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Uzmanlık Öğrencisi Hekimlerin Mentorluk Algılaması ve Öz Etkililikleri Arasındaki İlişkinin Değerlendirilmesi: İzmir İlinde Bir Çalışma

Analyzing The Relationship Between The Physician Assistants' Perceptions of Mentorship and Their Self-Efficacy: A Sample From Izmir Province

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ÖZ

Amaç: Uzmanlık öğrencisi hekimlere, çalıştıkları eğitim kurumlarının birim sorumluları tarafından, göreve başlamalarını takiben bir rehber eğitim sorumlusu tayin edilmektedir. Bu çalışmada uzmanlık öğrencisi hekimlerin mentorlerini nasıl algılandıkları tespit edilip, öz-yeterlilikleri ile ilişkisinin saptanması amaçlanmıştır.

Materyal ve Metot: Bu araştırmanın evrenini İzmir İli Ege Üniversitesi Hastanesi, İzmir Atatürk Eğitim ve Araştırma Hastanesi ve İzmir Tepecik Eğitim ve Araştırma Hastanesi'nde çalışan uzmanlık öğrencisi hekimler oluşturmuştur. Sayısı bilinen evrenden örneklem hesaplanmış 436 öğrenci hekime ulaşılabilmiştir. Uzmanlık öğrencisi hekimlerin mentorluk algılarını ve öz-yeterliliklerini ölçmek için veri toplama aracı olarak anket yöntemi kullanılmıştır. Veri SPSS 22.0 paket programı ile analiz edilmiştir.

Bulgular: Eğitim araştırma hastanesi doktorlarında mentorluk ölçeği toplam skoru, kabul-onay alma skoru, danışmanlık fonksiyon skoru, kendiniz ifade etme skoru üniversite hastanesi doktorlarından anlamlı olarak daha yüksektir ($p<0,05$). Mentorluk ve öz-yeterlilik ölçeklerinin arasında uygulanan korelasyon analizine göre, mentorluk alt faktörü rol model alma ile öz-yeterlilik ölçeğinin davranışa başlama haricinde diğer alt faktörler arasında korelasyon olduğu tespit edilmiştir.

Sonuç: Bu çalışmada, sıkıntı karşısında ısrar (öz-yeterlik) ile koçluk ve kabul ve onay (mentorluk) arasındaki ilişkiler tespit edildi. Hekim asistanlarının sosyal ortamındaki olumlu rol modellerinden yararlanarak belki bir davranış başlatmadıkları, fakat davranışı sürdürmenin sağlandığı görülmüştür.

Anahtar Kelimeler: Mentor, mentorluk ölçeği, öz-etkililik, uzmanlık öğrencisi hekim

ABSTRACT

Objective: Mentors are assigned to physician assistants by the heads of departments they work in after they start their duty. This study seeks to reveal physician assistants' perceptions towards their mentors and the relationship between their such perceptions and self-efficacy.

Materials and Methods: The population of this study covers physician assistants working in Ege University Hospital, Izmir Atatürk Training and Research Hospital, and Izmir Tepecik Training and Research Hospital. 436 of them were reached within the scope of the study. The survey method was used for data collection to measure physician assistants' perceptions of mentorship and self-efficacy. The data were analyzed using SPSS 22.0.

Results: The physicians working in the training and research hospitals have a significantly higher Mentoring Functions Scale total score, significantly higher score for acceptance and confirmation, significantly higher score for sponsorship, and significantly higher score for exposure and visibility compared to the physicians working in the university hospital ($p<0.05$). The correlation analysis conducted between the Mentoring Functions Scale and the Self-Efficacy Scale indicated that there is a relationship between all the sub-factors except for the role modeling sub-factor of the Mentoring Functions Scale and the willingness to initiate a behavior sub-factor of the Self-Efficacy Scale.

Conclusions: In this study, as relationships were detected between persistence in the face of adversity (self-efficacy) and coaching and acceptance and confirmation (mentoring). Benefiting from the positive role models in physician assistants' social milieu may not initiate a behavior but it helps to maintain a behavior.

