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TRANSITION SHOCK EXPERIENCED BY NEW NURSES: AN EXAMPLE FROM TURKEY

Yeni Hemşirelerin Yaşadığı Geçiş Şoku: Türkiye'den Bir Örnek

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ABSTRACT

This research was carried out to determine the transition shock to the profession in nurses. This descriptive study was conducted with 221 nurses who started to work in university hospitals in eastern Turkey between March and April 2022. Data were collected using the Introductory Information Form, and the Nursing Transition Shock Scale (NTSS). The mean score of the (NTSS) in Nursing was found to be 2.65±0.75 (moderate). The multiple linear regression model demonstrated that there was a statistically significant relationship between choosing the nursing department willingly, having an internship, receiving in-service training at the start of the profession, being self-confident in applying the knowledge and skills required by the nursing profession, having the communication skills required by the nursing profession and experiencing stress in transition from student role to profession and NTSS mean scores, and showed that these variables explained 20.7% of the total variance. In the study, it was found that the transition shock scores of the nurses were moderate. The research provides a perspective to nursing educators and managers in terms of showing the transition shock experienced by nurses who have just started to work and the factors affecting it.

Keywords: Nursing, Occupational competence, Occupational role, Transition shock.

ÖZ

Bu araştırma hemşirelerde mesleğe geçiş şokunu belirlemek amacıyla yapılmıştır. Tanımlayıcı tipte olan bu çalışma, Mart-Nisan 2022 tarihleri arasında Türkiye'nin doğusundaki üniversite hastanelerinde göreve başlayan 221 hemşire ile gerçekleştirilmiştir. Veriler, Tanıtıcı Bilgi Formu ve Hemşirelikte Geçiş Şoku Ölçeği (HŞGÖ) kullanılarak toplanmıştır. Hemşirelerin, (HŞGÖ) toplam puan ortalamasının 2.65±0.75 (orta düzeyde) olduğu bulunmuştur. Çoklu doğrusal regresyon modeli, hemşirelik bölümünü isteyerek seçme, staj yapma, mesleğe başlarken hizmet içi eğitim alma, hemşirelik mesleğinin gerektirdiği bilgi ve becerileri uygulamada kendine güvenme, hemşirelik mesleğinin gerektirdiği iletişim becerilerine sahip olma ve öğrencilikten mesleğe geçişte stres yaşama ile (HŞGÖ) puan ortalamaları arasında istatistiksel olarak anlamlı bir ilişki olduğunu ve bu değişkenlerin toplam varyansın %20.7'sini açıkladığını göstermiştir. Araştırmada hemşirelerin orta düzey geçiş şoku yaşadığı bulunmuştur. Araştırma, işe yeni başlayan hemşirelerin yaşadığı geçiş şokunu ve bunu etkileyen faktörleri göstermesi açısından hemşire eğitimcilerine ve hemşire yöneticilerine bir perspektif sunmaktadır.,

Anahtar kelimeler: Geçiş şoku, Hemşirelik, Mesleki rol, Mesleki yeterlilik.

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INTRODUCTION

The transition from student to professional nursing role is a challenging process. Duchscher's Transition Phases theory suggests that the initial 12 months of transition for newly qualified nurses consists of three phases: “doing” “being” and “knowing” (Duchscher, 2009). As novice nurses try to adapt to the new environment in the first "doing" phase, which takes about three to four months, they may begin to experience transition shock, finding out that working as an independent nurse is a unique experience compared to being a nursing student, which can often lead to a variety of emotions, including stress, feeling overwhelmed, and fear of making a mistake while providing care (Labrague & De los Santos, 2020). While starting a new profession as a nurse can often bring about feelings of excitement, the new nurse has to question her/his competencies and struggle to adjust to a new position with fresh obligations and reconcile the disparities between the teachings in school and their practical application in the real world (Chen, Liu, Wang & Dong, 2021).

The next stage, the “becoming” stage, is when the excitement of new beginnings is over, and the new nurse dedicates the next four to five months to acquiring new knowledge and enhancing her capabilities. Initially feeling inadequate, upset, and lost, the nurse gradually gains confidence and comfort in questioning and discussing care decisions rather than relying on more experienced colleagues to answer her questions as she becomes more independent as her knowledge and confidence grow (Duchscher, 2009; Hampton, Smeltzer & Ross, 2021). During the third and last stage, known as "knowing," novice new nurses continue to report a boost in their confidence and competence, accompanied by a reduction in their stress levels. The stress associated with the responsibility of being a nurse can be replaced by frustration with the healthcare provider or healthcare system. At this final stage, nurses may observe noticeable changes in themselves and can easily recognize their progress from where they began over the course of a year (Duchscher, 2009).

