	0.055	3.899	0.000	Confirmed
Indirect effects	Main	Religious Beliefs → Spiritual Intelligence → Professional Ethics	0.124	0.077	1.619	0.106	Rejected
Direct effects	1	Religious Beliefs → Professional Ethics	0.362	0.078	4.634	0.000	Confirmed
Direct effects	2	Religious Beliefs → Ethical Climate	0.356	0.080	4.460	0.000	Confirmed
Direct effects	3	Religious Beliefs → Spiritual Intelligence	0.717	0.070	10.247	0.000	Confirmed
Direct effects	4	Ethical Climate → Professional Ethics	0.599	0.053	11.285	0.000	Confirmed

As can be seen, six paths from the overall model were presented in the study, and the significance coefficients of the paths and t-values at the 95% level, except for the path Religious Beliefs → Spiritual Intelligence → Professional Ethics, were greater than 1.96, indicating the significance of these paths or hypotheses.

The main hypothesis path, Religious Beliefs → Ethical Climate → Professional Ethics, had a coefficient of 0.213 and a t statistic of 3.899, which was greater than 1.96. At this confidence level, the p value was 0.000. Therefore, this path was significant, and the main research hypothesis regarding the mediating role of ethical climate in the relationship between religious beliefs and professional ethics was confirmed.

The main hypothesis path, Religious Beliefs → Spiritual Intelligence → Professional Ethics, had a coefficient of 0.124 and a t statistic of 1.619, which was lower than 1.96. At this confidence level, the p value was 0.106. Therefore, this path was not significant, and the main research hypothesis regarding the mediating role of spiritual intelligence in the relationship between religious beliefs and professional ethics was not confirmed.

The path of sub-hypothesis 1, Religious Beliefs → Professional Ethics, had a coefficient of 0.362 and a t statistic of 4.634, which was greater than 1.96. At this confidence level, the p value was 0.000. Therefore, this path was significant, and sub-hypothesis 1 of the study regarding the relationship between religious beliefs and professional ethics was confirmed.

The path of sub-hypothesis 2, Religious Beliefs → Ethical Climate, had a coefficient of 0.356 and a t statistic of 4.460, which was greater than 1.96. At this confidence level, the p value was 0.000. Therefore, this path was significant, and sub-hypothesis 2 of the study regarding the relationship between religious beliefs and ethical climate was confirmed.

The path of sub-hypothesis 3, Religious Beliefs → Spiritual Intelligence, had a coefficient of 0.717 and a t statistic of 10.247, which was greater than 1.96. At this confidence level, the p value was 0.000. Therefore, this path was significant, and sub-hypothesis 3 of the study regarding the relationship between religious beliefs and spiritual intelligence was confirmed.

The path of sub-hypothesis 4, Ethical Climate → Professional Ethics, had a coefficient of 0.599 and a t statistic of 11.285, which was greater than 1.96. At this confidence level, the p value was 0.000. Therefore, this path was significant, and sub-hypothesis 4 of the study regarding the relationship between ethical climate and professional ethics was confirmed.

This criterion shows the effect of an exogenous variable on an endogenous variable and is one of the criteria used to connect and relate the two sections of the structural model and the measurement method. Increasing the degree of shared variance between constructs and indicators and reducing the error coefficient of measurement models are among the main advantages of this measure. Chen (1998) introduced three specific values for measuring this criterion based on weak, moderate, and strong levels: 0.19, 0.33, and 0.67, respectively. Therefore, according to the values obtained for the coefficient of determination (R^2), the proper fit of the structural model can be confirmed.

Table 7. Values of the Coefficient of Determination (R^2)

Endogenous Variable	R^2	Adjusted R^2
Professional Ethics	0.479	0.471
Ethical Climate	0.127	0.123
Spiritual Intelligence	0.515	0.512

This criterion is used to determine the predictive power of the model. Based on the reference values presented in Table 8, it can be concluded that the model has good predictive power.

