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Original Article

The Correlation Between Media Literacy and Reflective Thinking with the Reduction of Addiction Risk in Female Students: The Mediating Role of Spiritual Health

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Abstract

Background: Today, media literacy and reflective thinking are emphasized as an important preventive strategy against drug abuse. Therefore, the present study aimed to explore how spiritual health mediates the relationship between media literacy and reflective thinking in lowering addiction risk among female students.

Methods: In a descriptive-correlational study, 315 female students were selected using convenience sampling techniques at the University of Zanjan, Iran, from April 2021 to November 2021. They were asked to complete the Media Literacy Questionnaire (MLQ), Reflective Thinking Questionnaire (RTQ), Addiction Risk Assessment (ARA), and Spiritual Health Scale (SHS). The data was then analyzed using SEM conducted by SPSS Amos version 24.

Results: Preliminary findings indicated a significant negative correlation between addiction risk and both media literacy (r=-0.33, P=0.001) and spiritual health (r=-0.36, P=0.001), with reflective thinking acting as a critical factor in enhancing media literacy's protective effect. Spiritual health was regarded as a mediating variable in this study. The results demonstrated that spiritual health effectively mediated the relationship between media literacy and reflective thinking, affecting addiction risk among female students (P=0.001).

Conclusions: This study revealed a significant negative correlation between addiction risk and both media literacy and spiritual health, where reflective thinking plays a crucial role in enhancing the protective effect of media literacy on addiction risk, with spiritual health acting as a mediating variable.

Keywords: Literacy, Behavior addictive, Spirituality, Reflective thinking, Female University Students

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1. Introduction

In the rapidly changing world of healthcare, the pivotal role of professional doctoral students, especially women, is undeniable. Their burgeoning presence across critical disciplines like medicine, dentistry, and pharmacy heralds a significant demographic shift, underscoring the urgency of addressing unique challenges such as addiction risks (1). Addiction, a multifaceted challenge, impacts individuals regardless of gender, age, or profession. Its effects are particularly pronounced in high-pressure environments, among women and girls, especially students in demanding fields. The risk is heightened due to various stressors and societal expectations (2). Research indicated that female students might experience addiction differently, with factors that play significant roles such as stress, academic pressure, and social dynamics (3, 4).

The results of a study showed that most students (62.7%) started using drugs (both alcohol and other drugs) after entering the university (5). Also, research indicated that approximately 12% of medical university students experience academic failure and mental-psychological issues during their course of study due to various factors, including a propensity toward addiction. According to a survey, it was found that 37.5% of students at Tehran University and 33% of students at Tehran University of Medical Sciences are engaged in drug abuse (6).

In this regard, media literacy is recognized as a crucial skill for mitigating these risks, empowering students to navigate digital content critically (7, 8). Based on this, a study found that students with a higher level of media literacy were less prone to addiction, which indicates that media literacy has a negative and significant correlation with the tendency to addiction and can predict a student's

dependency (9). In addition, the findings from a research study indicated that students who received media literacy education had a more moderate internet addiction score as compared with the control group. This suggests that this particular factor had a significant impact on the results (10).

The use of media and technology has become an integral part of our daily lives, affecting our behavior, attitudes, and beliefs. With the increasing availability of various media platforms, concerns have been raised regarding their impact on individuals' addictive behaviors, particularly among young adults and Medical Science students that face high levels of stress and pressure, making them more vulnerable to addictive behaviors (11-13). Therefore, the digital era, characterized by its pervasive media landscape, necessitates a critical examination of the influences on health behaviors and perceptions, particularly regarding addiction.

A study also indicated that individuals deficient in reflective thinking are less likely to engage in systematic analysis or deliberate decision-making. This often leads to more impulsive behaviors and spontaneous actions without considering the consequences (14, 15). Such responses can potentially have tangible negative consequences as addiction (16). Reflective thinking, serving as a cognitive tool, enables these students to critically assess their beliefs and behaviors in the context of their media consumption, fostering a mindful engagement with digital content (17). However, despite the recognized importance of media literacy and reflective thinking, there exists a significant gap in understanding how these factors, in conjunction with spiritual health, influence addiction risk among female professional doctoral students in healthcare.

