Effects of Midwifery Education on Professional Self-Esteem and Problem Solving Skills

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***Abstract:** To was determine the effects of midwifery education on midwives' professional self-esteem and problem solving skills. The study was conducted with 277 students who agreed to participate in the study in Cumhuriyet University Faculty of Health Sciences Midwifery Department of a state university located in Central Anatolia region of Turkey. In study Arıcak Professional Self-Esteem Scale (APSES) to assess the professional self-esteem of students, and Problem Solving Inventory (PSI) to assess the problem solving skill of the individual were used as data collection tools. While the professional self-esteem levels were the highest among the 3rd year students they were the lowest among the 4th year students. On the other hand, while the 1st year students' problem solving skills were the lowest, the 3rd year students' problem solving skills were the highest. Students who had positive thoughts about the profession had higher problem solving skills. Students' problem-solving skills and professional self-esteem are influenced by midwifery training and trainers. Students' problem solving skills increase with the increase in their professional self-esteem. Accordingly, curriculum regulations and content studies should be conducted on the issue. Different methods (care plan discussions, case studies, projects to solve clinical problems, etc.) could be used to prepare training programs that would improve problem solving skills of the students, and to promote their problem solving skills.*
***Keywords:** Professional self-esteem, problem solving skills, midwifery, health education, health care quality*

I. Introduction

People's success in their profession is related with their own personal characteristics, choosing their profession knowingly and willfully, and being prepared for the profession psychologically and mentally [1]. Accordingly, those having a profession that is compatible with their personality are expected to be more successful and productive while those having a profession that is not compatible with their personality are more likely to experience conflicts and dissatisfaction. Professional self-esteem could be briefly described as individuals' judgement of worthiness they developed for the profession they preferred. This concept is associated with how individuals see their profession important and worthy. Professional self-esteem is a prerequisite of professional adjustment and satisfaction [2]. People solve their problems by knowing- with the help of information, by feeling-with the help of values, and by practicing- with the help of skills. In fact, problem solving is a part of decision-making [3]. Problem solving skill is the level of applying a solution by gaining information that will take one to solutions and combining it so that it can be ready to use [4].

Midwives, one of the most important profession groups in health service, are irreplaceable members of the health team. High professional self-esteem and higher-order decision-making and problem solving skills play an important role in providing a reliable and qualified patient care [5]. Due to the nature of the profession of midwifery, it consists of the systematic use of problem solving method in determination of individual's needs and finding suitable solutions to these needs, planning and implementation of the required obstetric interventions, and evaluation of the results [6]. If the existing condition is not identified accurately, there could be inefficacies in the planning and deficiencies in the application phase of the obstetric process. Thus, there could be conditions that could endanger the lives of both the mother and the baby [7]. During fulfillment of professional tasks, of midwives high levels of decision making and problem solving skills, as well as high professional self-esteem quite important in developing the professional image and the quality of the care and in keeping the mother and the newborn healthy and protecting their health [8].

As a part of their education, midwifery department students do their apprenticeship in hospitals. They may encounter various problems in this setting where stressful and acute problems could happen any time; they may also experience communication problems with various health team members, patients, and instructors at school. Besides, as university students, they have to cope with problems specific to their case, such as leaving their families, making friends, having financial problems, adjusting to dormitory life, and being concerned about their future profession and work life [9]. Therefore, beginning students in this profession could have behaviour and role changes after some time they start school [10].

Students' midwifery, who are the health professionals of the future, to cope with the daily stresses of life that they encounter during their training and with clinical problems, could affect the quality of healthcare

they would provide in their professional lives, and their positive or negative experiences with educators, friends, patients, and other healthcare professionals during the training process could result in changes in students' professional self-esteem. Individuals' problem solving knowledge and skills can only be taught and improved through a training that aims at effective problem solving skills. Otherwise, lack of problem solving skills, which bring dynamism to the content and quality of the profession, could have negative effects on the quality, efficiency, productivity, change, professionalism, autonomy, and empowerment of the service provided [11].

This study aims to identify the contribution of midwifery education to professional self-esteem and problem solving skills of midwifery department students.