Table 8. Stone–Geisser Criterion for the Predictive Power of the Model (Q^2)

Variable	SSO	SSE	$Q^2 (= 1 - SSE/SSO)$
Professional Ethics	3,376.000	3,007.096	0.109
Religious Beliefs	3,798.000	3,798.000	
Ethical Climate	5,486.000	5,307.525	0.033
Spiritual Intelligence	3,165.000	2,536.098	0.199

This criterion measures the variability of an endogenous construct affected by multiple exogenous structures. To calculate it, the communality values must be multiplied by the R^2 values of that structure. This criterion is the fourth criterion for the structural model section of structural equation modeling and is represented by the redundancy index. It is obtained from the mean value of the exogenous structures in the model. Unlike the previous parameters, which had specific values for judging whether a structural section was weak, moderate, or strong, there is no fixed threshold for this criterion. However, the higher the value of this criterion, the more compatible the structural section is. This refers to the structural section in the extracted model. Since the conceptual research model includes three endogenous variables, the value of each is calculated below.

Table 9. Redundancy Criteria for Variability of the Criteria

Variable	SSO	SSE	Q ² (= 1 – SSE/SSO)
Professional Ethics	3,376.000	2,813.585	0.167
Religious Beliefs	3,798.000	2,493.284	0.344
Ethical Climate	5,486.000	4,145.853	0.244
Spiritual Intelligence	3,165.000	2,104.810	0.335

This criterion indicates the strength of the relationship between the constructs of a research model and was first introduced by Cohen (1988). This criterion is mainly used to analyze the relationship between instruments. The standardized values for small, medium, and large effects are 0.02, 0.15, and 0.35, respectively.

Table 10. Effect Size Criterion for the Strength of Relationships Between Model Constructs

Variable	Professional Ethics	Religious Beliefs	Ethical Climate	Spiritual Intelligence
Professional Ethics				
Religious Beliefs	0.001		0.145	1.060
Ethical Climate	0.588			
Spiritual Intelligence	0.027			

Using descriptive and inferential statistics in the data analysis chapter, the values and results obtained from f^2 in the research sample were examined and evaluated. The characteristics of the respondents were reviewed, and the results were presented in the form of charts and tables. SmartPLS and the partial least squares approximation were tested to confirm the assumptions of structural equation modeling. Accordingly, three types of relationships were established and tested in the measurement section, structural section, and overall model.

Discussion and Conclusion

The present study aimed to investigate the relationship between religious beliefs and professional ethics with the mediating role of spiritual intelligence and school ethical climate among male secondary school teachers in Jahrom. The findings demonstrated that religious beliefs had a significant positive relationship with professional ethics. In addition, religious beliefs were significantly associated with ethical climate and spiritual intelligence. Ethical climate also showed a significant positive relationship with professional ethics. Furthermore, the mediating role of ethical climate in the relationship between religious beliefs and professional ethics was confirmed, whereas the mediating role of spiritual intelligence was not supported. Overall, the structural model indicated that both individual value-oriented factors and organizational ethical conditions contribute to the development of teachers’ professional ethics, although the strength and nature of these relationships differ across variables.

One of the major findings of the study was the significant positive relationship between religious beliefs and professional ethics. This finding suggests that teachers who possess stronger religious beliefs are more likely to demonstrate higher levels of responsibility, honesty, fairness, respect for others, empathy, and commitment to ethical principles in professional settings. Religious beliefs appear to function as an internal moral framework that guides teachers’ attitudes and behaviors in educational environments. Such findings are consistent with the theoretical assumption that religion strengthens ethical self-regulation and moral accountability. This result aligns with the findings of Jalili and Hashemi, who reported a structural relationship between religious orientation and teachers’ professional ethics (7). Similarly, Karimi Asl and Karimi Asl emphasized that the professional and Islamic ethics of teachers significantly influence students’ religious beliefs and educational outcomes, demonstrating the practical significance of teachers’ ethical and religious orientations (8). Hosseini et al. also highlighted the importance of ethical training grounded in Islamic teachings for strengthening teachers’ ethical conduct and educational

responsibility (6). These findings collectively indicate that religious beliefs may strengthen professional ethics by reinforcing moral commitment, spiritual accountability, and value-based behavior.