Nurses who are new to the profession face a multitude of challenges during their first year of practice, arising from the disparity between theoretical knowledge and real-world application, a heavy workload caring for patients, challenging interpersonal dynamics, and insufficient nursing proficiency and expertise. This is defined as “transition shock” (Hampton et al., 2021). Various factors, such as insufficient support, unrealistic performance expectations, bullying from senior colleagues, and the imbalance between work and personal life have been reported to be effective in transition shock. Similarly, transition shock of new nurses was found to be associated with age, self-efficacy, current working unit, desirable unit, and work setting

(Labrague & De los Santos, 2020). In addition, problems affecting patient safety, such as medication errors, neglect of vital aspects of nursing care, undocumented nursing care, and failure to report changes in patient status, have often been attributed to transition difficulties among new nurses (Herron, Professor & Elizabeth Herron, 2018; Kaldal, Conroy, Feo, Gronkjar & Voldbjerg, 2023; Labrague & De los Santos, 2020; Treiber & Jones, 2018; Zheng, Yang, Zhou & Zhu; 2023). Therefore, organizational efforts should be made to facilitate the smooth transition and integration of new nurses so that transition shock or its potential effects can be minimized. Being aware of the transition shock that newly graduated nurses may experience and the affecting factors enables rapid intervention in this process, accelerates the adaptation of the nurse and increases the quality of patient care (Labrague & De los Santos, 2020; Reebals, Wood & Markaki; 2022). From this point of view, this study aims to examine the transition shock experienced by newly graduated nurses and the affecting factors.

MATERIAL AND METHOD

Design

This research was conducted in a descriptive type in order to determine the transition shock to the profession in nurses. The study examined the relationship between variables that are thought to affect the transition shock, such as the socio-demographic characteristics of new nurses, the characteristics of the school they graduated from the hospital/clinic they work in, and their competencies at the start of their career.

Participants

The research was carried out in university hospitals of two provinces in eastern Turkey. The population of the research consists of nurses (n=286) who started working in the institutions determined between 01 March and 30 April 2022 in the last year. Since it was desired to reach the whole population in the study, no sample selection was made, the study was completed with 221 (77%) nurses who were actively working between the specified dates, had not worked in any institution before, started working for the first time and voluntarily accepted to participate in the research. To determine whether the sample size is sufficient or not, post power analysis was performed using the G*Power v.3.1.9.6 program. The power of the study $(1-\beta)$ was found to be 100%, with a confidence interval of 95% and a type 1 error of 0.05 (Faul, Erdfelder, Lang & Buchner, 2007).

Measures

The data of the study were collected by using the Introductory Information Form which was created by the researchers by scanning the relevant literature and the Nursing Transition Shock Scale (NTSS) (Chen et al., 2021; Wenxia, Feifei, Min, Li, Aihong & Xingfeng, 2022; Tarhan & Yıldırım, 2021)

Introductory Information Form

This form, which was prepared by the researchers by scanning the literature, consists of 25 questions examining the socio-demographic characteristics of nurses (Age, gender, marital status, education level), the characteristics of the school they graduated from (choosing the nursing profession willingly, general education method of the school they graduated from, receiving internship training) and the hospital/clinic they work at (the unit where they work, type of work, duration of work, time to start caring for patients on their own after starting the profession) and their competencies in the process of starting their profession (receiving orientation training when starting the profession, receiving in-service training when starting the profession, working with a guide nurse/training nurse when starting the profession, being self-confident in applying the knowledge and skills required by the nursing profession, feeling competent in the profession, believing they have the communication skills required by the nursing profession, experiencing stress during transition from the student to the professional role) (Labrague & De los Santos, 2020; Parker, Giles, Lantry & McMillan, 2014).

Nursing Transition Shock Scale (NTSS)

It is a valid and reliable measurement tool consisting of 18 items and four sub-dimensions, developed by Tarhan and Yıldırım (2021) to determine the transition shock levels of newly graduated nurses. Goodness-of-fit statistics with the model were found at an acceptable level. The Cronbach's alpha internal consistency coefficient was found to range between 0.80 and 0.89 for the sub-dimensions and 0.92 for the whole scale. Factor loadings vary between 0.56 and 0.78, and the single-factor structure explains approximately 65% of the variance of the scale. Confirmatory factor analysis results showed that the fit indices were sufficient, and the scale could be used to determine the level of transition shock.

