



ORIGINAL ARTICLE

Academic Leadership Skills and Professionalism of Senior Academic Leaders from Educators' Viewpoints

Atefeh Sadat Heydari^{1,2}, Fatemeh Keshmiri^{1,3*}

¹ Medical Education Department, Education Development Center, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

² Student Research Committee, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

³ School of Public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

ABSTRACT

Background: An efficient performance evaluation mechanism is essential for senior educational managers to ensure accountability and continuous improvement in educational systems. This study aimed to develop an academic leader's evaluation instrument and evaluate senior academic leaders at Shahid Sadoughi University of Medical Sciences.

Methods: The cross-sectional study was conducted in two phases in 2022-2024. In the first phase, an evaluation instrument of academic leaders was developed and validated from the viewpoint of educators. Also, content validity was assessed using quantitative content validity indices with the participation of 17 experts. The internal consistency of the instrument was assessed with the participation of 50 faculty members. In the second phase, the performance of senior academic leaders was examined from the perspective of educators. Data was analyzed using descriptive tests (Mean, SD, percentage).

Results: The evaluation instrument was developed with 34 items in two categories of professionalism (12 items) and educational managerial performance (22 items). The content validity of the instrument was confirmed by Scale-Level Content Validity Index (S-CVI/Ave) = 0.89. The internal consistency of the instrument was reported Cronbach's alpha = 0.82. The results showed that the performance of professional behavior (4.52 ± 0.12) and educational managerial performance (4.49 ± 0.11) of academic leaders of colleges were evaluated at the desired level.

Conclusion: In the present study, the instrument may be used in the education system for measuring the performance of academic leaders in the two domains of professional behavior and educational management performance. The present results showed that the adherence of academic leaders to professional principles was reported at a desired level.

Keywords: Evaluation, Education, Leader, Leadership, Management, Professionalism

Introduction

Enhancing the quality of education and improving educational outcomes necessitates the design and implementation of an efficient educational system (1). This involves identifying management priorities, such as efficiency, effectiveness, administrative decentralization, and productivity, to ensure that the system operates optimally, meets diverse needs of stakeholders, and adapts to

evolving educational landscape (2). Leaders require employing strategic planning and implementation to align educational programs with changing environment and stakeholder needs, which includes setting clear goals, objectives, and strategies, and implementing these plans through effective communication, problem-solving, and decision-making (3). In addition, developing

Corresponding Author: Fatemeh Keshmiri
Email: Drkeshmiri1400@gmail.com
Tel: +98 3538265559

Medical Education Department, Education Development Center, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

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essential competencies, such as professionalism, trustworthiness, altruism, responsibility, assertiveness, problem-solving, and decision-making skills, is crucial for effective leadership and management in educational institutions (4). These competencies, including effective communication, professional behavior, health system management knowledge, teamwork, dynamism, and a drive for excellence, are fundamental for ensuring the educational system success and sustainability (5).

Deans of faculties as senior leaders play a key role in the management of universities and faculties (6). Their duties, as the most important leaders of the educational system, include program and budget management, aligning the system with increasing developments in educational methods and approaches, consulting various stakeholders, facilitating executive and educational processes, fostering entrepreneurship, and planning for the development and improvement of the system. Moreover, leaders are responsible for planning and developing education, addressing faculty and student issues, communicating with external stakeholders, managing financial and facilities resources, overseeing information management, and ensuring institutional support (7).

As management agents interacting with various groups of stakeholders, academic leaders need to plan and organize numerous intra- and extra-organizational relationships. Therefore, it is essential to develop and monitor the communication skills of academic leaders, as this is a main factor in educational management. The study by Habibi et al. in a conceptual analysis revealed that professional behavior in university educational administrators is characterized by three main attributes including ethical care, justice-oriented ethics, and critical ethics. Ethical care involves empathy, communication skills, self-control, lifelong learning, a spirit of charity and caring, and a sense of responsibility towards employees. Justice-oriented ethics include fairness, equality, sufficient authority, a democratic spirit, and honesty. Critical ethics encompasses

awareness and knowledge, a spirit of risk-taking, and a commitment to the university and its progress. These attributes are affected by individual characteristics, professional capabilities, and a systemic perspective, emphasizing the multifaceted nature of effective leadership in educational management (8). Armstrong et al.'s study defined the evaluation of managerial skills of university administrators in three primary dimensions including top-down, bottom-up, and parallel (peer evaluation). The components of educational management in universities, as outlined by Armstrong et al., include the management of educational units, educators, students, interaction with the external environment, financial and human resource management, and the professional development of educators (9). Educators, as key users of educational management services, are among key stakeholders in the educational system and can play a crucial role in the evaluation of senior educational administrators. In medical education systems, various approaches and methods are used to evaluate educators, but the evaluation of academic leaders, particularly senior leaders who play a pivotal role in directing and managing medical science systems, has received less attention.