Spiritual health is chosen as a mediator in this study due to its comprehensive approach to well-being, encompassing emotional, psychological, and spiritual aspects of life (18). This choice is supported by recent study indicating the protective role of spiritual health against various psychological challenges, including addiction (19). Spiritual health provides a holistic framework for understanding well-being, offering resilience and a sense of purpose that are crucial for navigating the pressures of professional doctoral programs and the broader healthcare environment.

Although researchers believed that media literacy and reflective thinking are important in combating the dangers of addiction, little attention has been paid to how spiritual health affects addiction risk reduction through perceived media literacy and reflective thinking in previous studies, especially among female students (11, 12). In conclusion, given the landscape of addiction risk among female professional doctoral students in healthcare, a multifaceted approach to mitigation is necessary; one that integrates the influences of media literacy, reflective thinking, and spiritual health. The main aim of this study was to explore how media literacy and reflective thinking are linked to decreasing the risk of addiction. Additionally, this study aimed to provide practical recommendations that can support the creation of better support systems and programs for upcoming female leaders in the healthcare field. Ultimately, the goal is to build resilience and decrease the vulnerability to addiction among this group of future leaders. This contribution is particularly significant in the context of the evolving digital landscape and its impact on health behaviors and perceptions, marking a step forward in the efforts to safeguard the mental and emotional well-being of those at the forefront of advancing healthcare. Therefore, the present study aimed to investigate the mediating role of spiritual health in the correlation between media literacy and reflective thinking with the reduction of addiction risk in female students. Additionally, the conceptual model of the present study is depicted in Figure 1.

2. Methods

2.1. Design and Participants

This cross-sectional study was conducted among all female doctoral students in Medicine, Dentistry, and Pharmacy programs at Zanjan University of Medical Sciences, Zanjan, Iran from April 2021 to November 2021. The target population of the study were 1,405 female doctoral students. A convenience sampling technique was employed to ensure a representative distribution across three distinct academic disciplines. A total of 301 individuals participated in the present study. Accounting for a 5% potential loss of participants, the total sample size was determined to be 315 individuals, employing the following formula:

$$n = \frac{\frac{z^2 pq}{d^2}}{1 + \frac{1}{N}\left[\frac{z^2 pq}{d^2} - 1\right]}$$

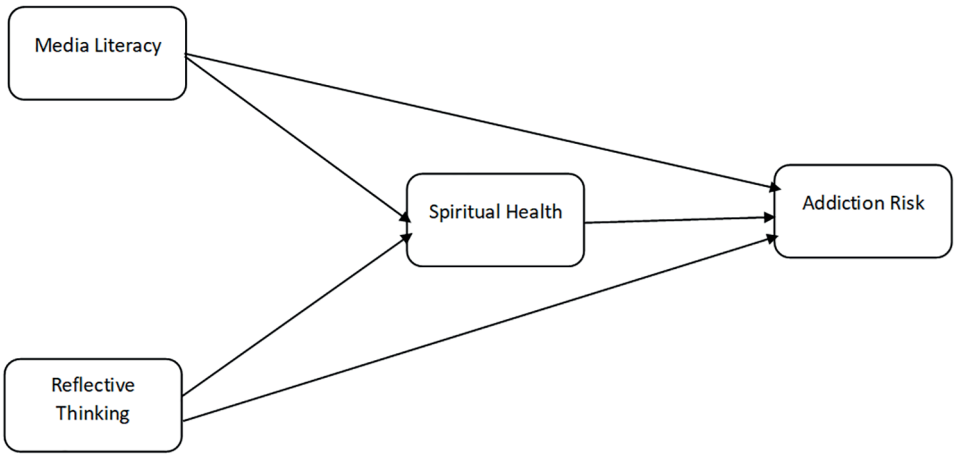

Figure 1: The figure shows the conceptual model of the study.

2.2. Inclusion and Exclusion Criteria

The inclusion criteria were: female students over the age of 20, enrolled in the specified disciplines of Medicine, Dentistry, or Pharmacy, who have completed at least one year of their university education. The exclusion criteria were: lack of willingness to continue participation in the study, the presence of psychological issues, and existing addiction problems. These criteria aim to ensure a homogeneous study group capable of providing insightful data relevant to the research questions while addressing the specific challenges and conditions pertinent to this demographic.