Keywords: Mentorship, mentoring functions, physician assistants, self-efficacy

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INTRODUCTION

Mentorship has started to be practiced in the 1990s to offer academic support to health professionals in their early careers.[1] Currently, mentorship practices are considered one of the most influential factors on academic career in medicine.[2] The main purpose of mentorship is to allow assistants to improve their knowledge and skills according to their individual advancement objectives.[3] The most important aspect here is both parties' willingness and the organization's support for this relationship.[4] The most detailed and systematic studies on mentorship were conducted by Kram et al.[5] Mentoring functions are classified in two dimensions (i.e. career functions, psychosocial functions) by Kram and Isabella, in three dimensions (i.e. career advancement, psychosocial, and role modeling functions) by Burke, and in two dimensions (i.e. career and psychosocial functions) by Noe.[6] Considering mentorship role in association with psychosocial and career functions (under two categories), a mentor plays a role similar to a counsellor or a friend in psychosocial terms and undertakes the role of a coach or a sponsor in career terms.[7] Among the career functions of a mentor are sponsorship, exposure and visibility, coaching, and assigning duties to improve protection and skills. Mentorship relations in which career functions are prioritized are generally formal relations. Therefore, it depends on knowledge and is carefully controlled.[8] There are the functions of role modeling, counseling, friendship, acceptance, and confirmation among the psychosocial functions of mentors. The necessary knowledge and support to meet the mentee's advancement needs are provided by these functions. Besides, it is important to know that mentorship is not a phenomenon characterized by the 'all or none' principle. A mentor may fulfill one or several of these functions together.[9]

The concept of self-efficacy was first proposed by Albert Bandura, who developed social learning theory, in 1977 as a part of "Cognitive Behavioral Change" theory.[10] If a person believes that s/he will achieve something, s/he behaves more actively and determines the course of his/her life. This belief of "I can do it" reflects one's urge to control the conditions s/he lives under.[11] To Bandura , a personality is formed through constant interaction of behavioral, cognitive, and environmental influences.[12] One of the main concepts that Bandura believes to be influential on behavior is self-efficacy. Self-efficacy refers to one's belief and trust regarding his/her capacity to overcome the future adversities and achieve success. The stronger one's self-efficacy belief is, the more that person demonstrates effort, persistence, and resistance. People with high self-efficacy can overcome difficulties as they can control the environment more; so, they are not afraid to try new experiences.[13]

On the other hand, people with low self-efficacy beliefs believe that the events are more difficult than they seem. As they have a narrow perspective, they cannot solve their problems and complete their works successfully.[18] If one's self-efficacy is higher than his/her real competencies, s/he may show depressive behaviors as s/he will live frustrations when s/he undertakes duties beyond his/her competencies. Academic self-efficacy can be considered as one of the special types of self-efficacy. The concept of academic self-efficacy refers to one's perception of fulfilling a given academic duty at the expected achievement level. Chemers et al. defined academic self-efficacy as students' self-confidence regarding the issues that require academic work. In this sense, a person needs to employ effective cognitive strategies, manage learning environment and time effectively, and regulate his/her own performance effectively.[14] Academic self-efficacy has many important characteristics. Zimmerman lists these characteristics as follows:

- Self-efficacy includes one's own beliefs about fulfilling a task rather than personal characteristics such as physical or psychological characteristics.
- Efficacy belief is multi-dimensional and is connected with various areas. Hence, self-efficacy belief for Mathematics is different from self-efficacy belief for English.
- Self-efficacy measurements depend on the situation. For instance, a student competitor may show less self-efficacy about learning compared to a situation in which collaboration in the classroom is prioritized.
- Self-efficacy measurements depend on proper criteria selected for performance. Different criteria and norms are not taken into account in comparison.

