ARAŞTIRMA

COMPARISON OF THE PROBLEM SOLVING SKILLS WITH FEELING AND EXPRESSION OF ANGER IN NURSING STUDENTS*

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ABSTRACT

This research is a descriptive study and relation seeker to comparing the problem solving skills of the nursing students in Erzincan University School of Health and their feelings of anger and statements. The context of the research consists of 150 nursing students. The research data of was gathered between 2-6 May 2005 using an information document including descriptive feature of the students and Problem Solving Inventory Form-A, State Trait Anger Scale. Data was analyzed using the percentage test Pearson Correlation, variance, and the analysis of Kruskall Wallis, Mann-Whitney U test. Findings indicated that a significant relationship was not detected between the problem solving skills scores of the students and their scores of anger and expression (p>0.05).

Keywords: Problem solving, expression of anger, nursing student

ÖZET

Hemşirelik Öğrencilerinin Problem Çözme Becerileri ile Öfke Duygusu ve İfadelerinin Karşılaştırılması

Bu araştırma Erzincan Üniversitesi Sağlık Yüksekokulu hemşirelik bölümü öğrencilerinin problem çözme becerileri ile öfke duygusu ve ifadelerinin karşılaştırılması amacıyla tanımlayıcı ve ilişki arayıcı olarak yapılmıştır. Araştırmanın evrenini toplam 150 hemşirelik öğrencisi oluşturmuştur. Öğrencilerin tanıtıcı özelliklerini içeren bilgi formu ve Problem Çözme Envanteri Form-A, Sürekli Öfke-Öfke Tarz Ölçeği kullanılarak 2-6 Mayıs 2005 tarihleri arasında araştırmanın verileri toplanmıştır. Verilerin analizinde, yüzdelik, t testi, Pearson korelasyon, Kruskall Wallis varyans analizi ve Mann-Whitney U testi kullanılmıştır. İstatistiksel değerlendirme sonucunda öğrencilerin problem çözme beceri puanları ile öfke duygusu ve ifadesi puanları arasında anlamlı bir ilişki saptanmamıştır (p>0.05).

Anahtar kelimeler: Problem çözme, öfke duygusu, hemşirelik öğrencisi

INTRODUCTION

Problem is the difficulty which an individual or a society encounters and which has to be solved in order to reach success. Problem solving, in general, is the achievement of an individual to his/her problem-oriented goals. According to Heppner (1982), problem solving is synonymous with the term of coping with the problems (Taşçı 2005).

The problem solving approach is systematic; problems can be solved if a systematic approach is performed (Hisli Şahin 1994).

One of the preferential goals of education is to train individuals who can overcome future problems. The problem solving success of a student depends on the development of his/her skills in the problem solving process (Erdem 2001).

Problem solving is the basis of nursing applications. Increase in the quality of the nursing service is possible with the application of solutions which are appropriate for the patient and the patient family. Nurses need problem solving skills for making decisions about nursing applications both in institutional and clinical fields (Taşçı 2005).

The nursing process is the systematic use of scientific problem solving methods in nursing care. At each step of the nursing process, there is decision making. The usage of the problem solving process is important in professional nursing applications (Birol 2004). It has been thought that the scientific problem solving process contributes to the development of the quality of health care services (Taşçı 2005).

The success in solving problems varies among individuals depending on the way it is handled. The skills of the individual in coping with the problem play an important role here as well as the accompanying personal features and life conditions (Tümkaya and İflazoğlu 2000).

Anger is the feeling which arises free from the anxiety due to hopelessness and weakness when an individual faces a danger or an obstacle. It varies from discomfort to rage or violence (Üstün and Yavuzarslan 1995). Anger is an extremely healthy and natural feeling when expressed appropriately. However, it causes problems in school-professional life, personal relations and in overall life quality when it is out of control and, it becomes destructive. Individuals can get rid of their anger and express it positively when they recognize their anger (Üstün et al. 2005). Expressing the anger appropriately is called anger control. One of the anger control methods is the problem solving. When faced with a condition that leads to anger, considering the problem simply as a problem to solve, the problem becomes easy to solve (Hisli

Şahin 1997, Kökdemir 2004, Bilge and Ünal 2005). Study showed that anger control increases problem solving skills (Schieman 2000).