II. Materials And Methods

The present study, which was descriptive in nature, was conducted in the Midwifery Department of Faculty of Health Sciences in a state university. The university was located in the Central Anatolia region of Turkey and provided undergraduate education. The data were collected between 19 and 23 October, 2015. Target population of the study was 277 first, second, third, and fourth year students who volunteered to participate in the study and were enrolled in the midwifery department in the fall semester of the 2015 and 2016 academic year. No sampling was used in the study as the researchers aimed to reach the whole target population. However, 23 students were not involved in the study either because they were not at school during the time the study was conducted or because they did not want to participate in the study.

Data Collection Tools
Personal Information Form, "Arıcak Professional Self-Esteem Scale" to assess the professional self-esteem of students, and "Problem Solving Inventory (PSI)" to assess the problem solving skill of the individual were used as data collection tools.

Personal information form
Personal Information form was prepared by the researchers with a view to identifying the students' socio-demographic characteristics, reasons for choosing this profession, and their views about the profession [5,9,10]. The form included 17 questions.

Arıcak professional self-esteem scale (APSES)
The scale, which was developed by Aricak (2001), is used in order to measure respect attitudes of individuals who preferred a profession, who are receiving education on a profession, or who are practising a profession. Cronbach alpha consistency coefficient of the original scale was found 0,93. Professional Self-esteem Scale is a likert type scale which has 30 questions. The scores to be obtained from the scale range between 30 and 150. Higher scores indicate students' high professional self-esteem; and low scores indicate low professional self-esteem. The related literature indicates no cut-off point [12]. Cronbach alpha consistency coefficient was found 0,94 in this study.

Problem solving inventory (PSI)
The 35-item inventory, which measures individuals' self-perceptions about problem solving skills, was developed by Heppner and Peterson (2002). PSI could be used for adolescents and adults and it includes 35 items responded on a likert scale ranging from 1 and 6. Cronbach alpha consistency coefficient of the original scale was 0.90. [13]. Turkish validity and reliability of the inventory was performed by Sahin et al., (1993) [14]. Cronbach alpha consistency coefficient of the scale was found 0.88. The scale has six sub-dimensions called impetuous approach, thinking approach, avoidant approach, evaluative approach, self-confident approach, and planned approach. The scores to be obtained from the scale range between 32 and 192. No cut-off point is indicated in the related literature. Lower scores obtained from the scale indicate high problem solving skills; and higher scores mean low problem solving skills. Cronbach alpha consistency coefficient was found 0,87 in the present study.

Participant students were informed about the study prior to the class (with the permission of the related teaching professor) before the study commenced, and their written informed consent were taken, and then instructions on how to fill data collection tools were provided. It took approximately 15 minutes to fill the forms. During the process of the application of the forms, researchers waited in the classroom and then they collected the completed form.

Analysis of the Data
The data obtained from the study were analysed on computer, using SPSS 22.0 for Windows package programming. Findings were evaluated using descriptive statistics (mean, standard deviations, minimum and maximum values and percentages). Besides, evaluations of the findings were done using t-test (independent

samples t-test) and analysis of variance for the comparison of the scale score with the variables when the parametric hypotheses were met. Kruskal Wallis and Mann-Whitney U tests were used for the cases when parametric hypothesis were not met. Statistically significant relationships between the variables was identified according to $p < 0.05$.

Ethical Considerations

Regional Ethics Committee approval was obtained prior to the study. Written permission was received from the institution where the study was conducted (Approval No: 2015-10/08). The students were informed about the purpose of the study and volunteer participants' consent was obtained. The participants were assured that the data would be kept confidential, their identification information would not be asked, and the participation was on a voluntary basis. The study followed principles of Declaration of Helsinki.

The present study includes students enrolled in one midwifery department and thus the results cannot be generalised to whole population of midwifery students.