The significant relationship between religious beliefs and professional ethics may also be interpreted through the social and cultural role of religion in shaping teachers' identity and professional meaning. Teachers with strong religious beliefs may perceive teaching not only as a job but also as a moral and social mission associated with service, justice, and responsibility toward students and society. Such perceptions may increase professional commitment and reduce unethical behavior. Previous research has shown that religious beliefs influence adherence to moral and social norms in different contexts (9). In addition, organizational studies have demonstrated that Islamic work ethics can strengthen positive organizational behavior and social responsibility (10). Therefore, the findings of the present study support the broader literature suggesting that religion can operate as a motivational and normative resource for ethical professional behavior.

Another important finding was the significant positive relationship between religious beliefs and ethical climate. This result indicates that teachers with stronger religious beliefs are more likely to perceive or contribute to a more ethical organizational environment in schools. Religious beliefs may influence how teachers interpret fairness, organizational justice, cooperation, care, and accountability within the school environment. Teachers with stronger moral and spiritual commitments may actively participate in maintaining respectful communication, ethical interactions, and socially responsible behaviors, thereby strengthening the ethical climate of the institution. This finding is consistent with research demonstrating the importance of ethical climate in organizational behavior and professional interactions (19). Kashouri also found that professional ethics and organizational virtues are positively related to ethical climate among teachers (18). Similarly, Ahmadi et al. emphasized the role of perceived ethical climate in shaping ethical judgment and moral reasoning in professional contexts (20). Therefore, the present findings suggest that religious beliefs may contribute indirectly to ethical organizational environments by encouraging moral sensitivity and ethical interpersonal conduct.

The results also revealed a significant positive relationship between ethical climate and professional ethics. This finding indicates that teachers working in schools characterized by fairness, ethical norms, supportive relationships, and clear moral expectations are more likely to demonstrate ethical professional behavior. Ethical climate functions as an organizational framework that shapes acceptable behavior, reinforces ethical standards, and influences teachers' daily interactions. When schools provide an atmosphere of trust, justice, cooperation, and ethical accountability, teachers may feel greater motivation to maintain professional ethical standards. This finding supports previous studies emphasizing the role of ethical climate in organizational and educational settings. Kashouri found that ethical climate is associated with teachers' professional ethics and organizational virtues (18). Kouhi Rostami et al. also reported that ethical climate mediates the relationship between professional ethics and job performance in academic institutions (5). Furthermore, Nasiriani et al. showed that ethical climate strengthens ethical courage among healthcare professionals (19). These studies, together with the findings of the present research, indicate that ethical climate serves as a contextual mechanism that encourages ethical behavior and reduces professional misconduct.

One of the central findings of the present study was the confirmation of the mediating role of ethical climate in the relationship between religious beliefs and professional ethics. This result suggests that religious beliefs influence teachers' professional ethics not only directly but also indirectly through the ethical environment of the school. In other words, teachers with stronger religious beliefs may contribute to creating a more ethical school atmosphere, and this positive ethical climate subsequently promotes professional ethical behavior. This finding has important implications because it demonstrates that ethical behavior is not solely an individual phenomenon but also a socially and organizationally constructed process. Ethical values become more effective when supported by collective norms and institutional practices. This result is consistent with

organizational ethics literature emphasizing the mediating role of ethical climate in the relationship between individual values and professional outcomes (5, 20). It also supports the argument that schools function as ethical communities in which organizational culture can reinforce or weaken personal moral values. Therefore, strengthening ethical climate may be one of the most effective ways to transform teachers' moral beliefs into sustainable professional ethical practices.