Given the importance of the role of senior academic leaders at different levels of educational systems, it is essential to plan and implement an efficient mechanism for evaluating their performance (10). In educational management, establishing a reliable evaluation system is a critical necessity. Determining appropriate evaluation methods and resources remains one of the most contentious issues in educational system evaluation. The present study aimed to develop and psychometrically evaluate an instrument for assessing the professional and educational management of senior academic leaders at Shahid Sadoughi University of Medical Sciences.

Materials and Methods

This cross-sectional study was conducted at Shahid Sadoughi University of Medical Sciences.

Participants

The design and psychometric evaluation instruments for academic leaders involved several steps:

The first phase: development of the instrument

Instrument development: Forty educators participated in the design phase of evaluation instruments, of which 12 (30%) were academic leaders and 28 (70%) were educators. Moreover, 18 (45%) subjects were male and 22 (55%) were female, with an average age of 38 ± 4 .

Reliability Assessment Phase: A total of 50 participants were involved in the reliability assessment phase of the instruments, of which 24 (48%) were male and 26 (52%) were female. The mean age ($\pm$ SD) of the participants was 36 ± 6 .

The second phase: assessment of senior leaders

- *Evaluators:* The evaluators were educators from each faculty, and the inclusion criterion was more than three months of interaction with senior academic leaders. A total of 248 educators participated as evaluators in the evaluation process of senior academic leaders in faculties. Moreover, 148 (59%) subjects were female and 100 (40.32%) were male and their mean (SD) was 43 ± 6 .
- *Evaluatees:* A total of 23 senior academic leaders from faculties and teaching hospitals (including deputy educational officers of faculties and deans of faculties) were evaluated.

Study process

The study was conducted in two phases. In the first phase, the development and psychometric evaluation of assessment instruments for senior academic leaders of faculties and hospitals (including vice-chancellors and deans of faculties) in domains of managerial performance and professional behavior was undertaken.

The first phase: development of the instrument

Review of Literature and Documents: To develop the instrument, relevant texts, and documents (regulations and rules) were reviewed. A review of literature related to educational management was

conducted in the PubMed, Scopus, Science Direct, and Google Scholar databases. The relevant regulations for the management of universities and higher education institutions, job descriptions of faculty deans and leaders, educational standards in institutional and program accreditation, and the university's policy were reviewed.

Development of the initial items: The results of the literature were reviewed in the expert panel. The initial items were developed by experts.

Review and Refinement of Items: In the third step, the proposed items were reviewed by the expert panel. The results were summarized by the research team, and the initial version of the instrument was prepared.

To ensure the validity of the instrument, qualitative content validity using the modified Delphi method and quantitative content validity using the content validity ratio (CVR) and content validity index (CVI) (11, 12) were used.

Qualitative Content Validity Assessment

The modified Delphi technique was utilized to assess the qualitative content validity. The experts in educational management ($n=17$) participated in this step. The initial items of the instrument were sent to the experts via an electronic form. After collecting the forms, the qualitative suggestions and opinions of the experts were compiled. Delphi rounds continued for three rounds until a consensus of opinions was reached. During this process, four items were proposed for modification to enhance the evaluators' understanding of the behaviors being assessed.

Quantitative Content Validity

In the next step, the content validity was examined using quantitative content validity indices. A qualitative content validity assessment form was prepared based on the specified evaluation criteria and distributed to the participants electronically. The quantitative content validity indices were then evaluated. In the assessment of the CVR, the experts were asked to assess each criterion on a three-point Likert scale (necessary, useful but not necessary, and not necessary). The minimum value

of the CVR was determined using the Lawsche table (11). The CVI was assessed by the "relevance" criterion of each item using a four-point Likert scale. The item-level CVR (I-CVI) was calculated for each item, and the scale-level CVR (S-CVI/Ave) was also determined. The results of the validity assessment and the quantitative validity indicators were discussed and reviewed.