III. Results

Average age of the students participating in the study was found 20.18±1 .54. Of all the participants, 85.2 % had a nuclear family, mothers of 54.4% and fathers of 39.7% graduated from primary school. Mothers of 89.9% did not work; fathers of 80.9 % worked. 45.8% stated their longest place of residence as city, 73.3% had equal income to expenses, 63.5% graduated from a regular high school, and 49.1 % currently stay in a state dormitory. Half of the participants (53.1%) chose their profession themselves, 71.1% chose the profession willingly and fondly, half of them (50.9%) stated they chose this profession because it has no employment problem. Detailed findings in relation to the participants' descriptive characteristics are presented in Table 1. The participants' PSES and PSI total and sub- dimensions mean scores were analysed according to their grade level. "Professional Self-esteem" mean scores were found to be highest in the 3rd year and lowest in the 4th year. Statistical difference between the grade levels was found to be significant ($p = 0.000 < 0.05$). 3rd year students' professional self-esteem was found to be significantly higher in comparison to other grade levels.

Table 2 demonstrates findings about the changes in the participants' positive or negative thoughts about the profession according to grade levels as well as the distributions according to PSES total scores and PSI total and sub-scale mean scores. Almost all of the 1st and 3rd year students (94.7% and 92.4% respectively) and majority of the 2nd and 4th year students (85.5% and 81.5% respectively) have positive thoughts about the profession. Professional self-esteem was significantly higher in the students at all grade levels who have positive thoughts about the profession ($p < 0.05$) (see Table 2). It was found that students' positive thoughts about the profession were related firstly with instructors, courses, and apprenticeship experiences (43.3%), secondly with doing apprenticeship and apprenticeship experiences (23%), thirdly with instructors (21.9%), and lastly with courses (11.8%).

Total scores for the participants' problem solving skills were found 88.04±20.16 for the first year students, 82.72±18.93 for the second year students, 80.17±16.30 for the third year students, and 82.25±18.31 for the fourth year students. The differences between the grade levels were not statistically significant ($p > 0.05$). However, the grade level with best problem solving skills was found to be the 3rd year students again (see Table 2).

Table 2 demonstrates that students at all grade levels who had positive thoughts about the profession had better problem solving skills mean scores in comparison to the students who had negative thoughts. Besides, with the increase in the grade level, there was an increase in the problem solving skills of the students who had positive thoughts about the profession.

IV. Discussion

It was found that 3rd year students had highest professional self-esteem; and lowest professional self-esteem was found to belong to 4th year students. At all grade levels, professional self-esteem was higher in those who had positive thoughts about the profession. Although the 3rd year students were found have highest problem solving skills, the difference between the grade levels was not statistically significant. Students who had positive thoughts about the profession had higher problem solving skills. Students' professional self-esteem and problem solving skills were positively affected by midwifery education and instructors. Students' problem solving skills improved with the increase in their professional self-esteem. Therefore, midwifery education could have a positive effect on professional self-esteem and problem solving skills.

Importance and worthiness attached to a profession by a person reflects how valuable s/he sees that profession. In fact, professional self-esteem is a prerequisite of professional adjustment and satisfaction [15]. The present study found that professional self-esteem was significantly higher in 3rd year students and lowest in 4th year students. In a similar study conducted by Sener et al., (2011) [16], professional self-esteem of 4th year nursing students was found to be lower. In their study conducted with preschool teaching department students,

Aslan et al., (2006) [17], found that students' professional self-esteem was higher in 3rd year students and lower in 4th year students. Findings of the studies mentioned above are parallel to the findings in the present study.

In present study, there was a decrease in professional self-esteem of 4th year students despite the increase in their positive thoughts about the profession. This case could be associated with such factors as students' following tiring curriculum, doing their apprenticeship in the busy and stressful environments of hospitals even at nights, encountering negative role models during their apprenticeships, having work overload, experiencing communication problems with the health professionals and instructors, and facing negative attitudes of the society towards the profession. In addition, people working in health field constantly meet patients' needs work with people whose life is at risk, who are dying, and who have pain; and face high expectations of patients and patient relatives. Hence, students face stressful cases such as traumatic death experiences, taking responsibility in people's care and interpersonal relationships in the field they are working. Students' professional self-esteem might have decreased due to these stressful cases and their inability to cope with these kinds of problems.