The findings further indicated a strong positive relationship between religious beliefs and spiritual intelligence. This result suggests that individuals with stronger religious beliefs tend to report higher levels of spiritual intelligence, including meaning-making, spiritual awareness, resilience, and closeness to transcendent values. Religious beliefs may enhance individuals' existential reflection and encourage them to interpret life and work through a moral and spiritual framework. Such findings are compatible with previous studies showing relationships between spirituality, religiosity, and psychological functioning. Penthin et al. found that teachers' spirituality and religiosity contribute to their professional beliefs regarding teaching and learning (23). Tavan and Soleimani Fard also reported that spiritual intelligence training based on Islamic educational principles influences religious orientation and spiritual thinking (15). Moreover, Kessi et al. emphasized the role of spiritual intelligence in work passion and employee performance (17). These findings suggest that religious beliefs and spiritual intelligence are conceptually and empirically interconnected constructs.

Despite the strong relationship between religious beliefs and spiritual intelligence, the mediating role of spiritual intelligence in the relationship between religious beliefs and professional ethics was not confirmed. This finding indicates that although religious beliefs increase spiritual intelligence, spiritual intelligence alone does not significantly explain teachers' professional ethics in the current model. Several explanations may account for this result. First, professional ethics in educational environments may depend more strongly on organizational and contextual conditions than on internal spiritual capacities. Teachers may possess high spiritual intelligence, but without supportive organizational structures and ethical norms, such capacities may not necessarily translate into observable professional ethical behavior. Second, spiritual intelligence may influence other outcomes such as resilience, job satisfaction, emotional regulation, or career success more strongly than professional ethics itself. Previous studies have indeed connected spiritual intelligence with job satisfaction, work conscience, employee outcomes, and career success (11, 12, 14, 24). Third, the ethical demands of teaching may require concrete institutional guidance and collective ethical standards in addition to personal spirituality. Thus, while spiritual intelligence may support personal meaning and emotional balance, ethical climate may play a more direct role in regulating professional ethical behavior within schools.

The rejection of the mediating role of spiritual intelligence also highlights the importance of distinguishing between internal spiritual orientation and externally observable ethical conduct. Spiritual intelligence may remain primarily cognitive, emotional, or existential in nature, whereas professional ethics requires practical implementation within social and organizational contexts. Teachers may possess spiritual awareness without necessarily translating it into professional ethical behavior in situations involving institutional pressure, administrative demands, workload, or organizational conflict. This interpretation is partially supported by studies suggesting that professional ethics is influenced by broader organizational and professional factors, including ethical climate, ethical identity, and institutional norms (2, 21). Therefore, the findings of the present study suggest that organizational ethical structures may have stronger practical implications for professional ethics than personal spirituality alone.

Another important implication of the study concerns the contemporary educational environment and the growing complexity of ethical decision-making in schools. Teachers today face numerous ethical challenges related to fairness, discipline, technology use, emotional support, diversity management, and professional accountability. Ethical conduct in such contexts requires not only personal morality but also institutional guidance and collective ethical standards. Recent comparative studies

examining ethical decision-making among teachers and artificial intelligence systems have highlighted the complexity and sensitivity of ethical dilemmas in education (22). In such situations, ethical climate may provide teachers with clearer expectations and stronger organizational support for ethical action. At the same time, religious beliefs may strengthen teachers' commitment to moral principles and social responsibility. Consequently, the interaction between personal beliefs and organizational ethics becomes particularly important in educational institutions.

The findings of this study also contribute theoretically to educational management and organizational ethics research by integrating religious beliefs, spiritual intelligence, ethical climate, and professional ethics within a single structural model. Previous research has generally examined these variables separately, whereas the present study demonstrated the differential pathways through which religious beliefs influence professional ethics. The results suggest that organizational ethical conditions are more effective mediators than spiritual intelligence in explaining teachers' ethical behavior. This distinction is theoretically important because it emphasizes the interaction between individual moral values and institutional ethical structures. The findings support the broader perspective that professional ethics emerges through the interaction between personal values, organizational climate, and social expectations. In educational institutions, ethical leadership and organizational culture may therefore play critical roles in transforming individual beliefs into collective ethical behavior.