2.3. Procedure

The sampling process was meticulously conducted during the second semester of the academic year 2021, targeting students aged between 20 and 35 who voluntarily agreed to participate and provided an informed written consent. To ensure the reliability and robustness of the dataset, individuals with a history of bipolar disorder, schizophrenia, schizoaffective disorder, addiction, or those who had previously received psychological interventions or psychotherapy were excluded. Additionally, to preserve the integrity of the data, any incomplete questionnaires were removed from the analysis. Initially, a sample size of 342 participants was determined based on Cohen's method. However, to accommodate potential non-responses and ensure comprehensive coverage, 376 questionnaires were electronically distributed using the Porsline system, leveraging virtual student groups and collaborating with the University's Educational Affairs Office of these, 315 questionnaires were deemed complete and suitable for the analysis stage.

2.4. Measurement Tools

2.4.1. Media literacy Questionnaire (MLQ): Designed by Cheshmeh Sohrabi and Shahin (20), the questionnaire comprised five dimensions, each with a set of questions. The initial dimension of the questionnaire addressed the use of media messages (questions 1-4). The second dimension evaluated participants' understanding of media operations (questions 5-11). The third dimension involved critiquing media messages (questions 12-19), and the fourth dimension examined the integration of these messages (questions 20-24). The final dimension, fifth in order, concentrated on the summarization of media content (questions 25-28). The survey used a 5-point Likert scale for responses, ranging from 'very much' to 'very little. Higher scores on the Media Literacy Questionnaire indicate a higher level of media literacy. Researchers may use different cut-off points to classify participants into different categories of media literacy (21). Experts in library and information sciences confirmed the face validity of the questionnaire, and its reliability was also established with a Cronbach's alpha of 0.89, indicating high internal consistency. Additionally, the content validity index (CVI>0.8) and content validity ratio (CVR>0.99) further validate its adequacy (22). In this study, face validity was endorsed based on the assessments of statistics and psychology experts. The reliability of the questionnaire was assessed using the Cronbach's alpha method, resulting in a value of 0.75, which signifies acceptable internal consistency.

2.4.2. Reflective Thinking Questionnaire (RTQ): Devised by Kember and colleagues in

2000, RTQ serves to assess the learners' capacity of reflective thinking through a 16-item self-report measure, using a five-point Likert scale to gauge agreement levels (23). It is built upon factor analysis, revealing four distinct dimensions: habitual action, understanding, reflection, and critical thinking, each evaluated by four specific statements. This questionnaire not only underwent a rigorous validation process by its developers, demonstrating good internal consistency across its subscales (with Cronbach's alpha coefficients ranging from 62% to 75%) (24, 25), but also was successfully standardized in Iran by Azimi and Taghizadeh (26), and the questionnaire's validity was confirmed (CVI>0.79, CVR=0.83). This thorough validation and standardization process highlights the effectiveness of Reflective Thinking Questionnaire in measuring key aspects of learners' reflective thinking, making it a valuable tool for educational research and practice. In the present study, the Cronbach's alpha coefficient was 0.75, respectively.

2.4.3. Identifying People Risk Addiction (IPRA): Developed by Anisi and colleagues in 2013 at the Behavioral Sciences Research Center of Baqiyatullah Medical University, this questionnaire has 75 questions and four factors. The range of possible survey scores is between 0 and 225 (27). Anisi used Cronbach's alpha coefficient of 0.97 to determine the validity of the test, and the correlation between the test and Zuckerman's scale of depression, anxiety, stress, and excitement was found to be 0.78. In Anisi's questionnaire, a higher total score indicates a higher risk of addiction. However, it is essential to note that Anisi's questionnaire is a screening tool and not a diagnostic tool for addiction. Therefore, the scores should be interpreted cautiously and in conjunction with other clinical evaluations. The specific cutoff point for the questionnaire was not defined in the research. In the study conducted by Anisi and colleagues, the validity of the questionnaire was established with a CVI greater than 0.8 and a CVR of 0.81 (27). Furthermore, they documented a Cronbach's alpha coefficient of 0.97 for the questionnaire. The results showed that Anisi's questionnaire had good internal consistency reliability (Cronbach's alpha=0.85).