Instructors have prominent roles in students' professional development, gaining skills, developing clinical skills, benefitting from learning opportunities by combining theory with practice; briefly in forming students' professional self-esteem [18-20]. Various studies indicate that the interaction between instructors and prospective midwives and nurses has a vital role in students' learning and developing knowledge and skills in the clinical field [19-23].

This study found that the increase in positive thoughts about the profession with the increase in grade level was affected firstly by instructors' attitudes, approach, courses and apprenticeship experiences. Parallel to the studies in the literature, this finding indicates the prominent effect of instructors in introducing the profession to students, making them love it, and being role models for them during both courses and the apprenticeships [24].Problem solving is a cognitive and behavioural process that requires higher order thinking and encompasses identification of the effective solutions, selection of potentially appropriate solutions, and decision making [6]. Midwives have to cope with and find solutions to both their personal problems and problems of others who are in the stressful and acute environment of hospitals where complicated and rapid changes could happen any time. Midwives providing care to people with various problems have to solve these problems encountered in clinical settings and are expected to have high problem solving skills [25, 26].

PSI inventory mean scores of all the participants was found to be 83,34±18,60 (range min:40.00 - max:143.00). Scores to be obtained from the scale range between 32 and 192; lower scores indicate the individual's perception of self as a good problem solver. Total score obtained in this study was found to be lower than the mean score, which indicates that prospective midwives' problem solving skills are below the average [14]. Although the related literature includes studies that were conducted with nursing students, studies that involved midwifery students are limited in number both in our country and in the world literature.

Sen et al., (2014) [27], conducted a study with 195 midwifery students and found PSI mean score of all students as 124,75±11,73 [32]. Similarly, Altun (2003) [28], found midwifery students' PSI mean score as 81.96_19.70.1. Findings of the present study are similar to those found by Altun (2003) and to some other studies conducted with nursing students and made use of Problem Solving Inventory 82,82±15,93 [29], 80.75 ± 28.39 [30], 83.97±17.08 [31]. PSI mean scores in these studies are similar to the one in the present study.

In this study, no statistically significant differences were found between the grade levels in terms of the problem solving total mean scores of prospective midwifery students. While the 3rd year students had highest problem solving skills, 4th year students were found to have a decrease in their problem solving scores in accordance with the mean scores. However, midwifery students until 4th grade were found to have an increase in their problem solving skills with the increase in their grade levels. Studies on this issue show that the grade level did not create statistically significant differences in the problem solving skills [9,28,29,31,32], which is parallel to the findings of the present study. Some studies in the related literature also indicates that there was an increase in PSI mean scores with the increase in the grade level, but PSI mean scores displayed a decrease in the 4th year [27,33-40].

In present study, some of the reasons of the decrease in the problem solving skills of 4th year students might include the nature of clinical settings in which routine practices are prioritised rather than the problem solving skills, lack of appropriate role models, inadequate number of midwives in the health system, equipment problems, acceptance of insolubility, and inadequacy in the cooperation of theory and practice. Midwifery education programs should contain more problem solving skills so that midwifery profession can comply with the developments. Besides, it is evident that the causes of the decrease in problem solving skills need to be investigated. The related literature reports that some positive personal traits such as self-esteem, objective point of view, creative thinking, less anxiety towards the events and enterprise have effects on the solutions to the problems [33, 41].

In a study by McCourt and Thomas (2001) that scrutinized the implementation of problem based learning curriculum in obstetrics, it was determined that obstetrics students experienced problems in self-

learning, critical thinking and problem solving [42]. Thus, it is important to develop problem solving skills of obstetrics students during undergraduate studies. However, it was a positive development that studies that scrutinized obstetrics and nursing students reported that mean problem solving skill scores of obstetrics students were higher than nursing students [5, 28].

In the present study, was identified that students, who had positive views about the profession when they were freshmen in college, improved their positive views about the profession as their seniority increased, and their problem solving skills improved as well. Similarly, it was determined that students who made their job selection with free will demonstrated better problem solving skills. Thus, it could be argued that the views and perceptions about a profession and the selection of this profession with free will were also significant in development of problem solving skills. Although this study revealed that students' problem solving skills were not at a desired level, results also showed that university education had positive effects on problem solving skills, and problem solving skills could be improved with education. Therefore, it is necessary for the midwifery education programs to contain problem solving skills.