Overall, the results of this study indicate that teachers' professional ethics is shaped by both individual and organizational factors. Religious beliefs contribute directly to professional ethics and indirectly through ethical climate, whereas spiritual intelligence, despite its positive association with religious beliefs, does not significantly mediate this relationship. These findings demonstrate that ethical organizational environments may be more influential than internal spiritual capacities in strengthening teachers' professional ethics. Consequently, educational administrators and policymakers should pay greater attention to ethical climate, value-based leadership, and institutional ethical development while also recognizing the importance of teachers' moral and religious values in promoting ethical educational environments.

One limitation of the present study was that the research population was restricted to male secondary school teachers in Jahrom, which may limit the generalizability of the findings to female teachers, primary school teachers, or teachers from other cultural and geographical regions. Another limitation was the use of self-report questionnaires, which may have increased the possibility of social desirability bias and subjective responses. In addition, the cross-sectional design of the study prevented the identification of causal relationships among the variables. The study also focused only on selected mediating variables and did not examine other organizational or psychological factors that may influence professional ethics.

Future studies are recommended to examine similar models in different educational settings, including female schools, universities, and private educational institutions. Researchers may also investigate additional mediating and moderating variables such as organizational commitment, ethical leadership, job satisfaction, emotional intelligence, or teacher burnout. Longitudinal and mixed-methods studies may provide deeper insight into the causal and developmental relationships among religious beliefs, ethical climate, spiritual intelligence, and professional ethics. Comparative studies across different cultures and educational systems may also contribute to a broader understanding of ethical behavior in education.

Educational administrators and policymakers should design programs aimed at strengthening ethical climate within schools through ethical leadership, organizational justice, transparent regulations, and supportive communication systems. Teacher training programs should also emphasize ethical responsibility, value-based teaching, and professional accountability. In addition, schools should create opportunities for ethical dialogue, collaborative decision-making, and reflective professional development in order to strengthen teachers' ethical awareness and institutional commitment. Promoting ethical organizational culture may ultimately improve teachers' professional performance, educational quality, and students' moral and academic development.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adhered in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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References

1. Yazdanshenasi M. The Role of Responsibility and Professional Ethics in the Success of Teachers and Its Effects on the Quality of Education and Learning. 2024.
2. Momtaz M, Rostam Nia M, Vosoogh M, Karami M, editors. Professional ethics and the challenges of teaching. The Second National Conference on Humanities with a New Approach and the First International Research Conference of Modern Teachers; 2025; Astara.
3. Zhukov V, Popova O, Altukhova A, Boiarska-Khomenko A, Fomin V. Moral and ethical culture of a future art teacher. *Revista Romaneasca pentru Educatie Multidimensionala*. 2025;17(1):138–58. doi: 10.18662/rrem/17.1/944.
4. Hooti F, Allahi Z, Arjang Z. The relationship between professional ethics with self-efficacy and job performance among elementary school teachers. *Journal of Professional Ethics in Education*. 2022;1(2):68-82.
5. Kouhi Rostami M, Gilani S, Najafpour Moghadam P. The impact of professional ethics on job performance with the mediation of ethical climate in university libraries of Ahvaz. *Library and Information Science Research*. 2022;56(3):1-12.
6. Hosseini B, Dovayi M, Vakili N, Samadi M. Providing a model for teacher ethical training with emphasis on Islamic teachings. *Scientific-Research Quarterly of Islamic Lifestyle with a Focus on Health*. 2022;6(1):563-77.
7. Jalili F, Hashemi Z. Structural relationships between religious orientation and professional ethics of teachers with the mediating role of moral transformation. *Scientific-Research Quarterly of Applied Issues in Islamic Education and Training*. 2023;8(1):67-84.
8. Karimi Asl L, Karimi Asl Z. Examining the role of professional and Islamic ethics of religious education teachers in influencing religious knowledge (religious beliefs) in secondary school students in Izeh. *Humanities and Islamic Studies in the Third Millennium*. 2022;19(6):43-52.

