ARAŞTIRMA MAKALESİ / *RESEARCH ARTICLE*

Relationship Between Well-Being, Psychological Resilience, and Life Satisfaction of Residents

Asistan Hekimlerin İyi Olma Hali, Psikolojik Dayanıklılığı ve Yaşam Doyumları Arasındaki İlişki

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ABSTRACT

Aim: *In this study, the objective was to compare the psychological well-being, psychological resilience, and life satisfaction of the resident physicians working in our hospital according to their gender and branches.*

Material and Method: *"Personal Information Form", "Brief Psychological Resilience Scale", "Psychological Well-Being Scale" and "Life Satisfaction Scale" were used as data collection tools to evaluate the socio-demographic qualities of the resident physicians. The results and study data obtained were analyzed using the SPSS 22 program.*

Results: *Psychological resilience, psychological well-being, and life satisfaction did not differ according to the resident's gender. While the psychological resilience of resident physicians did not differ statistically according to their branches, the psychological well-being and life satisfaction of the resident physicians working in internal medical science were higher than of other resident physicians. No statistically significant difference was found in the psychological well-being and life satisfaction of the resident physicians working in the Surgical Medical Science and emergency department.*

Conclusion: *It was found that psychological resilience did not differ according to the branches of the resident physicians. However, the psychological well-being and life satisfaction of physicians working in internal medical science were higher than those working in surgical medical science. At the end of the study, the Life satisfaction of emergency medicine, which is regarded as one of the internal medical science, was closer to scores of the surgical medical science.*

Key words: *psychological well-being; life satisfaction; psychological resilience*

ÖZET

Amaç: *Bu çalışmada hastanemizde çalışan asistan hekimlerin psikolojik iyi olma hali, psikolojik dayanıklılıkları ve yaşam doyumlarının cinsiyet ve branşlarına göre karşılaştırılması amaçlandı.*

Materyal ve Metot: *Asistan hekimlerin sosyo-demografik özelliklerini değerlendiren "Kişisel Bilgi Formu", "Kısa Psikolojik Sağlamlık Ölçeği", "Psikolojik İyi Olma Ölçeği" ve "Yaşam Doyumu Ölçeği" veri toplama araçları olarak kullanıldı. Çalışmamızda elde edilen sonuçlar ve çalışma verileri SPSS 22 programı kullanılarak analiz edildi.*

Bulgular: *Cinsiyetlerine göre psikolojik sağlamlık, psikolojik iyi olma ve yaşam doyumları farklılık göstermedi. Branşlarına göre asistan hekimlerin psikolojik sağlamlıkları istatiksel olarak anlamlı farklılık göstermez iken dâhili branşlarda çalışan asistan hekimlerin psikolojik iyi olma halleri ve yaşam doyumları diğer asistan hekimlerden daha yüksek bulundu. Cerrahi branşlar ile acil tıp kliniğinde çalışan asistan hekimlerin psikolojik iyi oluşları ve yaşam doyumlarında istatiksel olarak anlamlı farklılık tespit edilmedi.*

Sonuç: *Asistan hekimlerin branşlarına göre psikolojik sağlamlığın farklılaşmadığı tespit edildi. Ancak dâhili branşlarda çalışan hekimlerin psikolojik iyi oluş ve yaşam doyumu cerrahi branşlarda çalışanlara göre daha yüksektir. Çalışmanın sonucunda dâhili branşlardan biri olarak kabul edilen acil tıbbın yaşam doyumu puanı cerrahi branşlara daha yakın bulundu.*

Anahtar kelimeler: *psikolojik iyi oluş; yaşam doyumu; psikolojik sağlamlık*

Introduction

Specialization training in medicine is a full-time training program conducted under supervision[1]. Doctors spend 3 to 7 years of their young adulthood in specialization training[2]. This period is a difficult one in that it creates a heavy burden for individuals. Stress is a condition inherent in the medical education process. Several types of research highlight the relationship between medical education and stress[3]. The specialty training

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process has also been related to anxiety, depression, loss of self, and emotional decline. All these events affect people's behavior and plans for the future. Several factors such as working hours longer and more than expected and promised, insufficient financial resources, isolation from the social environment, friends, relatives, and even family, and restriction of the time these physicians can spare for themselves pose a source of stress during specialty education[4]. It is also known that residents undergo much stress during this process, and this stress adversely affects the quality of health care[1].

In this study, the aim was to compare the well-being, psychological resilience, and life satisfaction of the resident physicians working in emergency medicine and internal and surgical medical science based on their gender and branches.