NTSS, perception of inadequacy in interpersonal relations-F1 (4, 5, 6, 7, 8, 9, 10), perception of inadequacy in professional decisions and practices-F2 (12, 13, 14, 15), perception of inadequacy in social life-F3 (11, 16, 17, 18) and perception of inadequacy in roles and responsibilities-F4 (1, 2, 3). The scale, which is in the form of a five-point Likert scale, does not contain items with negative meaning. Scale and sub-dimension scores are calculated by

dividing the total score from the whole scale and sub-dimension by the number of items. A minimum of 1 point and a maximum of 5 points can be obtained from the whole scale and each sub-dimension. A high mean score from the relevant sub-dimension is interpreted as a high level of transition shock in the relevant sub-dimension of recent graduates (Tarhan & Yıldırım, 2021).

Data Collection

The data were collected using the online data collection method after the voluntary participation of the nurses. After the nurses accepted the informed consent page explaining the purpose of the study, they were able to view the questionnaire questions. Filling in each questionnaire took approximately 10 minutes. The data collection process was followed online.

The study data was sent to participants via email and social communication networks (WhatsApp, Facebook, etc.). Nurses were able to view the survey questions after accepting the consent page, which explained the purpose of the study. IP moderation was used to ensure that a participant completed only one questionnaire. Each questionnaire took approximately 10 minutes to complete. The data collection process was conducted online.

Data Analysis

The data obtained from the research were evaluated in the computer environment. In the study, mean, standard deviation, number, and percentage values were given as descriptors. Whether the data showed normal distribution or not was determined by the Kolmogorov-Smirnov test of normality. The t-test was used to evaluate the difference between two independent groups with normal distribution, the Mann-Whitney-U test to evaluate the difference between two independent groups that did not, and the Kruskal-Wallis test to evaluate the difference between three or more independent groups and multiple linear regression analysis was done to determine the direct effect. In the study, $p<.05$ was considered statistically significant.

Limitations

Due to the use of self-report scales in this study, the fact that the results of the study are based on the reports of the nurses participating in the study may cause a response bias. At the same time, the limitations of the study are that the research was conducted in only two institutions from the same region, both institutions were university hospitals, and the results could not be generalized to all institutions.

Ethical Considerations

Before starting the research, ethics committee approval (22.02.2022/ 04-5) was obtained from the Social Humanities Ethics Committee of Fırat University and institutional permission from the university hospitals where the research was conducted. Before starting the study, permission to use the NTSS scale was obtained from the authors via e-mail.

RESULTS

In the study, it was found that the total NTSS mean score of nurses new to the profession was 2.65±0.75. Also in the study, it was found that the mean score of the Perception of Inadequacy in Interpersonal Relations sub-dimension (F1) is 2.38±0.91, the mean score of the Perception of Inadequacy in Professional Decisions and Practices (F2) sub-dimension is 2.58±0.88, the mean of the Perception of Inadequacy in Social Life sub-dimension It was found that the mean score of (F3) was 2.93±1.04, and the mean score of the Perception of Inadequacy in Roles and Responsibilities sub-dimension (F4) was 2.97±0.98 (Table 1).

Table 1. Nursing Students' Total Score Averages of NTSS and Subscales

Scala	MED (Min-Max)	*X*±SD	Cronbach Alpha
NTSS total	2.55 (1.11-5.0)	2.65±0.75	.92
Perception of Inadequacy in Interpersonal Relations (F1)	2.28 (1.0-5.0)	2.38±0.91	.86
Perception of Inadequacy in Professional Decisions and Practices (F2)	2.50 (1.0-5.0)	2.58±0.88	.76
Perception of Inadequacy in Social Life (F3)	3.00 (1.0-5.0)	2.93±1.04	.79
Perception of Inadequacy in Roles and Responsibilities (F4)	3.00 (1.0-5.0)	2.97±0.98	.73

In the study, it was found that the mean age of the nurses was 24.64±1.78 years, 76.0% were female, 86.4% were single, and 91.4% were undergraduate graduates. It was determined that 55.2% of the nurses choose the profession willingly, 42.5% graduated from a school that actively uses the classical education method, and 64.3% graduated from a school with an internship practice. The comparison of the nurses' descriptive characteristics and the total score averages of the NTSS and its sub-dimensions is given in Table 2. In this study, it was found that nurses who did not choose the profession willingly, had higher mean scores of NTSS and F1, F2, F3 sub-dimensions, and the difference between them and those who chose it willingly was statistically significant; It was determined that nurses who graduated from a school with internship practice had higher NTSS and F2, F3, and F4 sub-dimension total score averages, and the difference between them and those who did not receive internship was statistically significant (Table 2).

