

# COMPARISON OF 1ST AND 2ND YEAR MEDICAL IMAGING PROGRAM STUDENTS' OCCUPATIONAL ANXIETY LEVELS

Suat Cakina<sup>1\*</sup>, Elif Ucdag<sup>1</sup>, Emine Kılıcarslan<sup>1</sup>, Sıla Kose<sup>1</sup>

*1 Health Service Vocational College, Çanakkale Onsekiz Mart University, Çanakkale, Turkey*

\*Corresponding Author: Suat CAKINA, Assoc. Prof. Dr. Address: Çanakkale Onsekiz Mart University, Health Service Vocational College, Çanakkale, 17100, Turkey.

**Abstract:** *This research aims to investigate the level of professional anxiety among medical imaging techniques students in the Medical Imaging Techniques program of Çanakkale Onsekiz Mart University Health Services Vocational School and to compare the occupational anxiety levels of first and second year students. A total of 130 individuals, 65 first year students and 65 second year students, were included in the study. Demographic information form and occupational anxiety scale for associate degree students were used as data collection tools. No statistically significant differences were found in the total and sub-dimension scores of the scale according to the class parameter of the participants in the study ( $p>0.05$ ). As a result, the graduation and occupational anxiety levels of the second year students were higher and no statistically significant difference was found compared to the first year students.*

**Keywords:** Anxiety, Student, Medical Imaging Technician

## 1. INTRODUCTION

Anxiety can be defined as a state of worry and uneasiness, characterized by an unpleasant state of inner turmoil and involving feelings of fear towards expected events. [1]. Anxiety, although its source is unclear, causes people to act based on assumptions [2, 3].

Anxiety, which develops due to discomfort, tension, worry and fear, negatively affects people's educational lives. In addition, professional concerns about the future cause professional stress, depression and increased anxiety. Anxiety can negatively affect students' learning levels and life decisions throughout their education, and can cause the person to make wrong decisions [4]. Students' concerns may differ according to the profession in terms of education, working conditions and difficulty. The most common types of anxiety among students are not being able to find a job after graduation, financial problems, and not being able to work productively [2, 5-7].

Many studies have concluded that the level of anxiety among students is high and that this particularly negatively affects their quality of life. [2, 8-10]. Although there are many studies measuring the level of occupational anxiety in the health field, no study was found in the literature review to measure the

occupational anxiety levels of students studying in the medical imaging techniques program.

This study aimed to compare the professional anxiety levels of first-year and second-year students in the Medical Imaging associate degree program in Çanakkale province.

## **2. MATERIAL AND METHOD**

### **Study Design and Participants**

The universe of the study consists of students (n=130) of in the Medical Imaging associate degree program in Çanakkale province

### **Vocational Anxiety Scale for Associate Degree Students**

This scale, which was developed by Çelebi, Şemeret Alkaş, Keleş and Şen and whose validity and reliability studies have been conducted, measures the professional anxiety levels of associate degree students. The four-factor and three-point Likert-type scale can be scored as "I am not anxious: 1 point", "undecided: 2 points" and "I am anxious: 3 points".

The scale, which has 30 items, consists of four sub-dimensions: "Professional knowledge factor" (12 items), "Working life factor" (8 items), "Occupational health factor" (4 items), and "Communication factor" (6 items) [2].

### **Data Collection and Analysis**

The Occupational Anxiety scale survey was completed face-to-face/online by volunteer students who agreed to participate in the study. The total time required to complete all surveys varied between 20 and 30 minutes. SPSS 25.0 package program will be used for data analysis. The mean and standard deviation, were shown with the descriptive statistical analysis of the items. Comparison between groups was evaluated using Chi-square tests and independent t-test. For statistical significance, a p-value of  $<0.05$  at a 95% confidence level was considered significant.

### **Limitations of the Study**

The students who participated in the study on a voluntary basis were between the ages of 18 and 45. The criteria for participation in the study included not having had any previous mental health problems.