Reliability Assessment

The reliability of the instrument was assessed with the participation of 50 educators, distinct from those involved in the second phase of the study. At this stage, the internal consistency of the instrument was evaluated. The results of the validity and reliability assessments were reviewed by the experts and the instrument was finalized based on their feedback.

The second phase: Implementation of the Evaluation of Academic Leaders

The evaluators were trained through various methods, including training workshops, educational videos, and educational booklets. Senior educational leaders—including faculty deans and vice-chancellors—were assessed by faculty members who had engaged with them for at least three months.

To enhance the validity of the evaluation results, an average of 8 evaluators were chosen per senior manager, aligning with the approach of multi-

source evaluation and evaluation through stakeholder perspectives as suggested (13). Each senior educational manager was evaluated by at least an average of 8 educators. In this phase, to facilitate the evaluation process, an electronic evaluation system was developed, and evaluation forms were organized. To monitor the evaluation implementation process, information was provided at different time intervals, and the response rate of evaluators was tracked and feedback was provided to them.

Analysis

Data was analyzed using descriptive methods, including mean, standard deviation (SD), and percentages.

Results

The evaluation instrument was finalized with 34 items into two categories of professional behavior (12 items), and managerial performance (22 items).

The results of CVR showed that, based on the Lawsche table, all items obtained values higher than 0.49. The CVI of the instrument obtained values higher than 0.79 and were retained in the instrument. The CVR of the instrument was reported as S-CVI/Ave = 0.89. The results showed that the internal consistency of the instrument was confirmed with Cronbach's $\alpha = 0.82$. These findings indicated that the evaluation instrument designed for senior academic leaders is a valid and reliable tool.

Table 1. The content validity indices of the instrument

Domains	Items	CVI*	CVR**
Professional Behavior	1. Respectful behavior	0.90	1.00
	2. Observing educational discipline and regulations	0.90	1.00
	3. On-time and continuous attendance	0.90	0.80
	4. Effective communication	1.00	1.00
	5. Accepting criticism	0.90	0.70
	6. Honesty and dignity	0.90	1.00
	7. Cooperation with others	1.00	1.00
	8. Altruism towards students and colleagues	1.00	0.80
	9. Responsibility	1.00	1.00
	10. Fair behavior	0.90	1.00
	11. Excellence and personal and professional development	0.90	0.80
	12. Adherence to professionalism in educational management	0.80	1.00
Managerial Performance	13. Creating coordination in educational and research, administrative, and financial affairs	1.00	1.00
	14. Supporting and developing compliance with the principles of professional behavior and ethics and interpersonal communication in the faculty	0.90	1.00
	15. Directing and motivating educators to participate in university/faculty development programs	0.90	1.00
	16. Encouraging staff for professional development	0.80	0.80
	17. Organizing and directing educational development activities in the faculty/hospital	0.90	0.80
	18. Effective presence and active participation in university educational and research councils	1.00	1.00
	19. Supporting educational programs in research	0.80	1.00
	20. Participation and responsibility in activities related to the promotion of the faculty	1.00	0.80
	21. Cooperating with the university's educational vice-chancellor and affiliated units	1.00	0.80
	22. Establishing communication with educators	1.00	0.80
	23. Establishing appropriate communication with staff	0.90	0.60
	24. Establishing appropriate external communication with vice-chancellors, the university's president, and other heads of faculties and other community institutions	0.85	0.74
	25. Formulating and proposing the annual budget of the faculty and following up on its implementation	0.85	0.73
	26. Monitoring the proper implementation of educational and research duties by educators	0.88	0.79
	27. Regular assessing the performance of vice-chancellors and directors of faculty educational departments and submitting a report to the university educational vice-chancellor	0.88	0.79
	28. Monitoring the educational and research council of the faculty	0.87	0.78
	29. Continuous evaluation of educators	0.87	0.79
	30. Implementing the program evaluation	0.87	0.78
	31. Monitoring the activities of all affiliated units of the faculty (hospitals, research centers, etc.)	0.87	0.77
	32. Annual self-evaluation of faculty and reports to the vice president of education/university president	0.86	0.77
	33. Monitoring the proper implementation of policies by the vice president of education of the university	0.85	0.76
	34. Adherence to managerial principles by leaders	0.85	0.75

*Content Validity Index

** Content Validity Ratio

Implementation of the Performance Evaluation of Senior Academic Leaders

The results of the evaluation showed that the professional behavior and managerial performance

of the senior academic leaders were evaluated at a desirable level. The detailed results of the evaluation are presented in Table 2.