Anger is among the most powerful factors in school violence. Students who cannot control their anger are at risk in terms of violence. Strategies such as problem solving skills should be taught to students in anger management (Skiba and McKelvey 2006).

Today's society needs creative individuals who have critical and analytic thinking and who can solve various problems that they face. Nursing students should also be productive and positive-thinking; should know how to obtain information and turn it into skill; should bring solutions to problems and should control their anger (Orgun et al. 2003).

Objective: This study was performed to compare the problem solving skills of nursing students with their feeling of anger and its expression.

MATERIAL AND METHOD

Descriptive and relationship searching this study was conducted with nursing students in Erzincan University School of Health.

Population and Sample Selection

180 nursing students, formed the study population in this descriptive and relationship searching study. No sampling method was used in the study, 30 students were not reached due to several reasons thus only 150 students were participated in this study.

Data Collection

Data was collected by using the student descriptive features form, Problem Solving Inventory (PPI) and the State Trait Anger Scale (STAT) between 2nd and 6th of May, 2005. The form comprised of 9 questions which aimed to determine the individual features of the students (i.e., age, reason for choosing the profession etc.) as well as the level of problem solving skills and anger control.

The Problem Solving Inventory was developed by Heppner and Peterson in 1982 and was adapted to Turkish by Şahin et al. (1993). The inventory consists of 35 items which were scored as 1-6 and measures the self perception of the individual in problem solving skills. The minimum score of the inventory is 32 and the maximum score is 192. The lower scores indicate attitudes related to effective and successful problem solving while higher scores are related to of not finding efficient solutions to problems. The inventory has 3 subscales: Problem Solving Confidence (PSC), Approaching–Avoidance (AA) and Personal Control (PC) (Savaşır and Hisli Şahin 1997).

The State Trait Anger Scale (STAT) was developed by Spielberger in 1983 and was adapted to Turkish by Özer (1994). The scale measures the feeling of anger and its expression. It is a 34-item, self evaluation scale. It has anger expression-in, anger expression-out and anger control subscales (Savaşır and Hisli Şahin 1997, Özer 1994).

Higher scores of the Trait Anger indicate higher anger levels; higher scores of the anger control indicate that the anger is under control; higher scores of the anger expression-out indicate that anger is expressed easily and higher scores of anger expression-in indicate that the anger is depressed (Savaşır and Hisli Şahin 1997).

Data Analysis
Percentage, t-test, Pearson correlation, Kruskall Wallis analysis and Mann-Whitney U test were used in the analysis of the data.

Ethical Principles
Written consent was obtained from the institution and the aim and methods of the study were explained to the students. Volunteers were accepted to the study and confidentiality was provided.

FINDING AND DISCUSSION
Among the student population, 30% of the students were in the first grade, 78.7% of them were 20 years old or older, 60% had spent most of their life time in a city and 27.3% was smoked (Table 1).

The mean PSI score of the students grade level was lowest in the third grade and highest in the first grade. The difference were significant (p<0.05). (Table1). Similarly, in the study of Yurttaş and Yetkin (2003), it was found that the PSI score of the first grade students was higher than that of the fourth grade students.

The PSI scores was found higher in the 18 year-old group the students but no significant effect of the student age on the PSI score was detected (p>0.05) (Table 1). This result may be due to the narrow age segment (18-20 years-old and over). In the study of Kaya and Ulusoy (2005) with nurses, no significant difference was detected between the PSI score mean and the age (p>0.05). Yurttaş and Yetkin (2003) found the highest PSI scores in 19 year-old group, but stated that the difference was not significant (p>0.05).

The PSI scores of the students graduated from vocational high school were higher than those of the graduates from high school, but the difference was not significant (p>0.05) (Table 1). Similar results were obtained in the study of Yurttaş and Yetkin (2003) but the difference was again not significant (p>0.05).

