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Exploring the effective elements on the personal and professional development among health-care providers: A qualitative study

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Abstract:

BACKGROUND: A new domain of “personal and professional development” was introduced as a core competency of health-care providers. This study aimed to explore the experiences of learners and faculty members about what competencies or skills were essential for the professional development and success of health-care providers.

MATERIALS AND METHODS: This is a qualitative study using an inductive content analysis approach in 2019–2020. In the present study, 58 academic faculty members participated by purposeful sampling including ten associate professors (17.24%) and 24 assistance professors (41.37%), in addition to 23-year medical residents (20.65%) and 4th-year nursing students (20.65%). Individual and group interviews were conducted. Data were analyzed by the inductive content analysis approach introduced by Graneheim and Lundman.

RESULTS: The qualitative data were classified in 953 open codes and eight categories, which were further divided into four main categories: “socio-emotional skills,” “life-long learning skills,” “coping skills,” and “well-being strategies.”

CONCLUSIONS: The present results showed socioemotional and coping skills affect interpersonal and professional interactions that contributed to their improved health-care providers’ capabilities. Participants also considered lifelong learning as influential in developing professional capabilities and keeping their knowledge and skills up-to-date for accountability to duties. Moreover, using well-being strategies protects the mental and physical health of health-care providers. These skills are synergistic, and their combination can have a significant role in improving the personal and professional capabilities.

Keywords:

Competency, crisis, personal development success, professional development, qualitative study

Introduction

Health-care providers have to deal with various challenges and crises that can affect their professional performance and success during their careers. Health-care providers are faced with stresses such as physical tiredness, lack of sleep, high job pressure, emotional tensions related to work, improper performance of the system at work, and shortage of time for their

personal life, which decrease the well-being of health-care providers.^[1,2] Change in the balance between stress and coping strategies leads to fluctuation of well-being during professional work.^[3] It has been suggested that in order to overcome these stresses, providers should improve personal and professional development competencies.^[4] Therefore, it is vital to consider the competencies that help the medical doctors cope with the challenges and protect their physical and mental

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health. In this regard, besides to improvement of professional abilities, there has been an emphasis on skills such as management capabilities, the ability of team membership, committing to professionalism, interpersonal communication skills, informatics, education, and accountability.^[5]

Hicks *et al.* have introduced the new domain of “personal and professional development” (PPD) as a core competency which was introduced as a successful element of health-care providers. The goal of PPD is to ensure the quality of health services.^[6] Considering the growth of knowledge in the field of healthcare, there is essential for various health-care professionals to improve their abilities in order to provide efficient services continuously. Several studies indicate that skills in PPD are also fundamental for the provision of high-quality health care and success in medical profession especially in crisis periods.^[4,6] Self-management abilities in stressful situations, identifying and managing ambiguity, increasing self-confidence in relation to patients, and the degree of help seeking based on self-reflection and conflict management between personal and professional life were vital elements in health-care providers’ professional development.^[6] Health-care providers are constantly faced with crises and difficult situations. Therefore, it is necessary to provide the necessary skills to provide services in this situation. It expects growth of the competencies that can protect the personnel from serious problems, which threaten their health or adversely affect their professional performance. Previous studies on the factors affecting personal and professional development were mainly based on the opinions of experts or descriptive studies on one of the dimensions of the phenomenon. The aim of the present study was to explore the experiences of faculty members in medical and nursing schools and regarding the essential skills through which they need to achieve professional development and success in healthcare systems.

Materials and Methods

Study design and setting

This was a qualitative study that was conducted by inductive content analysis approach of Graneheim and Lundman.^[7]

Study participants and sampling

In the present study, the participants have entered by purposeful sampling. Learners and academic faculty members in medical and nursing schools, who were well known as multi-dimensional and successful individuals in their professional careers, with a willingness to participate in the study, were enrolled.

Data collection tool and technique

In the present study, ten individual interviews and five group interviews were conducted to explore the experience of the participants about the effective underlying factors and skills for personal and professional development. Experiences of the senior faculty members (associate professors) were obtained using in-depth, individual, and semi-structured interviews. Each interview took 60–90 min. In addition, we have used group interviews for the collection of experiences of junior faculty members and learners. Each group interview took about 4 h. The total duration of individual and group interviews was 30 h. All the interviews were performed face to face in the quiet and calm environment of the conference hall of the medical school. The first author performed the individual interviews, facilitated, and guided the group interviews. As well, she wrote the field notes during and after the sessions. All the interviews were audio-recorded. Each interview was started with the following question “What are your most important personal experiences regarding personal and professional development in your own life?” and “Could you describe what were the most effective factors to your professional success in difficult situations and crises?” Probing was performed according to the reflections of each participant about his/her prior experiences of PPD, facilitators, barriers, skills, and perceptions.