Academic self-efficacy is among the most important dimensions of academic achievement. Particularly in the 1970s following Bandura's introduction of the concept of self-efficacy, researchers observed that this belief is influential at all levels of academic life.[12]

The health sector, with its obligatory mentor-mentee relationship, is among the important sectors where

people advance in their careers. Mentors are assigned to physician assistants by the heads of departments they work in after they start their duty. Specialization training is an organized program being offered under counseling and surveillance and contributing to professional and personal development. The role of mentors guiding and leading physician assistants in their training and development is vital. They play a key role in ensuring physician assistants' experiencing a healthy orientation process in the institutions they start to work in and enhancing their organizational commitment, job satisfaction, socialization, communication, information sharing, and learning.[5] All these aspects may have a reflection on self-efficacy characteristics such as assistants' employment of effective cognition strategies to learn, effective management of learning environments and time, and effective regulation of their own performance.[15]

In this sense, this study seeks to reveal not only physician assistants' perceptions towards mentorship and self-efficacy levels but also the level of the relationship between mentoring perception and self-sufficiency was determined. Moreover, we aim to detect the relationship between these factors and demographic characteristics, determine the lacks in mentorship practices, and contribute to the organization of needed mentorship practices and development of new practices to improve physicians' self-efficacy.

MATERIALS AND METHODS

Ethics committee approval of this study was approved by the non-interventional health sciences ethics committee (Okan Üniversitesi, İstanbul/ Turkey, Date: 29.01.2014; Decision no:27) and the informed consent forms obtained from all participant. This is a cross-sectional study. The population of this study covers physician assistants (N=1097) working at Ege University Hospital, Izmir Atatürk Training and Research Hospital, and Izmir Tepecik Training and Research Hospital, which are all located in Izmir province. As the research sample, 436 students were reached within the scope of the study. The survey method was used for data collection to measure physician assistants' perceptions of mentorship and their self-efficacy.

The first section includes socio-demographic questions about gender, age, marital status, year of experience as a physician, year of experience as a physician assistant, department, and the hospital one works in.

The second section consists of the Mentoring Functions Scale with 29 items developed by Noe in 1988 and gaining international acceptance.[7] 5-point Likert -type rating is used to express levels of agreement with the items in the Mentoring Functions Scale. Özkalp et al. calculated the reliability of the scale as 96% through Cronbach's alpha test. A Cronbach's alpha value in the range of $0.8 \leq \alpha \leq 1.0$ is considered highly reliable . The Self-Efficacy Scale used in the third section is a Likert-type scale developed by Sherer et al. in 1982 to assess behaviors and behavioral changes. The scale was tested, and its reliability was calculated by Gözüm and Aksayan.[16]

The participating physician assistants were informed about the purpose and the data collection tools of the study. The survey was administered face-to-face to the physicians who gave verbal and written consent. The data were analyzed via SPSS 22.0. Chi-square, Kruskal-Wallis, and Mann-Whitney U tests and Spearman's correlation analysis were used for data analysis. Statistical significance level was accepted as $p<0.05$.

The health sector, with its obligatory mentor-mentee relationship, is among the important sectors where people advance in their careers. It is expected that physician assistants' perceptions towards mentorship have reflections on their academic self-efficacy. To reveal this, the questions below were tried to be answered:

1. Are there significant differences between physician assistants' mentorship perceptions and self-efficacy levels in terms of demographic characteristics?
2. Do these differences change by department and the hospital one works in?
3. Are there relationships between the sub-factors of the Self-Efficacy Scale and those of the Mentorship Functions Scale for physician assistants?

RESULTS

As the demographic data is shown at Table 1, of the participants, 52.8% are males, and 47.2% are females. The average age was found to be 28.7±2.9. Their years of experience as a physician are 4.1±2.7 years and years of experience as a physician assistant are 2.7±1.3 years. 53.9% of the participants work in Ege University Hospital; 20.9% work in Tepecik Training and Research Hospital; and 25.2% work in Izmir Atatürk Training and Research Hospital. 36% of the participants work in surgical sciences; 59.4% work in medical sciences; and 4.6% work in basic sciences.