Table (1): Findings on descriptive characteristics of the students (n=277)

Characteristics		n	(%)
Grade Level	1st year	75	(27.1)
	2nd year	69	(24.9)
	3rd year	79	(28.5)
	4th year	54	(19.5)
Family type	Nuclear family	236	(85.2)
	Extended family	41	(14.8)
Mother's education	Illiterate	47	(17.0)
	Elementary school	159	(57.4)
	Secondary school	39	(14.1)
	High school and ↑	32	(11.6)
Mother's working status	Yes	28	(10.1)
	No	249	(89.9)
Father's education	Illiterate	7	(2.5)
	Elementary school	110	(39.7)
	Secondary school	70	(25.3)
	High school and ↑	90	(32.5)
Father's working status	Yes	224	(80.9)
	No	53	(19.1)
Longest place of residence	Village	48	(17.3)
	Town	65	(23.5)
	City	127	(45.8)
	Metropolis	37	(13.4)
Income Status	Income less than expenses	74	(26.7)
	Income equal to expenses	203	(73.3)
School of graduation	Regular high school	176	(63.5)
	Vocational high School	14	(5.1)
	Anatolian High School	87	(31.4)
Person/people affecting your choice of this profession	Myself	147	(53.1)
	Family	75	(27.1)
	Relatives	8	(2.9)
	Coincidence/wrong choice	47	(17.0)
How did you choose this profession	Willingly / fondly	197	(71.1)
	Unwillingly	80	(28.9)
Reason for choosing this profession	Has no employment problem	141	(50.9)
	Desire to help patients	90	(32.5)
	request of the family	22	(7.9)
	My score was sufficient for this department	24	(8.7)
Place of Residence	With Family	41	(14.8)

At home with friends	31	(11.2)	
State dormitory	136	(49.1)	
Private dormitory	69	24.9)	
Number of siblings (Mean SD)			3.98 (1.96)
Age (Mean SD)			20.18 (1.54)

Table (2). Distribution of variations on positive or negative views about the profession based on total APSES and PSI scores and mean sub-dimension scores of the students