Data were analyzed using the inductive content analysis approach described by Graneheim and Lundman.^[7] The process of analysis included “code, subcategories, categories, and theme.” All the audio-recorded files were transcribed word for word. To become immersed in the data, the transcripts were read several times. Then important words were highlighted and written as notes in the text during the reading of the transcripts. We used the original words of the interviewees for initial coding. Relevant codes were collected together to form sub-categories. Categories were developed by collecting the subcategories. Themes were emerged by putting together the relevant categories.

Rigor

The data have obtained through several methods including reflection on the aim of the study and the main research question, using open-ended questions, reflection on meaning units in order to conduct in-depth analysis of data, spending adequate time on data gathering and analysis, and review and revision of categories by the research team were done if required. Member checking was used to determine the accuracy of the qualitative data. In order to these criteria, we gave five of the transcripts back to the interviewees to ensure of accuracy of codes and categories. The interviews were performed in a defined time interval, with stringent emphasis on following the same subject and questions

throughout all the interviews. We spend prolonged time to analysis process to obtain an in-depth understanding of the phenomenon. All the steps of the research, in particular, the steps of analysis of data were written in detail. This enabled other researchers to continue this study based on the documents of interviews and based on the categorization and coding process. We presented a clear description of the context, selection criteria, and characteristics of the interviewees, data collection, and analysis to increase the transferability of the findings.

Ethical considerations

Before starting the interview, the purpose of the research, the method of interview, and the right of the participants to decline to participate were explained to all the interviewees. They were informed that we would record the interviews with consideration of confidentiality. Informed consent was obtained from all the interviewees. Only the first author had access to the recorded voices. The transcripts were anonymous and saved as confidential information. The present study was approved by the Ethics committee in Shahid Sadoughi University of Medical Sciences (ID: IR.SSU.REC.1399.044).

Results

Fifty-eight academic faculty members and learners of the medical and nursing schools of the Tehran University of Medical Sciences and Shahid Sadoughi University of Medical Sciences were enrolled in this study. The demographic data of the participants are shown in Table 1. The participants in different specialties included internal medicine, cardiology, orthopedics, psychiatry, emergency medicine, internal medicine, sports medicine, general surgery, geriatrics, neurology, forensic medicine, ophthalmology, infectious disease, gynecology, urology, pediatrics, anesthesia, pathology, radiology, radiotherapy, and occupational medicine were entered in the present study.

Analysis of the qualitative data, including 953 open codes, eight categories were classified into four main categories including: (a) Socio-emotional skills, (b) Life-long learning skills, (c) Coping skills and (d) Well-being [Table 2].

Socio-emotional skills

In this theme, we classified the effective skills for develop and maintaining professional competencies in dealing with stressful and challenging situations. This theme encompasses four subcategories, as below:

Self-awareness

Participants in this study believed that self-awareness of one's capabilities and limitations enables one to plan an

Table 1: Basic demographic characteristic of participants

Basic demographic characteristic	n(%)
Academic rank, n (%)	
Associate professor (senior professor)	10 (17.24)
Assistance professor (junior professor)	24 (41.37)
Residents	12 (20.65)
Nursing students	12 (20.65)
Total	58
Gender, n (%)	
Males	32 (55.17)
Females	26 (40.62)
Age, mean±SD	
Associate professor (senior professor)	50.6±6.1
Assistance professor (junior professor)	39.7±3.1
Learners	34.5 2.1

SD=Standard deviation

Table 2: Categories and themes of essential skills for healthcare providers' success at difficult situations and crisis

Categories	Themes
Social communications	Socioemotional skills
Responsibility and accountability	
Self-awareness	
Stress management	Coping skills
Resilience	
Striking the balance	Well-being
Physical and psychological health	
Self-directing in learning	Life-long learning
Cognitive and meta-cognitive skills	

effective program for the improvement of professional performance. One of the associate professors said:

"If we accept that we are not the knower of everything and we have limitations, then we plan for becoming better."(Participant 3).