It was detected that having chronic health problems did not affect PSI mean score of the students (p>0.05) (Table 1). This might be due to fewer students at this use having chronic health problems (%12) and the their lives not being affected drastically by these health problems (sinusitis, migraine etc.).

Table 1. The Distribution of the Mean PSI Scale Scores of Students Their Descriptive Features (n=150)

Descriptive Features	N	%	X±SD	Significance
Grade				
1	45	30.0	91.31±16.05	KW=7.96
2	47	31.3	95.00±0.18.80	P<0.05
3	24	16.0	101.47±19.52	
4	34	22.7	98.10±22.56	
Age				
18	10	6.7	87.50±10.27	KW=2.92
19	22	14.7	98.18±18.69	p>0.05
20 and over	118	78.7	95.93±19.34	
School Graduated				
Vocational High School	2	1.3	91.00±7.07	KW=0.52
High School	109	72.7	97.02±19.23	p>0.05
Anatolian High School	14	9.3	93.93±20.04	
Super High School	25	16.7	91.28±16.92	
Chronic Disease				
Present	18	12.0	92.28±14.83	MW-U=1026.5
Absent	132	88.0	96.17±19.32	p>0.05
Has spent most of life time in place				
Village or town	37	24.7	96.19±18.75	KW=2.431
City	90	60.0	96.88±19.36	p>0.05
Metropolis	23	15.3	90.30±16.55	
Monthly income			267.97 YTL	r = -0.036, p>0.05
Reason for choosing the profession				
Self desire	42	28.0	96.95±21.95	KW=3.749
Family wish	30	20.0	100.33±15.60	p>0.05
For not being unemployed	59	39.3	93.42±17.13	
Other	19	12.7	92.68±20.86	
Smoking habit				
Smoking	41	27.3	96.80±20.93	t= 1.167
Not smoking	109	72.7	95.28±18.06	p>0.05
Alcohol habit				
Drinking alcohol	10	6.7	97.10±21.74	MW-U=652.0
Not drinking alcohol	140	93.3	95.60±18.65	p>0.05

The PSI scores of the students who have spent most of their life time in a metropolis were higher than those who spent most of their life time in cities or villages or towns, but this difference was not significant (p>0.05) (Table 1). Yurttaş and Yetkin (2003) showed that the PSI scores of the students who have spent most of their life time in a town were higher than those who spent most of their life time in cities or villages, but this difference was not significant (p>0.05). These results are similar to those obtained in the studies of Yurttaş and Yetkin (2003) and Çam (1998). It was detected that the monthly income of the students did not affect the PSI mean scores (p>0.05) (Table 1). Çam (1998) also found that the income of the students did not affect the PSI score.

Table 2. The Distribution of the Mean Scores of the PSI Scale and Its Subscales

Subscales	Min and max score	Marked min and max score	X±SD
Problem solving confidence	11-66	12-35	24.69±4.74
Approaching–Avoidance	16-96	24-71	46.87±10.36
Personal Control	5-30	12-28	19.65±3.15
Total PSI score	32-192	55-138	95.70±18.83

It was found that the PSI of the students who have chosen this profession by family wish was lower but the relation between the reason for choosing the profession and the PSI score was not significant (p>0.05) (Table 1). In the study of Yurttaş and Yetkin (2003), they also found that the students who have incidentally chosen the profession have the lowest PSI mean scores (p>0.05).

Students who do not smoke and use alcohol have higher PSI mean scores but the difference was not significant (p>0.05) (Table 1). Smoking decreases the level of energy which is necessary for coping with daily problems and the regular, long term, large amount of alcohol intake increase depressive feelings (Hisli Şahin 1994). Many individuals tend to use smoking, alcohol or substance usage to solve their problems which actually do not solve any (Güner 2000).