Table 2 shows mean, minimum, maximum, and standard deviation values for the Mentoring Functions Scale and the Self-Efficacy Scale. The Mentoring Functions Scale scores of the participants are as follows: total score: 3.0±0.8, acceptance and confirmation: 3.2±1.0, role modeling: 3.3±0.9, sponsorship: 3.1±0.9, exposure and visibility: 2.9±0.9, coaching: 3.1±1.0, and friendship is 2.4±1.0. The Self-Efficacy Scale scores of the participants are as follows: total score: 3.6±0.5, willingness to initiate a behavior: 3.9±0.6, willingness to expend effort in completing a behavior: 3.9±0.7, defining a behavior: 3.6±0.7, and persistence in the face of adversity: 2.9±0.7.

Table 3 and Table 4 show the relationships between the participants' socio-demographic characteristics and the dimensions of the Mentorship Functions Scale and the dimensions of the Self-Efficacy Scale (variables). Table 3 shows the relationship between gender and the variables. The mentorship perception of the male physicians regarding friendship function is significantly higher than that of female physicians ($p<0.05$). However, there is no significant difference between them in other dimensions of the Mentoring Functions Scale ($p>0.05$). There is no significant relationship between gender and the Self-Efficacy Scale total score, the score for willingness to expend effort in completing a behavior, and the score for defining a behavior ($p>0.05$). However, the male physicians' score for willingness to initiate a behavior in the Self-Efficacy Scale is significantly lower than that of the female physicians ($p<0.05$). The male physicians' score for persistence in the face of adversity is significantly higher than that of the females ($p<0.001$). In accordance with the correlation test results regarding the variables of age, year of experience as a physician, and year of experience as a physician assistant, except for the positive, significant relationship between year of experience as a physician assistant and the score for friendship function ($p<0.05$), there are no significant relationships between the dimensions of the Mentoring Functions Scale and age, year of experience as a physician, and year of experience as a physician assistant ($p>0.05$). While there are no significant relationships between age and year of experience as a physician and the Self-Efficacy Scale total score, score for willingness to initiate a behavior, score for willingness to expend effort in completing a behavior, and score for defining a behavior (the self-efficacy scale) ($p> 0.05$), there is a significant, positive relationship between year of experience as a physician assistant and persistence in the face of adversity ($p<0.05$).

While analyzing the relationship between the hospital one works in and the variables, the types of hospitals were reduced to two categories. These are university hospitals and training and research hospitals. Table 4 shows the relevant analysis results. The physicians working in the training and research hospitals have a significantly higher Mentoring Functions Scale total score, significantly higher score for acceptance and confirmation, significantly higher score for sponsorship, and significantly higher score for exposure and visibility compared to the physicians working in the university hospital ($p<0.05$). There are no significant differences between the physicians working in these two types of hospitals in terms of score for role modeling, score for coaching, and score for friendship ($p> 0.05$). There are no significant differences between the physicians working in these two types of hospitals in terms of the Self-Efficacy Scale total score and scores for willingness to initiate a behavior, willingness to expend effort in completing a behavior, defining a behavior, and persistence in the face of adversity ($p>0.05$). Moreover, the participants' scores from each dimension of the above-mentioned scales were analyzed based on department (i.e. surgical sciences, medical sciences, and basic sciences), but no significant results were reached.

Table 5 shows the relationships between the subfactors of the Mentoring Functions Scale and the Self-Efficacy Scale for the physician assistants. There are no significant relationships between the Self-Efficacy Scale total score and the Mentoring Functions Scale sponsorship and friendship scores ($p>0.05$). There are positive, significant relationships between the Self-Efficacy Scale total score and the Mentoring Functions Scale total score ($p<0.05$), acceptance and confirmation score ($p<0.05$), role modeling score ($p<0.001$), exposure and visibility score ($p<0.05$), and coaching score ($p<0.05$). While there are no significant relationships between the score for willingness to initiate a behavior in the Self -Efficacy Scale and the dimensions of the Mentoring Functions Scale, there is a positive relationship between the score for willingness to expend effort in completing a behavior and role modeling score ($p<0.05$). The score for willingness to expend effort in completing a behavior in the Self-Efficacy Scale has a positive, significant relationship with the Mentoring Functions Scale total score ($p<0.05$), acceptance and confirmation score ($p<0.05$), role modeling score ($p<0,001$), sponsorship score ($p<0.05$),

exposure and visibility score ($p<0.05$), and coaching score ($p<0.05$). There are also positive, significant relationships between the score for persistence in the face of adversity and the Mentoring Functions Scale total score ($p<0.001$), acceptance and confirmation score ($p<0.001$), role modelling score ($p<0.001$), sponsorship score ($p<0.001$), exposure and visibility score ($p<0.001$), coaching score ($p<0.001$), and friendship score ($p<0.001$).