Emotional management

Competencies which enable health-care providers to recognize and manage emotions were described to be an effective factor for surviving in difficult situations. One of the learners said:

"When someone cries, you may cry too, when one shouts, you may shout too or you may be dominated by him/her. However, sometimes you have learned what the appropriate way of dealing with these situations is. You should know how to behave when a resident, a professor, or a patient, shout at you. I need to learn how to control, manage and guide my emotions and anxieties in order to be able to work efficiently during our career." (Participant 5).

Communication skills

Participants considered communication skills including interpersonal, inter-group and inter-professional

communication as an important factor in managing in difficult situations. An assistant professor mentioned.

"To achieve peace of mind, my family members were very helpful to me. In my view, communication with others provides emotional support. Family is the most important supportive unit." (Participant 14).

Responsibility and accountability

Responsibility and accountability were described as critical skills. Participants believed when the professors or peers delegate the responsibility of doing a task to the individual, it causes a feeling that one can do it and one should try to do it to the best of his/her ability. One of the assistance professors said:

"As I remember, I always did my best to accept the full responsibility of a delegated task to me and to do my job as perfect as possible, regardless of being a resident, an academic staff, a manager or a physician. In every role, I did my best." (Participant 12).

Well-being strategies

In this theme, skills on application of methods for protection of personal health and for keeping balance between personal and professional commitments are included. Two categories were included in this theme:

Striking the balance

Participants believed that skills causing happiness, hopefulness, optimism and resilience in personal and professional life set the appropriate stage for improvement of personal and professional competencies of a physician. One of the assistant professor said:

"One important point is to keep balance between work and personal life that I tried to do that. I believe the doctors need to learn how they can make balance between personal life and professional and educational commitments. I should be able to manage these situations." (Participant 22).

The "being at the present moment" technique was another practical tip for success in my professional life. One of the learners said:

"At the time of rest, we should rest with peace of mind and at the time of work and study, we should dedicate ourselves to the work and the study. People, who are always worried, neither can have a good rest nor can do a perfect job." (Participant 15).

Preservation of physical and mental health

The participants emphasized the importance of preservation of physical and mental health. One of assistant professors said:

"I found that too much work and sleep deprivation can increase the risk of various diseases. Therefore, I decided to counteract

this work overload by planning some vacations, entertainment and hobbies such as going to cinema, going to theater and spending time with my friends and family. This leisure time helps me to reconstruct my body and soul." (Participant 19).

Coping skills

This theme addresses the competencies that make the healthcare providers capable of managing difficult situations. It includes two subcategories of "stress and conflict management" and "resilience."

Stress and conflict management

There are different sources of stress and conflict in professional healthcare environments. Participants showed that the ability to manage stress and the conflicts could foster success in stressful situations. One of the assistant professor said:

"...I thought that the challenges occur only in our hospital. However, later, I learned that challenges are facts that exist everywhere. Now, I have learned to empower myself to know how to deal with and how to manage the challenges." (Participant 13).

Resilience

In the present study, participants believed that resilience helps health-care providers efficiently handle difficult situations by applying their skills in showing flexibility in dealing with and managing difficult situations. This trait enables the person to bounce back to his/her original level of stability after encountering a difficult and unfavorable event. One of the learners said:

"Many times, we do not have the optimal conditions and we face challenges. We should know how to cope with these hard circumstances. This means how much you break with a challenge or how much you can spring back to your original point of balance after the challenge. This skill helped me a lot." (Participant 26).

Life-long learning skills

These are the constellation of skills that enable the healthcare providers to seek to learn what they need to know in terms of knowledge, skills, and attitudes to perform their professional role with high quality. One of the associate professors said:

"I found I need to learn how to search for up-to-date information, how to do critical appraisal of the literature, I learn how to achieve my needs." (Participant 29).

This theme includes two categories of "self-directed learning" and "cognitive and meta-cognitive skills."

Self-directed learning

Micro-skills such as goal setting, determining strategies to achieve the goals, reflection and self-evaluation are

included in this category. One of the associate professor mentioned:

"I believed that I should maintain my competencies at the high level up to the end of the period of my career that will be at least 30 years, of course, if no events happen. Thus, I should learn up-to-date knowledge and skills by various methods, including self-study, participation in continuing professional development programs and so on in order to be able to provide efficient health care to my patients. This needs discipline and planning at the very first step." (Participant 32).