The mean PSI score was 95.70±18.83; the mean scores of the subscales were found as follows: Problem Solving Confidence 24.69±4.74, Approaching–Avoidance 46.87±10.36 and Personal Control 19.65±3.15 (Table 2). Results showed that the students have a moderate level of problem solving. In the studies of Orgun et al. (2003), Durna et al. (1997) and Yurttaş and Yetkin (2003), the PSI scores of the students were higher.

It was found that the trait anger mean score was 21.87±5.43; anger control mean score was 22.25±4.38; anger expression-in mean score was 17.03±4.06 and the anger expression-out mean score was 16.10±3.84 (Table 3). Özer (1994) found in his preliminary STAT study that the trait anger mean score of the nursing students was 20.96±4.69, while the anger control mean score was 20.73±4.73, the anger expression-in mean score was 15.98±3.41 and the anger expression-out mean score was 16.15±3.42. In the study of Doğan et al. (2001) on nurses, the trait anger mean score was found as 17.38, while anger control mean score was 23.28 and the anger expression-in mean score was 15.50 and the anger expression-out mean score was 13.77. It can be concluded that the level of anger of the students is moderate and they can control their anger and express it easily.

Table 3. The Distribution of the Mean Scores of the STAT Scale and Its Subscales.

Subscales	Min and max score	Marked min and max score	X±SD
Trait Anger	10-40	12-39	21.87±5.43
Anger Control	8-32	10-32	22.25±4.38
Anger Expression-In	8-32	8-27	17.03±4.06
Anger Expression-Out	8-32	9-26	16.10±3.84
Total STAT score	44-176	56-111	77.53±10.54

The trait anger mean score of the students was highest in the 4th grade and lowest in the 2nd grade students and the difference was significant (p<0.05). Üstün et al. (2003) found the trait anger

mean score of the 1st and 2nd grade students significantly lower than those of the 3rd and 4th grade students (p<0.05). The trait anger mean score was higher in the students who are 20 year-old or older and it was found that the student age affects the trait anger levels (p<0.01).

Table 4.The Distribution of the Mean Scores of the Students from the STAT Scale According to Their Descriptive Features

Descriptive Features	Trait anger X±SD	Anger Expression-In X±SD	Anger Expression-Out X±SD	Anger Control X±SD
Grade				
1	21.78±5.14	16.80±3.61	16.15±4.18	21.53±4.41
2	20.08±6.22	16.00±4.62	15.41±3.94	23.78±4.06
3	22.61±4.80	17.61±3.88	16.11±3.65	22.82±4.25
4	24.05±5.03	18.45±4.19	17.25±2.88	20.35±4.23
	KW=12.68	KW=6.22	KW=4.52	KW=11.52
	p<0.01	p>0.05	p>0.05	p<0.01
Age				
18	20.60±5.66	16.90±3.90	15.90±5.02	22.20±4.85
19	18.86±3.92	15.55±3.33	15.00±3.57	22.86±2.92
20 and over	22.54±5.48	17.31±4.16	16.32±3.78	22.14±4.58
	KW=9.791	KW=3.25	KW=3.02	KW=0.302
	p<0.01	p>0.05	p>0.05	p>0.05
Chronic Disease				
Present	24.33±6.17	18.89±3.86	18.61±4.53	20.89±4.87
Absent	21.54±5.25	16.77±4.04	15.76±3.63	22.44±4.29
	MWU=843.5	MWU=850.5	MWU=731.5	MWU=934.00
	p<0.05	p<0.05	p<0.01	p>0.05
Has spent most of life time in				
Village or town	21.35±5.76	17.03±3.95	15.73±3.47	22.43±4.52
City	21.71±5.25	16.90±4.04	15.91±3.92	22.43±4.23
Metropolis	23.35±5.57	17.52±4.45	17.43±3.98	21.26±4.76
	KW=2.60	KW=0.493	KW=3.597	KW=1.038
	p>0.05	p>0.05	p>0.05	p>0.05
Personal monthly income	r =.113, p>0.05	r =-.030, p>0.05	r =.083, p>0.05	r =-.153, p>0.05
Smoking habit				
Smoking	24.66±6.46	18.05±4.75	17.37±4.63	20.63±5.05
Not smoking	20.83±4.59	16.64±3.72	15.62±3.40	22.86±3.95
	t=4.05	t=1.907	t=2.519	t= -2.845
	p<0.001	p<0.05	p<0.01	p<0.01
Alcohol habit				
Drinking alcohol	25.50±7.50	16.70±4.50	18.10±5.20	19.00±3.56
Not drinking alcohol	21.61±5.19	17.05±4.05	15.96±3.71	22.49±4.35
	MWU=484.0	MWU=649.0	MWU=504.50	MWU=366.50
	p>0.05	p>0.05	p>0.05	p<0.05