Table 2. Comparison of Nurse Characteristics and the Mean Scores of NTSS and Subscales

Nurse characteristics	n	%	MED (MİN-MAX)	NTSS MEAN±SD	F_1 MEAN±SD	F_2 MEAN±SD	F_3 MEAN±SD	F_4 MEAN±SD
Gender								
Female	168	76.0	2.58 (1.11-5.00)	2.68±.76	2.42±.90	2.60±.89	2.99±1.04	2.97±.97
Male	53	24.0	2.50 (1.22-4.28)	2.56±.72	2.38±.96	2.54±.85	2.75±1.02	2.98±1.03
Test / p				U=-1.005 .315	U= -1.113 266	U= -.046 .963	U= -1.327 .185	U= -.071 .944
Marital status								
Married	30	13.6	2.47 (1.44-4.28)	2.61±.66	2.37±.90	2.38±.72	2.85±.98	3.16±1.01
Single	191	86.4	2.50 (1.11-5.00)	2.66±.76	2.39±.92	2.62±.90	2.95±1.05	2.94±.98
Test / p				U= .-287 .774	U= -.038 .969	U= -1.362 .173	U= -.494 .621	U= -.982 .362
Education level								
Bachelor	202	91.4	2.55 (1.11-5.00)	2.65±.73	2.38±.90	2.56±.86	2.95±1.03	2.96±.99
Master	19	8.6	2.38 (1.44-4.28)	2.68±.95	2.41±1.03	2.78±1.06	2.72±1.16	3.10±.93
Test / p				U= .-244 .807	U= -.096 .924	U= -.407 .687	U= -1.005 .315	U= -.611 .541
Choose the nursing department willingly								
Yes	122	55.2	2.44 (1.11-4.28)	2.50±.70	2.24±.85	2.46±.86	2.71±1.02	2.89±.88
No	99	44.8	2.72 (1.50-5.00)	2.83±.77*	2.56±.96*	2.73±.88*	3.21±1.00*	3.07±1.09
Test / p				**t= -3.279 .001**	**t= -2.647 .009**	**t= -2.237 .026**	**t= -3.695 .000**	t= -1.311 .191
General education method of the graduated school								
Classical	94	42.5	2.55 (1.39-4.28)	2.63±.69	2.42±.82	2.67±.88	2.77±.99	2.90±.92
Integrated	39	17.6	2.72 (1.50-4.28)	2.73±.67	2.43±.94	2.55±.65	3.21±1.04	3.03±.94

Case management	57	25.8	2.44 (1.11-5.00)	2.62±.90	2.38±1.03	2.45±.97	2.96±1.10	2.97±1.11
Simulation	31	14.0	2.50 (1.56-4.78)	2.64±.74	2.28±.92	2.59±.95	3.04±1.02	2.63±.69
Test / p				KW= .787 .675	KW=.263 .877	KW= 1.711 .425	KW= 5.570 .062	KW=.340 .844
Having an internship								
Yes	142	64.3	2.66 (1.11-5.00)	2.75±.79*	2.46±.94	2.75±.87*	3.04±1.07*	2.24±.85
No	79	35.7	2.38 (1.22-4.11)	2.47±.64	2.24±.85	2.28±.83	2.75±.95	2.56±.96
Test / p				**t= 2.629 .009**	t= -1.500 .134	**t= -4.001 .000**	**t= -2.076 .038**	t= -.862 .389
			MED (MİN-MAX)	**MEAN±SD**				
Age			24.0 (22-30)	24.64±1.78				

KW: Kruskal Wallis, U: Mann Whitney U, t: t test

In the comparison of the working characteristics of nurses with the averages of the NTSS and subscales, 42.1% of the nurses worked in various services, 86.9% worked in shifts, 42.5% worked in the range of 10-12 months, 62.9% started to care for patients on their own in the first month they started working. It was determined that nurses with 0-3 months working period had higher F2 sub-dimension total score averages and the difference between them and those with longer working hours was statistically significant (Table 3).