Cognitive and meta-cognitive skills

This includes skills that a physician needs for personal development to perform his/her professional role in a society with diverse needs. The skills classified in the category include searching for information, problem-solving, time management and critical thinking. These skills set the stage for changing the resident to a life-long learner. One of the learners said:

"When I was a resident, I realized that a physician came and said one therapeutic approach for the patient, and then another resident came and offered a different approach. I got confused on which one I should follow. This situation pushed me to study the evidences and to learn about evidence-based medicine and problem-solving skills. All of these skills helped me to have a better performance." (Participant 16).

Reflection was another main skill that was stated by the participants. One of the assistant professors said: *"At the end of the shift, I always thought with myself what I did wrong, what to do to make fewer mistakes, what I did well and how can I reinforce them."* (Participant 42) [Appendix 1].

Discussion

The present results showed socioemotional and coping skills affect interpersonal and professional interactions that contributed to their improved healthcare providers' capabilities. Participants also considered lifelong learning as an influential in the development of professional capabilities and keeping their knowledge and skills up-to-date for accountability to duties. Moreover, using well-being strategies protects the mental and physical health of the health-care providers. These skills are synergistic, and their combination can have a significant role in improving the personal and professional capabilities.

According to the socioemotional intelligence model, people with emotional intelligence are able to effectively express themselves, to understand and to communicate with others, to have flexibility in decision-making, and to overcome problems.^[8] The interpersonal component in emotional intelligence deals with the individual's ability

to live with others peacefully, and includes empathy, social responsibility, and interpersonal relationships.^[8] The present results showed that socioemotional skills such as communication skills, self-awareness, emotional control, and accountability were necessary for achieving success in personal and professional life. Participants believed that establishing effective communication is one of the strategies for understanding the situation, empathizing, improving resilience, and reducing stress among health-care providers. They also considered the effective communication important in performing the delegated tasks to them by other team members. They stated that the mastering interpersonal skills enable them to have effective communication with other team members in stressful situations. Effective interpersonal communication skills are introduced as a core feature in various definitions of emotional intelligence.^[9,10] In our study, self-awareness was explained as one of the factors affecting professional success in difficult circumstances. Self-awareness, defined as the ability to know one's capabilities and limitations, enables individuals to plan to improve their performance and facilitate personal and professional development. Furthermore, recognition of one's limitations, results in timely requests for help from other team members. Hicks defined the capability of personal and professional development as the ability to create self-awareness in relation to one's knowledge, and emotions, and limitations, which leads to appropriately asking for help. In his study, "identity development" is introduced as a key feature in professional development of a physician. He believes that recognition of personal and professional capabilities and limitations, positive attitude, and ability to "ask colleagues and peers for help" are important elements in PPD.^[6] Our findings are in accordance with this study.

Emotional management includes recognition and control of emotions has been emphasized in various emotional intelligence models.^[8] To acquire this skill, the individual should be able to perfectly understand other people's feelings and emotions and to control them appropriately. In a systematic review of a three-decade literature, Arora *et al.* reported positive correlation between emotional intelligence and teamwork, communication skills, improved empathy, stress management, organizational commitment, and leadership in the context of competencies of the Accreditation Council for Graduate Medical Education.^[11] Similarly, in the present study, participants believed that their socioemotional skills have improved their communications, teamwork, stress management, and resilience.

Stress and conflict, induced by professional responsibilities, workplace, and personal life, among members of the health profession are multifactorial.^[6] The synergy of sources of stress also causes stress and

worsens physical and mental pressures.^[6,12] The ability to use coping mechanisms in response to stress has been explained as an essential capability for professional development.^[6] Our participants also recognized coping skills such as problem-solving skills, social support, and the individual's flexibility for change. People try to cope with stress by combining problem-solving activities to change stressful situations and emotion-based activities to reduce emotional factors and stressors. In addition, support from colleagues and outside interests have been recommended as coping strategies.^[13] Participants conferred that stressful and conflicting situations among medical team members and peers are factors causing impaired personal-professional interactions. They believed personal distress, factors disturb mental peace and adversely affect individual's performance in treating patients. In addition, the inability to use stress and conflict management strategies to control one's performance has adverse implications for personal performance and professional relationships. Fothergill reported high levels of stress and burnout among personnel affect the efficacy of working with the patients. Therefore, training is necessary to help the providers to overcome work-related emotional stresses and challenging issues. Our findings are in accordance with their study.