Materials and Methods

The universe of the study is comprised of the resident physicians working in the emergency department, and the internal and surgical medical science in a 3rd level education and research hospital in the 2018–2019 academic year. The study started after the approval of the ethics committee was taken. This hospital has 209 residents, 112 of whom work in internal medical science, 71 work in surgical medical science, and 26 work in the emergency department. 89.5% (n: 187) of these resident physicians participated in the study. It was stated that the answers given to the questions in the scales used in the study were based on the principle of volunteering and that they could act freely in the choice of whether to participate or not. The physicians participating in the research were told about the objective, quality, and requirements of the research. Resident physicians who did not want to participate in the study were not included.

Data Collection

In the study, a "Personal Information Form," "Brief Psychological Resilience Scale", "Psychological Well-Being Scale," and "Satisfaction Scale" were used as data collection tools to evaluate the socio-demographic qualities of resident physicians. Personal Information Form is a form consisting of a total of 14 questions to evaluate several features of resident physicians (age, gender, branch, place of duty, whether they have previously received specialty training, marital status, chronic illness, etc.). The Brief Psychological Resilience Scale (BPRS) we used in the study was developed by Smith et al. (2008)[5] and adapted to Turkish by Doğan (2015)[6]. The aim of using this scale was to evaluate the recuperation of residents, their getting better again and returning to their previous functional state, and their adaptability. Our scale is a tool that includes six questions that physicians answer about themselves and is a 5-point Likert type evaluation in which the scores go from 1 to 5. A person's high score based on his/her answers shows that his/her psychological resilience level is also high. The second psychological well-being scale (PWBS), which we used, was developed by Diener et al. (2009)[7] and was adapted to Turkish by Telef (2013)[8]. The scale is a 7-point Likert-type scale consisting of eight items. The scoring goes from 1 to 7 for each item. The statement "Strongly disagree" on the scale gets "1" as a score, and the statement "I strongly agree" gets seven as a score. It is stated that the higher the score is, the higher the psychological resources and resilience of the individual are. The Satisfaction with Life Scale (SWLS), developed by Diener, Emmons, Larsen, and Griffin in 1985 to evaluate life satisfaction, was used in the study[9]. The scale is a self-report scale consisting of five items assessing life satisfaction, using a 7-point Likert-type scoring system for each item. The scoring of the items in the scale goes thus: (1) is "not suitable," (7) is "very suitable." The high score obtained through the self-report of the individuals on the scale indicates that their satisfaction with life is also high.

Data Analysis

Categorical variables such as demographic data and descriptive characteristics of resident physicians were summarized as number (n) and percentage (%). Descriptive statics associated with continuous variables were shown as mean ± standard deviation. The normal distribution of the variables was measured with the Shapiro-Wilk test. The Student-t-test was used to compare normally distributed continuous variables, and the Mann-Whitney U-test was used to compare non-normally distributed samples. Chi-square (χ^2) test was used to compare categorical variables. One Way Anova test was used to compare the means of the three groups. Bonferroni's test was used as the Post Hoc test to determine the difference between the groups. In our study, SPSS 22 package program was used in the statistical evaluation of the data obtained (SPSS Inc, Chicago, Illinois, USA). As the statistical significance level, $p<0.05$ value was taken.

Results

A total of 187 resident physicians working in the emergency department, and internal and surgical medical science participated in the study. 38% (n: 71)

of the resident physicians participating in the study were female, 62% (n: 116) were male, and the mean age was 30.06±5.4 years. While the lowest resident physician age was 24, the highest was 53. The mean age of male residents was 30.65±6, and the mean age of female residents was 29.11±4.3. There was no statistically significant difference in the mean age of the physicians according to their gender (p=0.43). 48.1% (n: 90) of residents were married, 51.3% (n: 96) were single, 0.5% (n: 1) were divorced. 48.1% (n: 90) of residents were married, 51.3% (n: 96) were single, 0.5% (n: 1) were divorced. No statistically significant difference was observed between marital status and gender (respectively; 1.000, 0.881, and 1.000). A statistically significant difference was found between gender and branch groups (Emergency medicine, internal and surgical medical science) (respectively; 0.015, 0.001, 0.001). Male residents work in emergency medicine and surgery, and female residents mostly work in internal medical science. The relationship between gender and branches is presented in Table 1. It was found that the psychological resilience scores of resident physicians did not differ statistically according to their gender (p=0.253) and marital status (p=0.086). It was found that the psychological well-being scores of resident physicians did not differ significantly according to their gender (p=0.711) and their marital status (p=0.415). It is observed that the life satisfaction scores of resident physicians do not differ significantly according to their gender (p=0.191) and their marital status (p=0.380). Distribution of physicians between their gender and marital status, branches, group, and scores are summarized in Table 1.