Year at school		n	(%)	APSES Total Score Mean (SD)	Impetuous approach Mean (SD)	Thinking approach Mean (SD)	Avoidant approach Mean (SD)	Evaluative approach Mean (SD)	Self-confident approach Mean (SD)	Planned approach Mean(SD)	Total score Mean (SD)
For 1st year (n=75)	Thoughts in the 1st year										
	Positive thinking	71	94.7	121.33 (17.96)	87.40 (20.26)	29.59 (6.49)	13.53 (7.14)	9.04 (3.09))	7.18 (2.91)	15.09 (5.57)	9.77 (3.42)
	Negative thinking	4	5.3	92.00 (22.99)	99.25 (16.66)	30.50 (4.43)	17.25 (4.57)	11.25 (4.64)	9.50 (1.91)	15.25 (5.50)	12.75 (3.77)
t*/p				0.018**	0.207	0.887	0.103	0.217	0.086	0.915	0.155
For 2nd year (n=69)	**Thoughts in the 1st year**										
	Positive thinking	37	53.6	127.97 (15,26)	81,48 (19,96)	25,72 (7.81)	12.40 (4.43)	9.91 (4.77)	6.56 (2.24)	14.43 (5.08)	8.94 (3.28)
	Negative thinking	32	46.4	107.56 (19,77)	84,15 (17,87)	27.06 (6.13)	12.06 (4.16)	9.43 (3.13)	7.15 (3.15)	15.25 (4.67)	10.09 (3.18)
t*/p**				0.000**	0.563	0.439	0.743	0.628	0.370	0.492	0.147
	Thoughts in 2nd year										
	Positive thinking	59	85.5	124.15 (14.33)	81.20 (18.77)	26.06 (7.29)	11.91 (4.11)	9.55 (4.09)	6.79 (2.66)	14.38 (4.73)	9.27 (3.18)
	Negative thinking	10	14.5	85.20 (17.53)	91.70 (18.22)	28.00 (5.55)	14.20 (4.96)	10.50 (4.08)	7.10 (3.03)	17.30 (5.20)	10.70 (3.62)
t*/p**				0.000**	0.100	0.437	0.191	0.614	0.770	0.092	0.121
For 3rd year (n=79)	**Thoughts in the 1st year**										
	Positive thinking	54	68.4	132.92 (12.29)	75.87 (14.65)	24.35 (5.87)	11.68 (3.34)	7.85 (3.02)	7.01 (2.06)	13.68 (3.63)	8.77 (2.45)
	Negative thinking	25	31.6	113.00 (16.68)	89.48 (16.03)	26.92 (6.84)	14.16 (3.81)	9.76 (3.67)	8.60 (3.09)	16.20 (4.73)	10.80 (3.18)
t*/p**				0.000**	0.000**	0.090	0.005**	0.017**	0.009**	0.011**	0.003**
	Thoughts in the 3rd year										
	Positive thinking	73	92.4	129.89 (12.03)	79.68 (16.18)	25.10 (6.10)	12.50 (3.71)	8.17 (2.75)	7.49 (2.52)	14.35 (4.11)	9.35 (2.91)
	Negative thinking	6	7.6	86.83 (12.43)	86.16 (18.08)	25.83 (8.72)	12.00 (3.22)	11.83 (7.25)	7.83 (2.78)	16,00 (4.69)	10.16 (1.94)
t*/p**				0.000**	0.448	0.993	0.801	0.310	0.744	0.367	0.242
For 4th year (n=54)	**Thoughts in the 1st year**										
	Positive thinking	25	46.3	117.92 (16.79)	81.12 (19.98)	25.56 (6.55)	12.00 (4.08)	8.56 (3.96)	7.52 (2.20)	14.64 (4.32)	9.84 (3.18)
	Negative thinking	29	53.7	105.37 (16.85)	83.24 (17.04)	25,79 (8.06)	12.72 (3.39)	8.44 (3,07)	7.89 (2.41)	15.10 (3.69)	10.41 (3.40)
t*/p**				0.009**	0.675	0.909	0.480	0.908	0.554	0.673	0.528
	Thoughts in the 4th year										
	Positive thinking	44	81.5	115.45 (15.41)	80.38 (18.30)	25.27 (7.57)	12.11 (3.69)	8.15 (3.47)	7.59 (2.31)	14.54 (3.84)	9.72 (3.38)
	Negative thinking	10	18.5	92.40 (15.93)	90.50 (16.78)	27.50 (6.16)	13.60 (3.71)	10.00 (3.29)	8.30 (2.26)	16.40 (4.35)	12.00 (2.05)
t*/p**				0.001**	0.138	0.338	0.214	0.100	0.419	0.146	0.039**

Note: * = Independent simple t test; **= p< 0.05

V. Conclusion

This study found that there was a difference between 1st year and 4th year in terms of midwifery department students' professional self-esteem scores; their professional self-esteem increased significantly after the 4-year education they received, but the increase in the problem solving skills mean scores according to grade level was not found to be statistically significant. Students' positive ideas about the profession increased with the increase in their grade level. The most important factor in forming positive ideas was found to be instructors, courses, and apprenticeship experiences. Students' professional self-esteem and problem solving skills are positively affected by midwifery education and instructors. Students' problem solving skills increase with the increase in their professional self-esteem. It is evident that the midwifery departments in our country need to produce graduates with higher professional self-esteem and improved problem solving skills. Accordingly, curriculum regulations and content studies should be conducted on the issue. It is also important to design activities that enable students to know midwifery better and realistically and that increase the quality of the consultancy services provided by the instructors. Different methods (care plan discussions, case studies, projects

to solve clinical problems, etc.) could be used to prepare training programs that would improve problem solving skills of the students, and to promote their problem solving skills. Furthermore, empirical studies could be conducted to determine which methods could better improve the students' problem solving skills

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