In the present study, resilience was explored as a category of coping skills. Resilience has been defined as the process of dynamic flexibility in difficult situations^[14] This skill enables the individual to be positively flexible in the face of adversities and resilient in dealing with many challenges in ongoing development.^[15] Resilience skills include active problem-solving, structured understanding of difficulties, promoting positive interaction with others, and performing and understanding the meaning of events through spirituality and faith.^[16] Resilience strategies include creating and fostering positive communications and relationships, maintaining positivity, developing emotional insight, creating a balance in life, spirituality, and using reflective skill.^[15] The development of resilience capability among health system personnel can reduce their vulnerability in the workplace and improve well-being and better outcomes in health care settings.^[17] Grant believed improving sing emotional resilience for practice between health-care providers enhances well-being and job satisfaction.^[16] In the present study, flexibility was essential an important feature of resilience that allows the individual to adapt to challenging and changing situations, which had been effective on participants' resilience under challenging conditions during residency and professional development. In Hicks' study, self-awareness, personal management, and self-confidence were considered as factors affecting flexibility. Flexibility and maturity in adapting to change were essential capabilities for personal and professional

development.^[6] In his study, resilience, confidence, self-efficacy, and adaptability were considered as effective components in flexibility,^[6] which agrees with the present study results.

Applying well-being strategies emphasizes strategies such as preservation of physical-mental health of healthcare providers, mechanisms of happiness, creating peace of mind such as hobbies and entertainments, and being in friendly and family gatherings. Well-being is closely related to personal development,^[18] professional success and leads to avoiding work pressures.^[19] Well-being was defined as a balance between different area including professional development, communications, and physical and mental health. In line with our results, their results showed that the six themes affecting well-being include balance in different domains, professional development and temporary imbalance, professional satisfaction and achievement, maintaining a sense of self, stress management and coping skills, and role of residency programs.^[20] Similar to the present study, in Hicks' study, conflict management between personal and professional responsibilities was determined as the essential capability for personal and professional promotion.^[6] In this study, personal recognition, interaction with family and friends, hobbies and interests, and maintaining physical health through exercise and nutrition, awareness of personal limitations, the and use of defensive mechanisms such as humor, determining and pursuing goals, and self-care explored as stress coping activities.^[6] In the present study, in the theme of well-being, a balance between personal and professional life, strategies for preservation of physical and mental health and methods such as interaction with family and friends, hobbies, and interests have been emphasized.

In the present study, the last theme, "lifelong learning," was explained as a factor affecting professional development in crisis. Lifelong learning has been defined as a dynamic process that enables learners to progress in core skills for obtaining expertise.^[4] The goal of lifelong learning is defined to develop learners' potential capabilities through ongoing support by stimulating and empowering them to acquire necessary knowledge, values, skills, and attitude. Core competencies of lifelong learning include the ability to recognize one's performance, manage learning in action, search for information and create and answer questions, evaluate and improve performance and motivation.^[4] Acquiring meta-cognitive skills, self-directed learning, self-evaluation, and reflection were proposed as the most important features of lifelong learning.^[21]

In the present study, in the category of self-directed learning, skills such as personal planning skills, evaluation and reflection, and effective learning strategies

have been emphasized. Self-directed learning is regarded as one of the key lifelong learning strategies that defined as a process in which learners are actively involved in recognizing their learning needs, set learning goals, gather resources, develop, and implement appropriate strategies, plan and evaluating learning outcomes independently or with others' help.^[22] Self-directed learning increases self-confidence, independence, motivation, and readiness for lifelong learning.^[22,23] In the present study, recognition of self-performance, management of learning, evaluation, and reflection were explained as factors affecting self-directed learning. Participants believed that planning, self-evaluation, setting goals, personal reflection, and effective learning strategies empower the learners to design a proper program for developing their capabilities. Using self-directed learning and keeping up-to-date were described as professional development strategies.