Table 1. *Distribution of physicians between their gender and marital status, branches, branches group, and scores*

	Total N (%)	Male n: 116 (62%)	Female n: 71 (38%)	p
Age (years)	30.06±5.4	30.65±6	29.11±4.3	0.43
Marital Status				
Married	90 (48.1%)	56 (62.5%)	34 (37.8%)	1.000
Single	96 (51.3%)	59 (61.5%)	37 (38.5%)	0.881
Divorced	1 (0.5%)	1 (100%)	0 (0%)	1.000
Branches Group				
Emergency Medicine	26 (13.9%)	22 (84.6%)	4 (15.4%)	0.015
Internal Medical Science	107 (57.2%)	50 (46.7%)	57 (53.3%)	0.001
Surgical Medical Science	54 (28.9%)	44 (81.5%)	10 (18.5%)	0.001
Branches				
Emergency Medicine	26 (13.9%)	22 (84.6%)	4 (15.4%)	0.015
Internal Medicine	21 (11.2%)	12 (57.1%)	9 (42.9%)	0.639
Family Medicine	41 (21.9%)	19 (46.3%)	22 (53.7%)	0.028
Pediatrics	30 (16%)	8 (26.7%)	22 (73.3%)	0.001
Radiology	8 (4.3%)	7 (87.5%)	1 (12.5%)	0.263
Cardiology	7 (3.7%)	4 (57.1%)	3 (42.9%)	1.000
Orthopedics and Traumatology	12 (16%)	12 (100%)	0 (0%)	0.004
General surgeron	9 (4.8%)	9 (100%)	0 (0%)	0.014
Gynecology and Obstetrics	7 (3.7%)	2 (28.6%)	5 (71.4%)	0.107
Ophthalmologist	7 (3.7%)	6 (85.7%)	1 (14.3%)	0.256
Urology	6 (3.2%)	6 (100%)	0 (% 0)	0.084
Otolaryngology	5 (2.7%)	4 (80%)	1 (20%)	0.651
Neurosurgeon	4 (2.1%)	3 (75%)	1 (25%)	1.000
Cardiovascular Surgeon	3 (1.6%)	2 (66.7%)	1 (33.3%)	1.000
Pediatric Surgeon	1 (0.5%)	0 (0%)	1 (100%)	0.380
Scores				
BPRS	19.3±5.0	19.61±4.9	18.75±5.2	0.253
PWBS	41.2±8.2	40.99±8.6	41.45±7.6	0.711
SWLS	21.8±6.7	21.26±6.8	22.58±6.4	0.191

Table 2. *Comparison of the scores of Brief Psychological Resilience Scale, Psychological Well-Being Scale and Satisfaction With Life Scale according to the branches of resident physicians*

	Branches	n	Mean	Standard deviation	F	p
BPRS	Emergency Medicine	26	18.12	4.685	0.819	0.4
	Internal Medical Science	107	19.48	5.182		
	Surgical Medical Science	54	19.46	4.824		
PWBS	Emergency Medicine	26	40.27	6.685	7.029	0.001
	Internal Medical Science	107	42.95	7.846		
	Surgical Medical Science	54	38.06	8.625		
SWLS	Emergency medicine	26	19.19	6.132	9.745	0.001
	Internal Medical Science	107	23.54	6.156		
	Surgical Medical Science	54	19.46	6.949		

BPRS: Brief Psychological Resilience Scale; PWBS: Psychological Well-Being Scale, SWLS: Satisfaction with Life Scale.
Statistical analysis: One Way Anova test.

As a result of the study, the psychological resilience scores of resident physicians did not differ statistically (p=0.442) compared to the branch groups (emergency, internal, surgical); However, the scores of psychological well-being (p=0.001) and life satisfaction scores (p=0.001) showed statistically significant difference based on the branches (emergency, internal and surgical) (Table 2).

It was found that there was no statistically significant difference between the emergency and the internal and surgical medical science in terms of the psychological well-being of the residents (p=0.371, p=0.732); However, there was a significant difference between the internal and surgical medical science on behalf of the physicians working in the internal medical science (p=0.001) (Table 3).