In the literature, it was reported that the anger reactions decrease as the age increases (Phillips et al. 2006).

It was found that the monthly income does not affect the trait anger, anger control, anger expression-in and anger expression-out (p>0.05). It was found in a study with the first grade high school students that the adolescents who perceive their family income as low have lower tendency to anger and express less anger (Özmen et al. 2005).

It was detected that students who have chronic health problems have also higher trait anger, anger expression-in and anger expression-out mean scores, and it was found that these chronic health problems affect the trait anger and anger expression-out scores (p<0.05, p<0.01). It has been shown that a high level of anger is associated with many physical and psychological disorders such as hypertension, coronary arterial diseases, cancer and depression (Bilge and Ünal 2005, Ricci et al. 1995, Yazıcı and Yazıcı 2003). In a study of 34 healthy university students and 32 patients who had a major depressive disorder diagnosis and who received consultation at psychiatry outpatients' clinics, the anger expression-in scores in the depressive group was found higher while the anger control scores were lower and the difference between the groups was significant (p<0.05) (Güleç et al. 2005).

The trait anger, anger expression-in and anger expression-out scores of the students who had spent most of their life time in metropolis were found to be higher but there was no significant relation in between (p>0.05) (Table 4). In the study by Kısaç (1999) on university students, it was found that the trait anger scores were the highest in students who live in villages while the anger expression-in scores were the highest in the students who live in small towns (p<0.05, p<0.01).

The trait anger, anger expression-in, anger expression-out and anger control scores of the students who smoke were found to be higher and the difference between them was significant (p<0.001, p<0.01). The trait anger score of the students who drank alcohol was higher however there was no significant relationship (p>0.05). The level of anger control was found to be low in students who drank alcohol and the relationship was significant (p<0.05). It was also found in the studies of Yıldırım and Ekinci (2005) and Yıldırım et al. (2005) that the level of coping with stress in students who do not smoke or drank alcohol was higher but not significant.

Table 5. The Relationship of the Scores Obtained from the PSI and STAT Subscales

STAT	PSI	r	P
Anger Control	Problem solving confidence	.159	p>0.05
Anger Expression- In	Approaching–Avoidance	-.019	p>0.05
Anger Expression-Out	Personal Control	.025	p>0.05
Trait Anger	**Total PSI score**	.001	p>0.05

The relations between the PSI scores of the students and the trait anger, anger expression-in and anger expression-out scores were not significant (p>0.05), while the relation between the PSI score and anger control was significant (p<0.05) (Table 5). One of the anger control methods is problem solving (Hisli Şahin 1997, Kökdemir 2004). Study showed that anger control increases problem solving skills (Schieman 2000).

CONCLUSIONS

In this study, the PSI mean scores of the first grade students were found significantly higher than those of the 3rd grade students ($p<0.05$). It was detected that the students usually had moderate problem solving abilities. Also, the students had moderate trait anger and can control and easily express their anger. The relationships between the PSI scores of the students and their trait anger, anger expression-in and anger expression-out scores were not significant ($p>0.05$). Following points are advised to be investigated in accordance with these results:

Detection of the students' PSI, feeling and expression of anger as well as the factors that affect positively/negatively,

Giving systematic PSI education to students in order to cope with the feeling of anger and provide this education at each step of nursing process,

Examination of the PSI and feeling and expression of anger in working nurses.

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