Moreover, the present results showed that cognitive skills such as problem-solving, critical thinking, proactive thinking, and meta-cognitive skills meaning learning how to learn are factors affecting individuals' dynamics and direction of the learner's ongoing learning for personal and professional development. Meta-cognitive and self-directed learning skills are regarded as features of lifelong learning.^[21] Cognitive skills, critical thinking, creativity, problem-solving, reflection, and self-regulation skills have been defined as skills needed in preparation for life-long learning, which have an effective role in professional achievements.^[24,25] The present study participants believed that self-directed learning and using cognitive-metacognitive skills such as critical thinking and problem-solving can direct a physician in successful learning and toward lifelong learning, and this has a major role in professional development. Similar to our results, improving problem-solving, interpersonal communication skills, and self-directed learning activities have been emphasized for coping in our results. Improving problem problem-solving, interpersonal communication skills, and self-directed learning activities have been emphasized for coping with stressful situations.^[6] In addition, developing skills such as self-awareness, emotional intelligence, time management, and life-long learning were emphasized for physicians.^[26]

Limitations and recommendation

The present qualitative study provided the viewpoints of physicians and nurses on essential elements of personal and professional development in difficult and stressful situations. The qualitative method may limit the application of these findings to other contexts with different cultures. Therefore, we recommend further studies to explore the contributive elements to professional success and development under stressful

circumstances from the perspective of a broader range of health care professionals.

Conclusions

In this study, the experiences of successful people who were famous for their personal and professional development were explained. The experiences of successful people can provide a better description of the phenomenon and its dimensions. The study showed socio-emotional and coping skills affect interpersonal and professional interactions and improve healthcare providers' capabilities. Participants also considered lifelong learning influential in developing professional capabilities and keeping their knowledge and skills up-to-date for accountability to duties. Moreover, using well-being strategies protects the mental and physical health of health-care providers. These skills are synergistic, and their combination can significantly improve personal and professional competencies.

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Conflicts of interest

There are no conflicts of interest.

References

1. Raj KS. Well-being in residency: A systematic review. *J Grad Med Educ* 2016;8:674-84.
2. Ghannam J, Afana A, Ho EY, Al-Khal A, Bylund CL. The impact of a stress management intervention on medical residents' stress and burnout. *Int J Stress Manag* 2020;27:65-75.
3. Hayat AA, Choupani H, Dehsorkhi HF. The mediating role of students' academic resilience in the relationship between self-efficacy and test anxiety. *J Educ Health Promot* 2021;10:23-49.
4. Campbell C, Silver I, Sherbino J, Cate OT, Holmboe ES. Competency-based continuing professional development. *Med Teach* 2010;32:657-62.
5. Filipe HP, Silva ED, Stulting AA, Golnik KC. Continuing professional development: Best practices. *Middle East Afr J Ophthalmol* 2014;21:134-41.
6. Hicks PJ, Schumacher D, Guralnick S, Carraccio C, Burke AE. Domain of competence: Personal and professional development. *Acad Pediatr* 2014;14:S80-97.
7. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today* 2004;24:105-12.
8. Mayer JD, Caruso DR, Salovey P. The ability model of emotional intelligence: Principles and updates. *Emot Rev* 2016;8:290-300.
9. Arora S, Ashrafian H, Davis R, Athanasiou T, Darzi A, Sevdalis N. Emotional intelligence in medicine: A systematic review