## Ethical Aspects of the Research

The study was approved by the Postgraduate Education Institute Ethics Committee Scientific Research and Publication Ethics Committee of Çanakkale Onsekiz Mart University (Project No:E-84026528-050.01.04-2300263580). This study was conducted in accordance with the principles of the Declaration of Helsinki..

## 3. RESULT

Demographic characteristics of our study in which 130 students participated are given in Table 1.

Table 1. Characteristics of the study sample			
	Grade 1	Grade 2	P Value
Age (Mean±Sd)	20.05±4.32	21.09±1.82	0.49
Gender			0.83
Male (n,%)	15 (23.1)	16 (24.6)	
Female (n,%)	50 (76.9)	49 (75.4)	
*sd:standard deviation			

According to Table 1., the mean age of the students was 21.09 years old. While 76.9% of the 1st graders were female, 75.4% of the 2nd graders were female (p=0.83) (Table 1.).

Table 2. Comparison of Occupational Anxiety Scores by Grade Level					
Scale Sub-Dimensions	Academic year	n	$\bar{X}$	ss	P Value
Professional Knowledge	1 st year	65	22.42	7.01	0.30
	2 nd year	65	23.75	7.71	
Working Life	1 st year	65	9.98	3.00	0.16
	2 nd year	65	10.95	4.60	
Occupational Health	1 st year	65	5.51	2.24	0.12
	2 nd year	65	6.23	2.91	
Communication	1 st year	65	11.80	4.52	0.17
	2 nd year	65	12.95	4.94	
Scale Total Score	1 st year	65	162.58	6.18	0.15
	2 nd year	65	179.06	6.76	

In Table 2, no significant difference was found between the total mean scores of professional knowledge, working life, occupational health, communication sub-dimensions and professional anxiety and the class variable ( $p>0.05$ ).

#### 4. DISCUSSION

Among professional groups, healthcare professionals are considered to be a group that is most affected by individual and organizational factors and experience high levels of occupational anxiety. In this study, the findings of the occupational anxiety scale for medical imaging technician candidates studying at associate degree level are discussed [2, 11].

As can be seen in the findings section, the occupational anxiety scale was examined with its subgroups for associate degree medical imaging techniques candidates. As a result of the study, no significant difference was found between the total score and sub-dimension scores of the Occupational Anxiety Scale between the 1st and 2nd year students of the associate degree medical imaging techniques program.

In recent studies, it has been found that first-year occupational anxiety scale scores are higher than second-year scores. This situation has been interpreted as first-year students not going to institutional practices and not seeing the hospital environments in which they will work [3, 12].

Some studies have reported that students' occupational anxiety scale scores increase as the grade increases [13-15]. In our study, in line with these studies, as the grade increases, students' occupational anxiety also increases, but no statistical significance was found. When the results obtained as a result of the study are examined, it is thought that this may be due to the problems experienced by the students in graduation anxiety, assignment and finding a job.

The limitations of this study include the examination of medical imaging techniques program students in the Çanakkale region and the use of a cross-sectional design. Therefore, it has limitations in terms of generalizability of the findings and establishing causal relationships. The strengths of the study include

examining the effects of sub-factors for occupational anxiety, conducting reliable analyses, and providing useful suggestions on measures that can be taken.

## 5. CONCLUSION

As a result, in this study, it was found that the levels of professional anxiety arising from the problems experienced by the second-year students in graduation, assignment and finding a job were higher than the first-year students, but there was no statistically significant difference between them. In line with the findings, in order to increase students' satisfaction with the departments they are studying and to reduce their anxiety levels, it may be recommended to organize career promotion seminars while they are still in the university preparation process and to provide accurate and realistic information about professions.

**Ethics Committee Approval:** All participants provided written informed consent, adhering to the principles outlined in the Declaration of Helsinki, and the Postgraduate Education Institute Ethics Committee Scientific Research and Publication Ethics Committee of Çanakkale Onsekiz Mart University approved the study (Project No: E-84026528-050.01.04-2300263580).

**Informed Consent:** Informed consent was obtained from all participants.

**Peer-review:** Externally peer-reviewed.

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