9. Ahmadpour A. Predictability of adherence to Islamic hijab based on religious beliefs and the use of social media. *Islam and Social Sciences*. 2022;14(27):183-97.
10. Raza SA, Khan KA, Hakim F. Whether organizational citizenship behavior is triggered by employee CSR perception and spiritual values: the moderating role of Islamic work ethics. *Management Research Review*. 2023.
11. Oyewunmi AE, Esho E, Oyewunmi O. Spiritual intelligence and employee outcomes in an African sample. *Journal of Management, Spirituality & Religion*. 2021;18(2):151-71.
12. Awad Alawi A. Investigating the relationship between spiritual intelligence and work conscience with career success in biology teachers of Nasiriyah city, Dhi Qar province: Islamic Azad University, Khorasgan Branch, Isfahan; 2023.
13. Dehbandi S, Kohzadi M, Alijanzadeh Kashi F, Alijanzadeh Kashi M, editors. Examining the relationship between professional ethics and spiritual intelligence in primary school administrators in Behshahr. 18th International Conference on Management, Economics, and Development; 2023.
14. Mehrpouya F, editor The relationship between spiritual intelligence and professional ethics with job satisfaction among primary school teachers in Zarand. 10th Scientific Conference on Educational and Psychological Sciences, Social and Cultural Issues in Iran; 2022; Tehran.
15. Tavan A, Soleimani Fard Z. Examining the effectiveness of spiritual intelligence training based on Islamic education principles on afterlife thinking and religious orientation among male students of Farhangian University in Kerman. *Applied Issues in Islamic Education and Training*. 2022;7(2):33-48.
16. Rezaei Shandiz R, Bahramzadeh M, Sang Sefid N. Investigating the relationship between spiritual intelligence and customer satisfaction in hotels with the mediating role of Islamic ethics (Case study: 4 and 5-star hotels in Mashhad). *Quarterly Journal of Knowledge-Based Business Management*. 2022;3(1):36-45.
17. Kessi AMP, Suwardi WZ, Mukhtar A, Asmawiyah A, Ar DP. Islamic Leadership, Emotional Intelligence, and Spiritual Intelligence on Passion of Work and Performance. *Golden Ratio of Human Resource Management*. 2022;2(1):15-26.
18. Kashouri S, editor The relationship between professional ethics and organizational virtues with ethical climate in teachers. 3rd National Conference on Applied Studies in Educational Processes; 2023; Minab.
19. Nasiriani K, Brati Khehrizangi M, Fazeljoo E. The ethical climate of hospitals at Yazd University of Medical Sciences and its relationship with the ethical courage of nurses. *Ethics and History of Medicine*. 2021;14:290-303.
20. Ahmadi A, Rostami A, Heidari Zadeh S. Examining the impact of moral reasoning, exposure to ethics, and perceived ethical climate on auditors' ethical judgment. *Financial and Behavioral Research in Accounting*. 2022;2(3):20-37.
21. Sifi Fathabadi S, Kamyabi M, Haji Poor Abai N, Manzari Tavakoli H. Structural equation modeling of the relationship between professional ethics and teacher emotions with the mediation of ethical identity. *Psychological Studies of Adolescents and Youth*. 2023;4(6):116-26.
22. Karakuş N, Gedik K, Kazazoğlu S. Ethical Decision-Making in Education: A Comparative Study of Teachers and Artificial Intelligence in Ethical Dilemmas. *Behavioral Sciences*. 2025;15(4):469. doi: 10.3390/bs15040469.
23. Penthin M, Christ A, Kröner S, Pirner ML, Scheunpflug A. Does Teachers' Spirituality Make a Difference? The Explanatory Value of Spirituality and Religiosity for Teachers' Professional Beliefs on Teaching and Learning. *Religion & Education*. 2023:1-32.
24. Rogers. Investigating the relationship between spiritual intelligence and employee career success. *Quarterly Journal of Ethics in Science and Technology*. 2022;13(1):101.