2.4.3. Spiritual Well-Being Scale (SWBS): SWBS was developed by Ellison in 1983. The primary aim of designing this questionnaire was to provide a comprehensive measure of spiritual well-being that encompasses both religious and existential dimensions (28). SWBS is intended to assess a person's perception of their spirituality and its impact on their overall sense of well-being. This tool has been used extensively in research across various fields, including psychology, health care, and social sciences, to explore the role of spiritual well-being in mental health, coping mechanisms, and quality of life. SWBS consists of 20 items equally divided into two subscales: Religious Well-Being (RWB) and Existential Well-Being (EWB). A 6-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree" is used in SWBS, with higher scores indicating greater spiritual well-being. A higher score on the RWB subscale suggests a strong personal correlation with a divine power, while a higher score on the EWB subscale indicates a strong sense of purpose and life satisfaction (29). Conversely, lower scores may indicate potential areas of spiritual distress or a lack of fulfillment in these domains. The validity of SWBS has been confirmed through various studies demonstrating its ability to distinguish between groups with varying levels of spiritual well-being and to correlate with other measures of spirituality and overall well-being. Its reliability is evidenced by consistently high Cronbach's alpha coefficients, typically exceeding 0.80 for both subscales, indicating good internal consistency. For instance, a study by Bufford and co-workers on cancer patients reported Cronbach's alphas of 0.87 for RWB and 0.86 for EWB (29), while Genia's study on university students reported an overall internal consistency coefficient of 0.89 for SWBS (30). Abhari and colleagues assessed the reliability and validity of their scale among students at Iran University of Medical Sciences, achieving satisfactory validity (CVI>0.8, CVR=0.87). They also reported Cronbach's alpha coefficients of 0.81, 0.84, and 0.89 for RWB, EWB, and SWBS, respectively (31). In the study conducted by Feizi and colleagues, the Cronbach's alpha coefficient of RWB, EWB, and SWBS was 0.76, 0.74, and 0.77, respectively (32). In our study, the Cronbach's alpha values for RWB, EWB, and SWBS were found to be 0.72, 0.71, and 0.73, respectively.

2.5. Statistical Analysis

Statistical evaluations were conducted on the gathered data, employing methods including

descriptive statistics namely average values, standard deviations, and the range of minimum to maximum scores. The relationships among the variables under study were analyzed using the Pearson correlation coefficient. Furthermore, to test the proposed model, the structural equation modeling (SEM) technique was implemented using the SPSS Amos version 24.

3. Results

In this study, the participants were 315 female students at Zanjan University of Medical Sciences, Zanjan, Iran who were divided into three major fields of study: Medicine, Pharmacy, and Dentistry. Medicine had the highest number of respondents, accounting for 47.62% of the total participants with 150 students. Pharmacy followed closely behind with 100 participants, making up 31.75% of the group. Dentistry had the smallest representation with 65 students, comprising 20.63% of the total sample. In terms of age, the majority of the participants were young adults, with 142 students aged 18-21 years (45.1%) and 148 aged 21-24 years (46.98%). The groups aged 24-30 years and over 30 years are significantly smaller, including only 16 (5%) and 9 (3%) respondents, respectively (Table 1).

Most of the participants were under 24 years of age. The mean score for literacy was 125.4±21.2 (30-150), the mean score for Spiritual Health was 56.5±6.82 (0-96), and the mean score for addiction risk was 45.11±3.32.

This correlation matrix reveals significant connections between media literacy, reflective thinking, addiction risk, and various dimensions of spiritual well-being. Specifically, media literacy and reflective thinking both show significant positive correlations with spiritual health (r=0.36, P=0.001), religious well-being (r=0.35, P=0.001), and to a lesser extent, existential well-being (r=0.21, P=0.032), suggesting that higher engagement in these cognitive activities is associated with greater spiritual and existential fulfillment. Interestingly, both media literacy (r=-0.33, P=0.001) and reflective thinking (r=-0.25, P=0.012) are significantly negatively correlated with addiction risk, indicating that increased levels in these areas might be linked to a reduced risk of addiction. The correlation between spiritual health and both religious well-being (r=0.45, P=0.001) and existential well-being (r=0.40, P=0.001) are notably strong, underscoring the interconnection between these facets of spiritual experience. In contrast, some correlations, such as media literacy with existential well-being (r=0.122, P=0.063), did not reach significance, suggesting a more nuanced or weaker correlation in these areas (Table 2).