The study determined that the highest life satisfaction belonged to the resident physicians working in internal medical science (Table 2). When the analysis conducted to determine the source of the difference between the life satisfaction of the resident physicians participating in the study was analyzed, there was a statistically significant difference between the life satisfaction of the resident physicians working in the emergency department and internal medical science (p=0.006); no statistically significant difference was found between the emergency medicine and the surgical medical science (p=1.000) (Table 3).

Discussion

In the literature, there was generally no difference between genders in terms of well-being and psychological resilience[10–13]. However, some studies have shown that women are well-being with scales that are more extreme[10], and it is stated that they are more exposed to stress and depressive symptoms. In addition, it is thought that it may be a common situation for women think that living conditions do not meet these expectations even though they may want more equality to regulate their lives in the early stages, lowering their life satisfaction levels. The role conflicts between working women on work-family

Table 3. *Evaluation of the analysis to determine the source of difference regarding Psychological Well-Being Scale and Satisfaction With Life Scale scores according to the branch groups of resident physicians*

	Branches	Comparison Group	p
PWBS	Emergency Medicine	Internal Medical Science	0.371
		Surgical Medical Science	0.732
	Internal Medical Science	Emergency Medicine	0.371
		Surgical Medical Science	0.001
	Surgical Medical Science	Emergency medicine	0.732
		Internal Medical Science	0.001
SWLS	Emergency Medicine	Internal Medical Science	0.006
		Surgical Medical Science	1.000
	Internal Medical Science	Emergency Medicine	0.006
		Surgical Medical Science	1.000
	Surgical Medical Science	Emergency Medicine	1.000
		Internal Medical Science	0.001

PWBS: Psychological Well-Being Scale, SWLS: Satisfaction with Life Scale.
Statistical analysis: Bonferroni test as Post Hoc test.

balance may also affect their well-being. Despite all these unfavorable causes, there should be reasons why women do not differ in their averages from men. It can be considered an advantage for men to be more independent and free in social life, to benefit more from the methods of coping with stress and to externalize their problems. Emotional intelligence averages of women who are known to have higher average effects their relationship with other people can increase their empathy and self-expression, thereby indirectly increasing their well-being and life satisfaction. Part-time working conditions can facilitate the preservation of work-family balance, reduce the perception of role conflict, and increase well-being. Role conflict and work-family balance influence well-being, and part-time compared to full-time work is associated with higher life satisfaction among career women[14]. Our study determined that the psychological resilience scores, stress coping, psychological well-being scores, and life satisfaction scores of resident physicians did not differ significantly according to their gender. Because resident physicians cannot work part-time, they are constantly working on shifts and this can not allocate enough time for their families, themselves, and social and private life. This situation does not distinguish gender for resident physicians. The fact that assistant physicians participating in our study are in the same city, in the same hospital, and under similar responsibilities can be considered a limitation of our study.

Another reason that determines the severity of stressors on resident physicians may be the branch they work for. Even though the resident physicians in the study work within the same institution, the departments they work for have different dynamics and stress factors. Studies in the literature report that surgeons are faced with more stress and workload and are more inclined to quit the training program[15–18]. The emergency department is the clinic with the highest patient density for many reasons, which significantly increases the workload. Health policies in our country, the fact that the patient has to pay a wage difference in other polyclinics and no wage difference in the emergency department, and other public and private employees' being transferred to the emergency department by administrators due to problems in getting consent for being off work and getting a health report instead, the fact that patients think they can more quickly resolve their problems in the emergency department and being in the emergency department grants them a priority for the resolution of their problems even though emergency department exists for urgent cases increase the workload of the emergency department. These reasons result in a severe increase in the density and, consequently workloads of the emergency departments in the Training and Research Hospitals, which are applied more intensively by patients than in university hospitals. It is also likely that residents working in Emergency Medicine Clinics in Training and Research Hospitals will undergo adverse effects regarding their stress, well-being, and life satisfaction levels due to the facts above. Although emergency medicine is among the internal medical science in our country during the specialty training process, it is closer to surgical medical science in terms of the interactions between stress, well-being, and life satisfaction.

A high level of psychological resilience is closely correlated with the ability to cope with stress. It was found that the participant's level of coping with stress based on their psychological resilience was not statistically different when compared among the branch groups (emergency, internal, surgical). Even though stress factors and workloads on resident physicians are high, the reason why there is no difference between the branch groups can be the fact that physicians improve themselves regarding psychological resilience; they are aware of the difficulties of the chosen branch as they deliberately have chosen it, they gain flexibility or and they accept the difficulties in some way even if they cannot get adapted to them.