Table 2. The results of the evaluation of senior academic leaders

Domains	Items	Mean	SD
Professional Behavior	1. Respectful behavior	4.56	0.52
	2. Observing educational discipline and regulations	4.51	0.56
	3. On-time and continuous attendance	4.54	0.54
	4. Effective communication	4.73	0.32
	5. Accepting criticism	4.54	0.93
	6. Honesty and dignity	4.41	0.75
	7. Cooperation with others	4.68	0.34
	8. Altruism towards students and colleagues	4.24	1.23
	9. Responsibility	4.64	0.45
	10. Fair behavior	4.45	0.60
	11. Excellence and personal and professional development	4.50	0.92
	12. Adherence to professionalism in educational management	4.54	0.75
Managerial Performance	13. Creating coordination in educational and research, administrative and financial affairs	4.63	0.37
	14. Supporting and developing compliance with the principles of professional behavior and ethics and interpersonal communication in the faculty	4.37	0.96
	15. Directing and motivating educators to participate in university/faculty development programs	4.61	0.59
	16. Encouraging staff for professional development	4.63	0.43
	17. Organizing and directing educational development activities in the faculty/hospital	4.49	0.76
	18. Effective presence and active participation in university educational and research councils	4.50	0.92
	19. Supporting educational programs in research	4.40	0.69
	20. Participation and responsibility in activities related to the promotion of the faculty	4.49	0.48
	21. Cooperating with the university's educational vice-chancellor and affiliated units	4.47	0.75
	22. Establishing communication with educators	4.45	0.93
	23. Establishing appropriate communication with staff	4.56	0.61
	24. Establishing appropriate external communication with vice-chancellors, the university president, and other heads of faculties and other community institutions	4.15	1.13
	25. Formulating and proposing the annual budget of the faculty and following up on its implementation.	4.38	0.81
	26. Monitoring the proper implementation of educational and research duties by educators	4.58	0.39
	27. Regular assessing the performance of vice-chancellors and directors of faculty educational departments and submitting a report to the university educational vice-chancellor	4.43	0.75
	28. Monitoring the educational and research council of the faculty	4.59	0.60
	29. Continuous evaluation of educators	4.63	0.37
	30. Implementing the program evaluation	4.37	0.96
	31. Monitoring the activities of all affiliated units of the faculty (hospitals, research centers, etc.)	4.61	0.59
	32. Annual self-evaluation of faculty and reports to the vice president of education/university president	4.63	0.43
	33. Monitoring the proper implementation of the policies by vice president of education of the university	4.49	0.76
	34. Adherence to managerial principles by leaders	4.50	0.92

Discussion

Evaluating senior academic leaders is crucial for advancing the goals of universities and can significantly enhance the quality of educational management. In this study, the evaluation of senior academic leaders was conducted in two key domains of educational management performance and professional behavior. The validity and reliability of the evaluation instrument were rigorously established. The findings from the second phase of the study indicated that the performance of senior academic leaders is at a desirable level.

In this study, the design of the evaluation process was planned in two domains of professional behavior and educational managerial performance. In the domain of professional behavior, the degree of adherence of senior leaders to the principles of professionalism was measured. In managerial performance, the implementation of managerial performance of planning, coordination, creation of motivational factors, and evaluation and feedback by an academic leader was emphasized. In line with our findings, Shams (14) considered three groups of capabilities, including managerial capabilities, social capabilities, and individual capabilities, as essential for academic leaders. Managerial capabilities include perceptual, leadership, decision-making, and executive capabilities, considered in the present instrument. According to the study by Javanak et al. (15) the components of professional development of leaders of medical science educational groups were classified into six themes, including managerial development, leadership development, individual development, educational development, research development, and social development. The components were considered in the present instrument.

The results of the second phase indicated that the overall performance scores of senior academic leaders were at desirable levels. In professional behavior, the highest scores for senior academic leaders were observed in items "effective communication" and "collaboration with others."