DISCUSSION AND CONCLUSION

Health sector is among the areas in which mentorship practices are used most. When the training in medicine is defined as mentor-protégé relationship, the importance of mentorship for academic career becomes apparent. This study focuses on physician assistants' perceptions towards mentorship and the reflection of these perceptions on their self-efficacy. Initially in the study, whether physician assistants' demographic characteristics created a significant difference in their perceptions towards mentorship and self-efficacy was questioned.

The findings given above regarding demographic data show that the physician assistants' self-efficacy scores differ significantly by gender as the male physician assistants have significantly lower scores for willingness to initiate a behavior while they have significantly higher scores for persistence in the face of adversity. The physician assistants' perceptions towards mentorship indicate that the male physician assistants' friendship scores are significantly higher than the female physician assistants' scores. There are many studies in the literature dealing with the relationship between gender and self-efficacy level. Scholz et al. state that men have higher self-efficacy levels than women.[17] Yiğitbaş and Yetkin[18] report that male students have higher self-efficacy total scores and mean sub-dimension scores than female students. In contrast to these results, Okçin and Gerçeklioğlu,[19] Doni et al.,[20] and Karadağ et al.,[21] conducted studies on self-efficacy perceptions of students studying at health services vocational schools and revealed that gender does not have a significant influence on students' self-efficacy levels. Consistently with many previous studies, the present study indicates that gender is associated with self-efficacy. The results of this study show that though the female physicians are more outgoing, they seem to give up more easily in the face of adversity while the male physicians are more contentious and develop friendlier relations with their mentors. We believe that this stems from gender roles. Though the participants have high education levels, it is possible to say that learned gender roles are reflected on self-efficacy and mentorship perceptions. As a matter of fact, the gender distribution of the departments shows that women are less inclined to study surgical sciences (32.5%), while the rate of women is higher than that of men in medical and basic sciences.

Physician assistants exchange more knowledge and experience with their mentors as they spend more time in assistantship. The mentoring scores based on year of experience as a physician assistant show that it has a positive relationship with friendship score. The research assistants stated that their first year in profession was the period when they learned most in terms of career advancement. They emphasized the importance of a model that they can consult in this process while facing the realities, having difficulty in balancing the social and academic life, and feeling isolated due to fear of failure stemming from too much responsibility.[22] Therefore, as the year of experience increases, their need to counsel their mentors increases as well. As a result, the mentor-protégé relationship is replaced by friendship as the roles transform into being colleagues. Hence, when they encounter problems in their work life, they share these problems with their mentors whom they consider as colleagues-friends and resolve them. Vatan[23] revealed in a study dwelling on formal mentorship program for nurses that mentors are considered as counsellors and role models. Similarly, Dimitri et al.[24] state that medical faculty students define their mentors as counsellors and sponsors to a great extent. Frei et al.[1] conducted a study assessing mentoring practices on medical faculty students. They revealed that mentorship practices in the early years of medical faculty are an important career advancement method. To sum up, whether it is medical faculty students or physician assistants, mentoring is an efficient method for professional development, and the mentor-protégé relationship transforms into being colleagues.

Though a relationship was detected between the year of experience as a physician assistant and self-efficacy, no relationship was determined with age. As to previous studies focusing on the relationship between age and self-efficacy, Keskin and Orgun[25] observed that as age increases, the score for willingness to initiate a behavior, which is a sub-dimension of the Self-Efficacy Scale, becomes higher. To Gözüm and Aksayan[16], a person gains more experience in life as s/he gets older. The most important

source of self-efficacy accumulation is one's previous successful experiences in fulfilling the expected/necessary behavior. Hence, the increase in self-efficacy level as the age increases is an expected result. These results are not consistent with the results of the present study.