In evaluating the model fit for the study, several key fit indices were reported. The Chi-square statistic, at 342.38 with 180 degrees of freedom, yields an (X^2/df) ratio of 1.90, indicating an adequate fit under the commonly accepted threshold of 3. This ratio suggests that the complexity of the model is appropriately matched to data structure. The RMSEA value is 0.05, well below the 0.08 benchmark for a good fit, reinforcing the adequacy of the model. Additional indices including TLI (0.90), IFI (0.93), NFI (0.91), and CFI (0.93) all meet or exceed the cutoff point of 0.90, further confirming the model's good fit to the observed data (Table 3).

The analysis effectively illustrates how Media Literacy and Reflective Thinking are inversely related to Addiction Risk, with higher levels of each predicting lower risk. Crucially, both variables positively impact Spiritual Health, which in turn, negatively influences Addiction Risk, acting as a mediating factor. Specifically, Media Literacy and Reflective Thinking enhance Spiritual Health (β=0.308, P=0.001) and (β=0.35, P=0.001), which subsequently reduces Addiction Risk (β=-0.20, P=0.001) for Media Literacy and (β=-0.17, P=0.001) for Reflective Thinking pathways.

Table 1: Frequency distribution of sample demographic variables

	Variables	Frequency	Percent
Field	Medicine	150	47.62%
	Pharmacy	100	31.75%
	Dentistry	65	20.63%
Age	18-21	142	45.1
	21-24	148	46.98
	24-30	16	5
	30>	9	3

Table 2: Correlation matrix of variables

Variable	Media Literacy	Reflective Thinking	Addiction Risk	Spiritual Health	Religious Well-Being	Existential Well-Being
Media Literacy	-					
Reflective Thinking	r=0.30 P=0.003	-				
Addiction Risk	r=-0.33 P=0.002	r=-0.25 P=0.012	-			
Spiritual Health	r=0.36 P=0.001	r=0.36 P=0.001	r=-0.20 P=0.022	-		
Religious Well-Being	r=0.35 P=0.001	r=0.35 P=0.001	r=-0.18 P=0.045	r=0.45 P=0.001	-	
Existential Well-Being	r=0.122 P=0.056	r=0.21 P=0.022	r=-0.15 P=0.053	r=0.40 P=0.001	r=0.50 P=0.001	-

**P<0.01, *P<0.05

Table 3: Fit indicators in the proposed and final models

Fit indicators	X^2	df	X^2 /df	RMSEA	TLI	IFI	NFI	CFI
Obtained values	342.38	180	90.1	0.05	0.90	0.93	0.91	0.93
Optimal values	5.77	-	<3	<0.08	≥0.90	≥0.90	≥0.90	≥0.90

IFI stands for Incremental Fit Index; TLI represents Tucker–Lewis Index; CFI is known as Comparative Fit Index; NFI denotes Normed Fit Index; RMSEA refers to Root Mean Square Error of Approximation

Table 4: Path coefficients of direct correlation between study variables in the Final models

Path	β	SE	P
Media Literacy →Addiction Risk	-0.294	0.256	0.002
Media Literacy →Spiritual Health	0.308	0.12	0.001
Media Literacy → Spiritual Health → Addiction Risk	-0.20	0.08	0.001
Reflective Thinking →Addiction Risk	-0.30	0.15	0.001
Reflective Thinking →Spiritual Health	0.35	0.13	0.001
Reflective Thinking → Spiritual Health → Addiction Risk	-0.17	0.06	0.045

SE: Standard error

This mediation confirms that the direct negative effects of Media Literacy and Reflective Thinking on Addiction Risk are moderated through improved Spiritual Health, thereby establishing partial mediation (Table 4).

The final model showed that; spiritual health serves as a mediating factor between media literacy, reflective thinking, and addiction risk. The positive effects of media literacy (0.308) and reflective thinking (0.35) on spiritual health suggest that both factors contribute to improving spiritual well-being. This enhancement in spiritual health then leads to a decrease in addiction risk, as indicated by the negative coefficients of -0.294 and -0.30. Essentially, spiritual health mediates the relationship by channeling the positive influences of media literacy and reflective thinking into a reduction in addiction risk. This highlights the critical role of spiritual health in linking cognitive and educational inputs with behavioral outcomes (Figure 2).