In the management process, effective interactions are considered a key indicator of success for the manager and the educational system. Creating empathy and fostering effective teamwork necessitates establishing strong relationships among system members. Furthermore, the current results demonstrated that collaborating with others, as a component of professionalism among senior system leaders, was reported at a desirable level. Collaboration with others involves creating a supportive team atmosphere, recognizing the role and responsibility of each team member, developing teamwork skills, and fostering empathy to achieve team objectives, which is a critical component in educational systems. Effective communication and collaboration with others, as principles that academic leaders adhered to, play a vital role in advancing the goals of the educational system. This may be attributed to the relationship-oriented culture within the investigated environment, which contrasts with the task-oriented approach. In this context, human factors and relationships among members of the educational system are prioritized. This contributes to enhancing individual performance and cultivating a conducive environment for personal and professional growth, ultimately achieving the goals of the system. A study by Czech et al. (7) randomly examined the communication style of faculty deans and their managerial performance among 202 educators. The findings indicated that the method of communication significantly affects interpersonal and organizational relationships, thereby having a substantial impact on the success of academic leaders. A study by Amini et al. (16) investigated communication capabilities in interprofessional collaboration. Their study revealed that interprofessional communication skills comprise 24 capabilities across four primary domains: communication strategies, structured communication, communication with colleagues, and communication with service recipients. The first two domains focus on the principles of effective communication and the utilization of effective instruments and strategies in communication, while the last two domains

emphasize the critical foundations of communication in the professional processes of providing services in medical education systems. These four domains have been presented as the cornerstone for establishing effective communication and collaboration (16).

Altruism and integrity are the main features of professionalism. Altruism emphasizes human dignity and benevolence towards all stakeholders, while integrity focuses on maintaining honor in challenging situations and conflicts of interest. The lowest scores were noted in items "honesty" and "altruism" although the average scores for these items were still at a good level. The lower scores in items highlight the need to cultivate a culture of professionalism and enhance the commitment of senior academic leaders. Given the critical role of educational management in medical education systems, which train future health service providers, developing professional skills in these domains is essential. A participatory and human-centered management approach is necessary, along with an understanding of the factors that foster integrity in the educational system. Torrance et al. propose empathy, altruism, and teamwork as strategies for managing complex situations in education systems (17). It suggests developing empowerment programs that focus on both positive examples and unprofessional behaviors, with discussions on the challenges and solutions related to professional commitment.

Team management is a crucial competency for leaders in medical education systems (18, 19). Key competencies for team leaders include the use of collaborative management strategies and the ability to plan and execute interprofessional collaboration. The ability to plan, organize, and improve activities in educational systems, along with the capabilities of planning, collaborative management, and time management, are vital for the success of interprofessional collaboration (20, 21). Effective leadership strategies to support interprofessional collaboration and team effectiveness, and the participation of team members in managing the interprofessional team

and its challenges, are essential in the management process. In a challenging educational environment, an awareness and understanding of effective leadership strategies by all team members are imperative. Conflicts, often arising from work pressures or a lack of recognition of the roles and abilities of different professions, can affect interprofessional relationships and team performance. Such conflicts typically occur when organizational status or power is not aligned with the abilities of various stakeholders. Familiarity with and the application of leadership and challenge management strategies, with a focus on goals, can enhance the ability of team members to manage challenging situations, transforming threats into opportunities and improving team performance. These capabilities have been highlighted in multiple studies (18, 19, 22). In the study by Shams et al., social capabilities and individual capabilities, such as effective communication, ethical characteristics (human dignity, religious commitment, honesty, confidentiality, conscientiousness, impartiality in discussions, and justice), and student-centeredness, have been emphasized in the professional behavior of leaders (14).

The present results indicated that in educational management performance, the highest scores were reported for items such as "creating coordination in educational and research, administrative, and financial affairs of the faculty" and "encouraging staff for professional development". Moreover, high scores were noted for "continuous evaluation of educators" and "annual self-evaluation of the faculty and reporting it to the vice president of education/president." These scores confirm the desirable performance of senior academic leaders in coordination and evaluation. Furthermore, motivating and encouraging system members to develop their individual and professional capabilities and creating educational opportunities for them were emphasized. Evaluation and performance monitoring were highlighted in two items, likely due to the implementation of a comprehensive evaluation system in the university.