Table 3. Comparison of the Working Characteristics of Nurses and the Averages of NTSS and Subscales

Working characteristics	**n**	**%**	**MED (MİN-MAX)**	**NTSS MEAN±SD**	**F_1 MEAN±SD**	**F_2 MEAN±SD**	**F_3 MEAN±SD**	**F_4 MEAN±SD**
Unit of assignment								
Services	93	42.1	2.61 (1.11-4.28)	2.65±.70	2.39±.94	2.53±.82	2.96±1.02	2.98±.92
Intensive care	79	35.7	2.61 (1.17-5.00)	2.70±.80	2.34±.87	2.72±.95	3.02±1.02	2.97±1.03
Operating room	15	6.9	2.27 (1.44-4.28)	2.55±.90	2.41±1.00	2.48±.84	2.71±1.13	2.77±.88
Emergency	31	14.0	2.50(1.50-4.11)	2.51±.69	2.22±.84	2.38±.85	2.73±1.11	3.09±1.06
Test / p				KW= 1.817 .611	KW= .930 .818	KW= 2.802 .423	KW= 2.291 .514	KW= .844 .839
Working shift								

Day Shift	29	13.1	2.61 (1.44-4.78)	2.67±.83	2.31±.88	2.80±1.00	3.03±1.09	2.86±.85
Day/Night Shift	192	86.9	2.52 (1.11-5.00)	2.65±.74	2.40±.92	2.55±.86	2.92±1.03	2.99±1.00
Test / p				U=-.084 .934	U=-.442 .659	U=-1.335 .182	U=-.308 .758	U=-.667 .505
Months in nursing								
0-3 months	66	29.9	2.77 (1.39-4.78)	2.78±.83	2.50±.99	2.90±.88*	3.01±1.09	2.97±1.01
4-6 months	46	20.8	2.58 (1.44-4.67)	2.75±.77	2.44±1.10	2.75±.77	2.75±.77	2.75±.77
7-9 months	15	6.8	2.33 (1.50-3.89)	2.55±.69	2.21±.77	2.55±.69	2.55±.69	2.55±.69
10-12 months	94	42.5	2.44 (1.11-5.00)	2.53±.67	2.31±.77	2.53±.67	2.53±.67	2.53±.67
Test / p				KW= 4.595 .586	KW= 1.228 .746	**KW= 20.794 .000**	KW= 2.811 .422	KW= 5.358 .147
Months of start caring for patients alone after starting the job								
0-1 months	139	62.9	2.44 (1.11-4.67)	2.60±.70	2.29±.85	2.54±.84	2.99±.100	2.91±.97
2-3 months	41	18.6	2.62 (1.17-4.11)	2.62±.76	2.43±1.00	2.48±.89	2.79±1.07	3.02±.97
4-6 months	41	18.6	2.61 (1.39-5.00)	2.83±.88	2.65±1.00	2.84±.98	2.89±1.15	3.16±1.03
Test / p				KW= 1.515 .469	KW= 3.793 .150	KW= 3.398 .183	KW= 1.129 .569	KW= 2.151 .341

KW: Kruskal Wallis, U: Mann Whitney U, t: t test

It was determined that 64.7% of the nurses participating in the study received orientation training (includes orientation training, general hospital and clinic introduction, rules and working conditions) when starting the profession, 67.0% received in-service training (includes planned and regular training to provide the individual with the necessary knowledge, skills and behavior about the changing and developing health services specific to the department they work in, and to increase work efficiency) when starting the profession, and 58.8% worked with a guide nurse/training nurse when starting the profession. 51.6% of the nurses are confident in applying the knowledge and skills required by the profession, 43.4% feel competent in the field of work, 83.3% think that they have the communication skills required by their profession, 83.7% experience stress during the transition from student to profession, 27.6% It was found that he felt very anxious during the transition from student to profession (Table 4).

It was found that nurses who received in-service training at the beginning of the profession had higher NTSS total score and F1 sub-dimension score average; It was determined that nurses who received orientation training at the beginning of the profession had a higher F1 sub-dimension score average and the difference between nurses who did not receive this training was statistically significant (Table 4).