When the results of the Psychological Well-Being Scale used in our study were examined, resident physicians working in internal medical science had higher psychological well-being than the physicians working in emergency medicine and surgical medical science, which can be explained by the fact that they can find more rest periods during working hours. There are relatively fewer stress factors they are exposed to during active work. In addition, they have relatively less workload, more hope for the future, and more time for themselves and their development families. It is not surprising that physicians in surgical medical science have the lowest psychological well-being due to their low scores, which stem from the opposite of reasons listed for internal medical science physicians.

One of the most basic elements necessary for one's life to make sense and leading a happy life is life satisfaction. This study determined that the highest

life satisfaction belonged to the resident physicians working in internal medical science. Life satisfaction comprises six elements: income level, occupational and social position, welfare level, state policy, opportunities and their conditions, environment, family, and social relations[19]. Residents cannot see the praise and appreciation they expect due to their professional and social positions. They think they can get the work done neither financially nor spiritually despite their heavy workload and responsibilities. It is thought that the current state policies are not implemented in favor of them sufficiently. The conditions they are in are not intended to decrease stress but rather to increase it. They are worried about their future, lack time for their private, family, and social lives, and their welfare levels do not meet their expectations. Our study has stated many times that these conditions are more evident, especially for resident physicians working in surgical medical science and emergency medicine. Even though emergency medicine is located in internal medical science in Education and Research Hospitals, the number of patients and their relatives, heavy workload, intense working hours, the fact that the possibility of rest during working hours is limited and sometimes nonexistent at certain hours, the residents here cannot spare enough time for their social lives, families, and development make us see the reason why emergency residents' life satisfaction scores are closer to surgical medical science. If we consider life satisfaction as a positive perception of the entire life of each individual, this is a result expected by us.

There is an intimate interaction between well-being and psychological resilience. Well-being makes it easier to cope with stress, and people with a high ability to cope with stress have higher well-being levels. On the contrary, excessive stress and low well-being levels can also impair people's health in all respects[20,21], negatively affect functionality and efficiency[22], and increase physician errors, risk of work accidents, and they're being burnout and exhausted[23]. For this reason, re-arranging the working hours considering the well-being of resident physicians in a way their ability to cope with stress is minimally affected and arranging the resident physicians' wages considering the difficulty of their work, the level of education required, the working hours, all the risks they take and personal depreciation during work may help to minimize stress. Furthermore, considering their expectations in terms of effective performance evaluation and effective use of different fields in specialty training such as rotation programs can contribute to the physician's motivation. In addition, equal distribution of workloads in clinics by administrators and physicians who are responsible for clinics according to the knowledge, skills, and seniority of resident physicians, a balanced implementation of the promotion and reward system, and making a fair arrangement can also enhance the efficiency and well-being of physicians. Keeping the well-being of the physicians high with the precautions to be taken will positively impact both their health and the patients they provide healthcare services to, as this will allow the physicians to be aware of their own capacities and ability to cope with stress. Besides, their psychological resilience, functionality, and efficiency will increase during this while.

Study Limitations

Our study was conducted in a single education and research hospital may create a limitation. Therefore, generalizing all resident physicians in our country may cause misconceptions. It may be useful if the prospective studies are conducted in a wider universe. The reliability and validity of the scales we used in our study have been studied and demonstrated, which one of the strengths of our study's strengths.

Conclusion

The decrease in physicians' well-being and psychological resilience should be perceived as an important public health problem. The factors that adversely affect the well-being of physicians and cause an increase in their stress levels are very diverse. Institution managers need to fulfill their responsibilities in creating an efficient working environment that enhances the well-being of physicians. Moreover, the staff's trust should be gained, and they should be supported. Positive interventions in the health system include parameters to reduce stressors on physicians, which will increase the efficiency and functionality of physicians and contribute to higher levels of health care.

Ethics Committee Approval

This study started after obtaining ethics approval from the T. C. Cukurova University Medical Faculty, Hospital Scientific Research Evaluation Commission (Date of Approval: 08.03.2019 Decision Number: 17 Number: SBÜANEAH. EK. 2019/86).

Authorship Contributions

Concept: T.E., S.A., S.S., Design: T.E., S.S., F.C.O., Data Collection or Processing: T.E., S.A., M.G., A.D., Analysis or Interpretation: T.E., S.A., S.S., C.I., A.D., M.G. Literature Search: T.E., S.A., S.S., F.C.O., C.I. Writing: T.E., S.A., S.S., M.G.

Conflict of Interest

The authors declared no conflict of interest.

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