In this comprehensive evaluation system, assessment is conducted in three domains: educational program/educational system evaluation, faculty member evaluation, and student evaluation (23). The use of continuous evaluation and attention to supportive and motivational approaches for individual and professional development to meet the needs of the system can play an effective role in improving the quality of system performance. Karwanto demonstrated that monitoring educational processes, creating support and corrective mechanisms for the implementation of educational activities, and monitoring and evaluating teachers and students to improve performance in educational systems need to be developed among academic leaders in the educational system (24). Karimian et al. (25) introduced the components of monitoring, collaboration, empowerment, and the use of technologies as essential components of the educational management model. They stated that basic strategies, including monitoring, evaluation, and feedback, as well as empowerment and attracting participation to develop personal and professional capabilities, play a key role in advancing the goals of the medical education system (25). Camilleri, in a review study, emphasized that evaluation and monitoring results over time are critical for pursuing and achieving the goals of the educational system. Given the need to develop and respond to changes in educational systems, evaluating research and development activities, responding to the needs of stakeholders, innovation, and technology transfer, collaboration, and communication are crucial components in evaluating educational systems (26).

The results revealed that from the educators' perspective, the performance of senior leaders in evaluation at the professor and institutional/faculty levels is appropriate, but it faces challenges at the program evaluation level. Specifically, the item "implementing the program evaluation" received lower scores compared to other items. This may be due to the broader scope and higher implementation costs associated with program evaluation. Furthermore, program evaluation results are a

critical issue that can affect professors' perceptions of senior leaders' performance. Moreover, while items such as "establishing appropriate external communication" and "supporting and developing professionalism and ethics and interpersonal communication in the faculty" were reported at a good level, their scores were lower than other items. One of the issues in educational systems is that faculties can become isolated "islands" with less emphasis on external communication. Health professions education systems, which are primarily active in the first and second generations of universities, are now being urged to move towards third-generation universities. This shift emphasizes the need for efficient communication between universities and industry and a social accountability approach in education. These results serve as a warning for universities to focus on establishing purposeful relationships with society, scientific centers, and industries. Such relationships can enhance the social accountability of universities and align the education of students with the needs of society and industry. Third-generation medical universities, often referred to as entrepreneurial universities in the medical sciences, are tasked with promoting social responsibility to contribute to the economic and social development of their communities. To this end, the skills training of students, educators, leaders, and academic staff should be a central focus of university and higher education institution strategies and policies (27). Therefore, establishing purposeful extra-organizational relationships, an expected task for third-generation universities needs to be addressed at policy-making level of medical universities. Furthermore, regarding the dissemination of a value-based culture and the development of a culture of professionalism, it is essential to implement well-documented planning and apply different strategies at various stakeholder levels. This comprehensive approach will help ensure that values and professionalism are deeply ingrained and effectively practiced across the educational system.

Limitation

The cross-sectional study was conducted in a

single university, which means that cultural factors of the educational system, as well as social and economic factors in the studied environment, could affect the results. These contextual factors should be considered when generalizing the findings to other settings. The generalizability of findings is restricted to environments with similar cultures and regulations.

Conclusion

In the present study, the validity of the instrument in domains of professional behavior and educational managerial performance was confirmed. The use of a valid instrument for monitoring and evaluating senior leaders in educational systems is recommended. The results showed that senior academic leaders' adherence to professional principles was at a desirable level. Furthermore, their scores in educational managerial performance were also at a desirable level. However, planning to develop an educational management approach aligned with social accountability among senior academic leaders is recommended to further enhance the effectiveness of the educational system.

Ethical Considerations

The study was approved by the Ethics Committee at Shahid Sadoughi University of Medical Sciences, Yazd, Iran (ID: IR.SSU.REC.1403.061). Confidentiality and the use of anonymous data were observed in the analysis, interpretation, and reporting stages.

Acknowledgment

We would like to thank the participants who contributed to the study.

Conflict of interests

The authors declare that they have no competing interests.

Authors' contributions

F.K. conceptualized and designed the study. F.K. and AS.H. collected and analyzed the data. F.K.

interpreted data. F.K. and AS.H. wrote the main manuscript text. The authors have met the criteria for authorship and had a role in preparing the manuscript. Also, the authors approved the final manuscript.

Funding

This project was funded by Shahid Sadoughi University of Medical Sciences, Yazd, Iran (Grant No. 18675). The grant supported the data collection process. The funders had no role in the design of the study and collection, analysis, interpretation of data, or preparation of the manuscript. The report of the study findings is sent by the authors to the funder at the end of the study.

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