4. Discussion

The primary purpose of this study was to investigate the interrelationship between reflective thinking, media literacy, spiritual health and tendency towards addictive behaviors among professional doctoral students in the fields of medicine, pharmacy and dentistry. Employing reflective thinking as an independent variable among professional female doctoral students, this study provided new insights into the multifaceted nature of addiction prevention in a highly educated sector of the healthcare field.

These results aligned with the studies of Potter and Jeong, which both emphasized the significant role of media literacy in mitigating the negative impacts of media, including addiction. The incorporation of reflectivethinkingintothisdynamicfurtherhighlights its potential as a crucial factor in understanding and combating addiction tendencies among students.

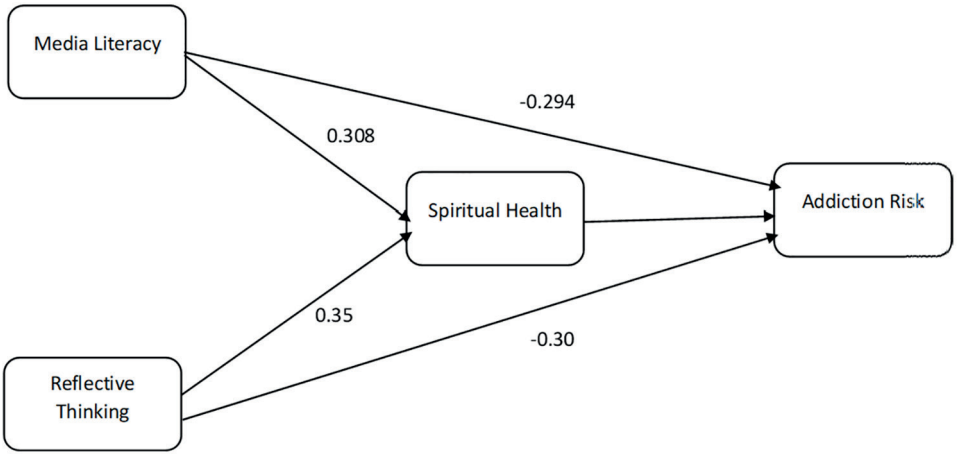

Figure 2: The figure illustrates the concluding model of Spiritual Health's mediating influence on the relationship between Media Literacy and Reflective Thinking, and their impact on Addiction Risk.

Reflective thinking, combined with media literacy, seems to empower individuals to critically assess media content and its potential addictive triggers, fostering a more resilient and informed approach to media consumption (8, 33).

Moreover, the analysis supports the notion that higher levels of spiritual health are inversely related to addiction risk. This suggests that a deeper spiritual awareness and engagement can serve as a buffer against the lure of addictive behaviors, align with the previous studies, who advocate for the protective role of spiritual practices and beliefs in substance abuse prevention (13, 18).

The nuanced correlation between media literacy and spiritual health, though not the strongest, hints at underlying commonalities in the cognitive and emotional competencies enhanced by both media literacy and a profound spiritual understanding. This preliminary connection warrants further investigation to elucidate the potential synergistic effects of these variables on addiction resistance (34).

The present study shed light on the mediating role of spiritual health in the intricate correlation between media literacy, reflective thinking, and addiction risk. This groundbreaking discovery posits that enhancing media literacy and reflective thinking can indirectly contribute to addiction prevention by bolstering spiritual health. Such an insight paves the way for innovative intervention strategies designed to mitigate addictive behaviors (35).

This idea is consistent with the theoretical principles of Bandura's Social Cognitive Theory, which highlights the importance of observational learning, self-efficacy, and self-regulation in modifying behavior. Reflective thinking, a critical component of this model, enables individuals to analyze their actions and the consequences thereof, fostering a more mindful approach to media consumption and its potential triggers for addiction (36, 37).