The scale scores based on the types of hospitals show that total score for mentoring, acceptance and confirmation score, sponsorship score, and exposure and visibility score are significantly higher for the physicians working in training and research hospitals than for the physicians working in university hospitals ($p<0.05$); however, no significant difference was detected between them for the Self-Efficacy Scale. This result is indicative of the fact that mentor physicians working in training and research hospitals are influential on physicians' training, and physician assistants benefit more from these mentors. It was seen that the physician assistants working in the medical sciences department of training and research hospitals had significantly higher scores from the Mentoring Functions Scale in terms of total score, acceptance and confirmation score, sponsorship score, exposure and visibility score, and friendship score, whereas the physician assistants working in university hospitals have significantly higher scores from the Self-Efficacy Scale in the category of willingness to initiate a behavior ($p< 0.05$). If the mentor has similar characteristics to the mentee in terms of age, gender, physical appearance, development level, ethnicity, educational background, and socio-economic status, this increases the mentee's belief that s/he can achieve as well.[26] In the present study, the mentors were assessed based on their functions. Many previous studies focused on whether mentors are effective. Çıtak and Aktaş conducted a study with 204 physician assistants from thoracic surgery and cardiovascular surgery departments.[27] They determined that the mentors in training and research hospitals are more effective than mentors in university hospitals. Kösemehmetoğlu et al. conducted a study covering 152 physician assistants from pathology department and stated that mentors in university hospitals are more effective.[28] Though there are contradictory findings in the literature about the superiority of mentors working in training and research and university hospitals over one another, the findings of this study are consistent with the previous studies reporting that mentors working in training and research hospitals have higher functions.

As self-efficacy is a dynamic structure and particularly influential on students' academic efforts and performance levels, it is a factor to which importance should be attached in learning environments.[29] Because specialization training is a learning process, the factors that influence physician assistants' performance and learning levels should be paid attention to as well. To this end, to reveal the relationship between the physicians' self-efficacy levels and mentorship practice, this study dealt with the relationships between their sub-factors.

The comparison of the scores from the Mentoring Functions Scale and the Self-Efficacy Scale showed relationships between three sub-factors of the Self-Efficacy Scale (i.e. total score, score for defining a behavior, score for persistence in the face of adversity) and five sub-factors of the Mentoring Functions Scale (i.e. total score, acceptance and confirmation score, role modeling score, exposure and visibility score, coaching score). The score for willingness to expend effort in completing a behavior has a relationship with role modeling score, while the score for willingness to initiate a behavior does not have a relationship with any of the scores. The friendship sub-factor of the Mentoring Functions Scale has only a relationship with persistence in the face of adversity. The sponsorship sub-factor has relationships with defining a behavior and persistence in the face of adversity. To Bandura, taking as a role model and making social comparisons are influential on one's perception of self-efficacy, and taking as a role model is a factor decreasing anxiety level. In this study, role modeling score has a relationship with four sub-factors of the Self-Efficacy Scale (i.e. total score, willingness to expend effort in completing a behavior, defining a behavior, and persistence in the face of adversity). This result supports Bandura's argument. The concepts of mentoring and role modeling are associated with one another. While mentorship is a process that needs constructing, role modeling is often automatic. Mentors with good role modeling capacity are more effective in managing the process. In the present study, no relationships were detected between willingness to initiate a behavior but some previous study reports that those who work with good role models have more job/professional satisfaction than those who do not.[30]

İbrahimoğlu studied the relationship between the mentorship and self-efficacy sub-groups for the staff working in technology development centers of Hacettepe and Bilkent Universities.[29] They detected reducing relationships between coaching, one of the

sub-groups of the Mentoring Functions Scale, and willingness to expend effort in completing a behavior and persistence in the face of adversity, which are among the sub-groups of the Self-Efficacy Scale. Moreover, they detected increasing relationships between acceptance and confirmation, which is among the sub-groups of the Mentoring Functions Scale, and willingness to expend effort in completing a behavior and persistence in the face of adversity, which are among the sub-groups of the Self-Efficacy Scale. These findings are in line with the results of this study. That study determined no relationships between willingness to initiate a behavior, one of the sub-groups of self-efficacy, and the sub-groups of mentoring.[29] In the present study, no relationships were detected between willingness to initiate a behavior and the sub-factors of mentoring. In this study, as relationships were detected between persistence in the face of adversity (self-efficacy) and coaching and acceptance and confirmation (mentoring), benefiting from the positive role models in physician assistants' social milieu may not initiate a behavior but it helps to maintain a behavior.