Table 4. Comparison of Some Other Characteristics of Nurses and the Averages of NTSS and Subscales

Characteristics	n	%	MED (MİN-MAX)	NTSS MEAN±SD	F_1 MEAN±SD	F_2 MEAN±SD	F_3 MEAN±SD	F_4 MEAN±SD
Getting orientation training at the beginning of the profession								
Yes	143	64.7	2.44 (1.11-5.00)	2.59±.78	2.30±.88	2.58±.94	2.87±1.08	2.59±.78
No	78	35.3	2.66 (1.50-4.28)	2.75±.69	2.55±.95	2.59±.77	3.04±.95	2.75±.69
Test / p				U= -1.720 .085	**U= -1.985 .047**	U= -.701 .483	U= -1.214 .225	U= -1.138 .225
Getting in-service training at the start of the profession								
Yes	148	67.0	2.44 (1.11-5.00)	2.56±.76	2.23±.90	2.56±.90	2.85±1.02	2.91±1.00
No	73	33.0	2.77 (1.50-4.78)	2.84±.69	2.70±.85	2.63±.85	3.10±1.06	3.10±.95
Test / p				**U= -2.704 .007**	**U= -3.961 .000**	U=-.420 .674	U= -1.636 .102	U= -1.261 .207
Preceptorship with a guidance nurse/training nurse when starting the profession								
Yes	91	41.2	2.50 (1.17-5.00)	2.62±.78	2.32±.93	2.64±.89	2.86±1.02	2.98±1.06
No	130	58.8	2.61 (1.11-4.78)	2.67±.73	2.43±.90	2.54±.87	2.98±1.05	2.77±.93
Test / p				t= -.402 .688	t= -.815 .416	t= .805 .422	t= -.831 .407	t= .127 .899
Self-confidence in applying the knowledge and skills required by the nursing profession								
Yes	163	73.7	2.44 (1.11-4.28)	2.54±.71a	2.28±.88a	2.42±.82	2.86±1.03	2.88±1.00a
No	11	5.0	3.38 (2.33-4.78)	3.47±.77b	3.27±.84b	3.36±1.15b	3.65±.95	3.81±.80b
Undecided	47	21.3	2.83 (1.50-5.00)	2.83±.74	2.54±.93	2.95±.83a	3.00±1.03	3.09±.85
Test / p				**KW= 15.630 .000**	**KW= 12.974 .002**	**KW= 18.290 .000**	**KW= 6.244 .044**	**KW= 9.724 .008**
Feeling self-efficacy in the working unit								

Yes	117	52.9	2.44 (1.11-4.28)	2.58±.72	2.29±.83	2.36±.82	2.94±.96	2.88±.99
No	27	12.3	3.27 (1.78-5.00)	3.29±.84a	3.17±1.08a	3.33±.89a	3.29±.97	3.51±1.07
Undecided	77	34.8	2.44 (1.17-4.28)	2.58±.72	2.26±.84	2.67±.82	2.80±1.15	2.93±.89
Test / p				**KW= 16.613 .000**	**KW= 16.478 .000**	**KW= 25.149 .000**	KW= 3.738 .154	**KW= 8.708 .013**
Having the communication skills required by the nursing profession								
Yes	184	83.2	2.44 (1.11-4.28)	2.53±.68	2.27±.83	2.46±.83	2.81±1.02	2.89±.97
No	12	5.4	3.36 (2.83-4.78)	3.65±.65*	3.55±.88b	3.75±.76	3.75±.58	3.61±.81
Undecided	25	11.3	3.00 (1.44-5.00)	3.01±.81	2.69±1.07	2.97±.82	3.42±1.06	3.29±1.03
Test / p				**KW= 25.784 .000**	**KW= 19.402 .000**	**KW= 25.502 .000**	**KW= 16.164 .000**	**KW= 8.572 .014**
Experiencing stress in transition from student role to profession								
Yes	185	83.7	2.61 (1.11-5.00)	2.71±.75	2.45±.92	2.65±.89	2.98±1.03	3.04±.96
No	36	16.3	2.33 (1.17-3.78)	2.34±.65	2.07±.82	2.22±.72	2.70±1.05	2.64±1.03
Test / p				**U= -2.433 .015**	**U= -2.161 .031**	**U= -2.478 .013**	U= -1.290 .197	**U= -2.405 .016**