Furthermore, the study builds upon the findings of similar research in the field. For instance, a study by Best and colleagues, (34) explored how spiritual practices could enhance an individual's resilience against stress and addictive behaviors, underscoring the protective role of spiritual well-being. Additionally, the work of Bellini-Leite (37) highlighted the positive impact of media literacy education on students' ability to critically evaluate media messages and resist persuasive techniques commonly used in advertising addictive substances.

Moreover, the dual-process model of cognitive processing offers a theoretical underpinning for understanding how reflective thinking and media literacy could influence addiction prevention. This model distinguishes between automatic, unconscious processes and controlled, reflective processes. By fostering reflective thinking and media literacy, individuals may be better equipped to engage in controlled processing, critically evaluate their media consumption habits, and resist impulsive behaviors conducive to addiction (37).

The mediation role of spiritual health in this dynamic suggests a multifaceted approach to addiction prevention. Spiritual health, with its ties to a sense of purpose, community connection, and inner peace, can serve as a foundational element in

developing resilience against the allure of addictive behaviors. This correlation is supported by the theoretical perspectives of existential psychology, which posits that fulfilling spiritual needs can lead to a more meaningful and satisfied life, reducing the reliance on external sources of gratification, such as addictive substances or behaviors (12).

In essence, this study enriched the existing literature by proposing a model where reflective thinking and media literacy enhance spiritual health, which in turn, acts as a protective barrier against addiction. This holistic approach not only contributes to the theoretical discourse on addiction prevention but also offers practical implications for developing comprehensive, spiritually-informed interventions in educational and clinical settings. Future research should continue to explore this correlation, employing longitudinal designs to confirm causality and expand the applicability of these findings across diverse populations and cultural contexts.

The study suggested the need for broader replication across different demographics and the implementation of longitudinal research to establish causality. Additionally, incorporating qualitative methods could enrich the understanding of how individuals perceive and navigate the correlation among these variables.

4.1. Limitations

While reliance on self-report questionnaires introduces potential bias and focusing on a specific student demographic may limit generalizability, these findings significantly contribute to the discourse on addiction prevention. The design of the present study, straddling between the need for cross-sectional efficiency and longitudinal depth, sought to balance resource constraints with the requirement for causal inference. Given the focus on female students, considerations were made to ensure the applicability of the findings across diverse backgrounds within this demographic, despite potential limitations in generalizability. The inclusion of spiritual health as a mediating variable added complexity to the statistical analysis, requiring careful attention to demonstrate mediation effectively. Ethical considerations, especially concerning the sensitivity of addiction-related topics, were paramount, guiding the research process to ensure confidentiality and ethical integrity. Lastly, the resource-intensive nature of this study, particularly if a longitudinal approach were adopted, demanded meticulous planning to manage time, funding, and logistical challenges effectively.

5. Conclusions

In conclusion, the present study underscored the importance of integrating media literacy, reflective thinking, and spiritual health into comprehensive prevention strategies against addictive behaviors. These findings held critical implications for educators, healthcare professionals, and policymakers in developing holistic and effective interventions. As the media landscape continues to evolve and addiction remains a persistent challenge, these insights emphasize the need for innovative approaches that address the cognitive, emotional, and spiritual dimensions of addiction prevention among future healthcare professionals.

Ethical Approval

This research was meticulously reviewed and received approval from the ethics committee of Azad University of Zanjan, Zanjan, Iran under the ethics code IR.IAU.Z.REC.1401.047. Throughout the data collection process, a steadfast commitment to ethical principles was maintained. This included using a non-random quota sampling method for selection and allocation of samples, ensuring confidentiality of information, securing voluntary participation of individuals, guaranteeing their freedom to remain in the study, and providing transparent information. Also, written informed consent was obtained from the participants.

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Authors' Contribution

Elahe Golrang: Contributed in devising the project's framework and methodology; also took part in collecting, analyzing, and interpreting the data, as well as initially drafting the manuscript. Qamar Kiani: Made significant inputs into the conceptual framework and methodology of

the study; involved in data collection, analysis, interpretation, and took an active role in the initial drafting and critical revision of the manuscript for important intellectual insights. Afsaneh Sobhi: Contributed significantly to the study's design, helped draft the manuscript, and critically reviewed the content to ensure intellectual depth.

All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, such as the questions related to the accuracy or integrity of any part of the work.

Conflict of Interest: None declared.

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