- through the context of the ACGME competencies. *Med Educ* 2010;44:749-64.
10. Cherry MG, Fletcher I, O'Sullivan H. Exploring the relationships among attachment, emotional intelligence and communication. *Med Educ* 2013;47:317-25.
 11. Edgar L, Roberts S, Yaghmour NA, Leep Hunderfund A, Hamstra SJ, Conforti L, *et al.* Competency crosswalk: A multispecialty review of the accreditation council for graduate medical education milestones across four competency domains. *Acad Med* 2018;93:1035-41.
 12. Pulido-Martos M, Augusto-Landa JM, Lopez-Zafra E. Sources of stress in nursing students: A systematic review of quantitative studies. *Int Nurs Rev* Sep 2011;59:15-25.
 13. Lim J, Bogossian F, Ahern K. Stress and coping in Australian nurses: A systematic review. *Int Nurs Rev* 2010;57:22-31.
 14. Harms P, Brady L, Wood D, Silard A. Resilience and well-being. In: *Handbook of Well-Being*. Salt Lake City, UT: DEF Publishers; 2018.
 15. Leys C, Arnal C, Wollast R, Rolin H, Kotsou I, Fossion P. Perspectives on resilience: Personality trait or skill? *J Trauma Dissociation* 2020;4:1-10.
 16. Grant L, Kinman G. Emotional resilience in the helping professions and how it can be enhanced. *Health Soc Care Community* 2014;3:23-34.
 17. Schultze-Lutter F, Schimmelmann BG, Schmidt SJ. Resilience, risk, mental health and well-being: Associations and conceptual differences. *Eur Child Adolesc Psychiatry* 2016;25:459-66.
 18. Hayman J. Personal, social, health and economic education: The bridge between public health and education. *J Educ Health Promot* 2016;54:157-61.
 19. Brady KJ, Trockel MT, Khan CT, Raj KS, Murphy ML, Bohman B, *et al.* What do we mean by physician wellness? A systematic review of its definition and measurement. *Acad Psychiatry* 2018;42:94-108.
 20. Tov W. Well-being concepts and components. In: Diener E, Oishi S, Tay L, editors. *Handbook of Well-Being*. Salt Lake City, UT: DEF Publishers; 2018.
 21. Mahajan R, Badyal DK, Gupta P, Singh T. Cultivating lifelong learning skills during graduate medical training. *Indian Pediatr* 2016;53:797-804.
 22. Murad MH, Coto-Yglesias F, Varkey P, Prokop LJ, Murad AL. The effectiveness of self-directed learning in health professions education: A systematic review. *Med Educ* 2010;44:1057-68.
 23. Siddiqui FS, Nerali JT, Telang LA. Relationship between the sense of coherence, self-directed learning readiness, and academic performance in Malaysian undergraduate dental students. *J Educ Health Promot* 2021;10:105.
 24. Kaplan A. Lifelong learning: Conclusions from a literature review. *J Elementary Educ* 2017;5:2.
 25. Naeimi L, Abbaszadeh M, Mirzazadeh A, Sima AR, Nedjat S, Hejri SM. Validating self-reflection and insight scale to measure readiness for self-regulated learning. *J Educ Health Promot* 2019;8:150-60.
 26. Mirzazadeh A, Mortaz Hejri S, Jalili M, Asghari F, Labaf A, Sedaghat Siyahkal M, *et al.* Defining a competency framework: The first step toward competency-based medical education. *Acta Med Iran* 2014;52:710-6.

Appendix 1: Effective factors on personal and professional development in medical education

Meaning units	Open codes	Categories	Main categories
I learned how can capable in communication skills and the more I am equipped with the weapon of communication, the more I am strong (a resident)	Communication skills Communication with family Emotional control and adjustment	Social communications	Socioemotional skills
To me, the important factor is commitment and responsibility. This encompasses four steps: definition of what to do, complete recognition of what to do, acceptance to do it with all the related responsibilities, doing it (an assistance professor)	Commitment and responsibility	Responsibility and accountability	
Success in career depends on how much one knows about himself/herself. What is his/her objective in his/her life and career? If one has chosen medicine because of the external forces of the family and has no personal interest in his/her job, he/she can never be happy (a resident)	Knowing oneself and knowing the purpose of life	Self-awareness	
When we face a challenge, we need to have stress management skills. Since we do not master these skills, the challenge converts to an argument. Having ability in controlling stress helps us to improve our communication with others and our handling of the challenging situations (a resident)	Stress control and management	Stress management	Coping skills
An important point for me to survive in my profession is that I try to be flexible. I do not mean to be passive. I do not mean to allow others to interfere with my rights and not to defend. I do not mean to have lack of self-esteem. I consider flexibility as a positive trait that helps us to tolerate and cope with difficult conditions (an assistance professor)	Flexibility and coping	Resilience	
I try to keep myself happy by being with my friends at any occasion that is available to me. We try not to talk about our work during these friendly gatherings (a resident)	Keeping balance between personal and professional life Being happy To keep away from work	Striking the balance	Well-being
Another matter is about sleep. In a first-year resident, many were recommended you to sleep whenever you find time. This may be kind advice, but it usually does not work. Instead, one can do other activities to promote other dimensions of life. I tried to watch movies, to study books, to do sports. These help me to be healthy, to have a better physical status and to have a dynamic mind. All of these lead to better achievement during the residency. This strategy has been very helpful to me (an associate professor)	Sports for physical health Holistic approach Strategies for having serenity of mind	Physical and psychological health	
I like studying and enjoy it. I know I need to learn something. Sometimes I say to not know and must to learn! This helps me accept my limitations and planning to learn them. I try to find responses of any questions that I face with them (a resident)	In mode of studying Accepting individualized limitations Planning to learning Using reflection	Self-directing in learning	Life-long learning
I think to be able to change something. I think, I can affect to change in the system. When you fell you are a manager and you can decide to improve the circumstance of education and career. These perceptions help you to change to improving in yourself, your profession or your system. I think, I can (a resident)	Accepting to making a change Critical thinking	Cognitive and meta-cognitive skills	