In conclusion; Though the participants have high education levels, it is possible to say that learned gender roles are reflected on self-efficacy and mentorship perceptions. As a matter of fact, the gender distribution of the departments shows that women are less inclined to study surgical sciences (32.5%), while the rate of women is higher than that of men in medical and basic sciences.

Although there are contradictory findings in the literature about the superiority of mentors working in training and research and university hospitals over one another, the findings of this study are consistent with the previous studies reporting that mentors working in training and research hospitals have higher functions.

Finally, as relationships were detected between persistence in the face of adversity and coaching and acceptance and confirmation benefiting from the role models in physician assistants', social milieu may not initiates a behavior but this is maintaining a behavior. Based on that it is recommended that mentoring be practiced by a qualified specialist, the lack of the program may be detected through feedbacks and attempts can be made to educate new mentors by organizing training seminars for educators which may improve mentors' qualifications about change.

Ethics Committee Approval: Our study was approved by the Okan University Non-interventional Health Sciences Ethics Committee (Date: 29.01.2014; Decision no:27).
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Table 1. Demographic data.

		n		%
Gender	Female	206		47.2%
	Male	230		52.8%
Hospital	Ege University Faculty of Medicine	235		53.9%
	Tepecik Training and Research Hospital	91		20.9%
	Yeşilyurt Training and Research Hospital	110		25.2%
Field	Surgical sciences	157		36.0%
	Internal diseases sciences	259		59.4%
	Basic medical sciences	20		4.6%
		Min.	**Max.**	**Mean±Std Deviation**
Age		24.0	50.0	28.7±2.9
Working period as a doctor		1.0	27.0	4.1±2.7
Working period as a expertise student		1.0	6.0	2.7±1.3

Table 2. Descriptive statistics results of variables.

Mentoring Perception Scale	**Mean± Std. Deviation**	**Min.**	**Max.**
Acceptance and approval	3.2±1.0	1.0	5.0
Role modeling	3.3±0.9	1.0	5.0
Counseling function	3.1±0.9	1.0	5.0
Self-expression function	2.9±0.9	1.0	5.0
Coaching function	3.1±1.0	1.0	5.0
Friendship function	2.4±1.0	1.0	5.0
Total	3.0±0.8	1.0	5.0
Self-efficacy Scale	**Mean± Std. Deviation**	**Min.**	**Max.**
Willingness to initiate behavior	3.9±0.6	1.9	5.0
Willingness to maintain behavior	3.9±0.7	1.4	5.0
Willingness to expend effort in completing the behavior	3.6±0.7	1.8	5.0
Persistence in the face of adversity	2.9±0.7	1.0	5.0
Total	**3.6±0.5**	**1.8**	**4.9**

Table 3. Significant relationships between variables and gender.

	Female			**Male**			
Mentoring Perception Scale	**Mean± Std. Deviation**	**Min.**	**Max**	**Mean± Std. Deviation**	**Min.**	**Max**	p
Total	2.9±0.8	1.0	5.0	3.0±0.8	1.0	5.0	0.294
Acceptance and approval	3.2±1.0	1.0	5.0	3.2±1.0	1.0	5.0	0.754
Role modeling	3.3±0.9	1.0	5.0	3.3±0.9	1.0	5.0	0.698
Counseling function	3.1±0.9	1.0	5.0	3.1±0.9	1.0	5.0	0.297
Self-expression function	2.9±1.0	1.0	5.0	2.8±1.0	1.0	5.0	0.890
Coaching function	3.1±1.0	1.0	5.0	3.1±0.9	1.0	5.0	0.436
Friendship function	2.3±1.0	1.0	5.0	2.5±1.0	1.0	5.0	**0.025***
Self-efficacy Scale							
Total	3.6±0.5	1.8	4.8	3.6±0.5	2.5	4.9	0.555
Willingness to initiate behavior	3.9±0.7	2.0	5.0	3.8±0.6	1.9	5.0	**0.023**
Willingness to maintain behavior	3.9±0.7	1.4	5.0	3.9±0.6	2.1	5.0	0.338
Willingness to expend effort in completing the behavior	3.5±0.7	1.8	5.0	3.6±0.7	1.8	5.0	0.120
Persistence in the face of adversity	2.8±0.7	1.0	4.7	3.0±0.7	1.3	5.0	**0.001***

*Mann-Whitney U Test, * $p<0.05$*

Table 4. Significant relationships between variables and type of hospital.

	Faculty of Medicine Hospitals			**Training and Research Hospitals**			
Mentoring Perception Scale	**Mean± Std. Deviation**	**Min.**	**Max.**	**Mean± Std. Deviation**	**Min.**	**Max.**	**p**
Total	2.9±0.8	1.0	5.0	3.1±0.8	1.0	5.0	**0.013***
Acceptance and approval	3.1±1.0	1.0	5.0	3.3±1.0	1.0	5.0	**0.006***
Role modeling	3.3±0.9	1.0	5.0	3.3±0.9	1.0	5.0	0.653
Counseling function	2.9±0.9	1.0	5.0	3.2±0.9	1.0	5.0	**0.002***
Self-expression function	2.8±1.0	1.0	5.0	3.0±0.9	1.0	5.0	**0.011***
Coaching function	3.0±1.0	1.0	5.0	3.2±0.9	1.0	5.0	0.076
Friendship function	2.3±1.0	1.0	5.0	2.5±1.1	1.0	5.0	0.088
Self-efficacy Scale							
Total	3.6±0.5	1.8	4.8	3.6±0.5	2.3	4.9	0.756
Willingness to initiate behavior	3.8±0.7	1.9	5.0	3.9±0.6	1.9	5.0	0.220
Willingness to maintain behavior	3.9±0.7	1.4	5.0	3.9±0.7	2.1	5.0	0.848
Willingness to expend effort in completing the behavior	3.6±0.7	1.8	5.0	3.6±0.7	1.8	5.0	0.684
Persistence in the face of adversity	2.9±0.7	1.0	4.7	2.9±0.7	1.0	5.0	0.667

*Mann-Whitney U Test, *p<0.05*

Table 5. Significant Mentoring Perception relationship on Self-efficacy.

			Self-efficacy Scale				
			Total	**Willingness to initiate behavior**	**Willingness to maintain behavior**	**Willingness to expend effort in completing the behavior**	**Persistence in the face of adversity**
Mentoring Perception Scale	Total	r*	0.104	-0.019	0.022	0.113	0.245
		p**	***0.030***	0.696	0.648	***0.019***	***0.000***
	Acceptance and approval	r	0.098	-0.017	0.055	0.105	0.180
		p	***0.042***	0.724	0.253	***0.029***	***0.000***
	Role modeling	r	0.180	0.071	0.119	0.155	0.206
		p	***0.000***	0.141	***0.013***	***0.001***	***0.000***
	Counseling function	r	0.073	-0.041	-0.009	0.111	0.179
		p	0.129	0.398	0.858	***0.020***	***0.000***
	Self-expression function	r	0.101	-0.016	0.006	0.125	0.237
		p	***0.036***	0.732	0.909	***0.009***	***0.000***
	Coaching function	r	0.095	-0.019	0.015	0.098	0.234
		p	***0.046***	0.696	0.752	***0.041***	***0.000***
	Friendship function	r	-0.011	-0.077	-0.071	0.007	0.190
		p	0.825	0.108	0.136	0.878	***0.000***

Spearman Correlation, p<0.001
**(r) refers to correlation coefficient.*
***(p) refers to degree of significance*