KW: Kruskal Wallis, U: Mann Whitney U, t: t test ve F: One Way Anova

A multiple linear regression model was established with variables that had a statistically significant relationship with NTSS mean scores (choosing the nursing department willingly, having an internship, receiving in-service training at the start of the profession, being self-confident in applying the knowledge and skills required by the nursing profession, self-efficacy in the working unit, having the communication skills required by the nursing profession, experiencing stress in transition from student role to profession) in univariate analyses. The multiple linear regression model demonstrated that there was a statistically significant relationship between choosing the nursing department willingly (β-coefficient 4.966; p=0.003), having an internship (β-coefficient -3.935; p=0.023), receiving in-service training at the start of the profession (β-coefficient 3.989;

p=0.025), being self-confident in applying the knowledge and skills required by the nursing profession -1.564; p=0.018), having the communication skills required by the nursing profession (β-coefficient 3.798; p=0.006) and experiencing stress in transition from student role to profession (β-coefficient -5.286; p= 0.018) and NTSS mean scores, and showed that these variables explained 20.7% of the total variance (Table 5).

Table 5. Results of NTSS Multiple Linear Regression Analyses with Independent Variables

NTSS Risk Factors	B	E	β	t	p	95.0% Confidence Interval for
Choosing the nursing department willingly	4.966	1.661	0.182	2.99	**0.003**	1.692-8.241
Having an internship	-3.935	1.713	-0.139	-2.297	**0.023**	-7.313- -0.558
Getting in-service training at the start of the profession	3.989	1.764	0.139	2.261	**0.025**	0.512-7.466
Self-confidence in applying the knowledge and skills required by the nursing profession	-1.073	0.879	-0.089	-1.22	0.224	-2.807- -0.661
Feeling self-efficacy in the working unit	-1.564	0.656	-0.161	-2.383	**0.018**	-2.857- -0.27
Having the communication skills required by the nursing profession	3.798	1.376	0.184	2.76	**0.006**	1.085- 6.51
Experiencing stress in transition from student role to profession	-5.286	2.22	-0.144	-2.381	**0.018**	-9.661- -0.91
NTSS	**R=** 0.482	**R^2**=0.232	**AdjR^2**=0.207	**p=0.000**		

Multiple linear regression analysis

DISCUSSION

The findings of this study showed the transition shock to the profession and the affecting factors in nurses. These findings may help ameliorate the transition shock faced by nurses in the transition from campus to the workplace, thereby facilitating the successful initiation of an effective workforce (Chen et al., 2021).

During the first transition to the clinic, nurses learn new skills and begin to form a professional identity. Therefore, it is extremely important to ensure a successful transition. The new nurses participating in the research received an average of 2.65 on the NSTT scale and experienced a moderate transition shock to the profession. This result is similar to the moderate results of 2.42 (out of 4) by Woo and Kim and 2.45 (out of 4) by Jeon and Kim, and lower than 2.8 (out of 4) by Kim and Yeo and 3.05 (out of 5) by Chen et al. (Chen et al., 2021; Jeon & Kim, 2017; Kim & Yeo, 2019; Woo & Kim, 2022). In the sub-dimensions of the vocational shock scale, the highest average belongs to "perception of inadequacy in roles and responsibilities", followed by "perception of inadequacy in social life", "perception of inadequacy in professional decisions and practices" and "perception of inadequacy in interpersonal relations". There are various results related to sub-dimensions in the studies. In the study of Woo and Kim, the highest average belonged to the perception of inadequacy in interpersonal relationships, while Wenxia et al. In this study, it belongs to the specifics related to physical properties (such as sleep deprivation and fatigue) (Wenxia et al., 2022; Woo & Kim, 2022). These results show that nurses who have just started their profession have difficulties in various areas such as roles and responsibilities, interpersonal relations, social life, etc., and experience transition shock.

In the study, it was found that gender, marital status, and education level were not significant variables in terms of transition shock. Chen et al. In their study, Wenxia et al. reported that gender was not effective on transition shock, but education level was a significant variable (Chen et al., 2021; Wenxia et al., 2022). Labrague and Santos, on the other hand, found that the marital status of the nurses did not affect the transition shock (Labrague & De los Santos, 2020). Considering the different results reported, it can be said that more studies are needed on the above variables.

In the study, it was seen that the students who willingly chose the nursing department experienced less transition shock than the others, except for the perception of inadequacy in roles and responsibilities. Woo and Kim reported that graduates who felt adequate in their nursing knowledge and were satisfied with the nursing profession experienced less transitional

shock (Woo & Kim, 2022). Although there is no study conducted with the same variable in the literature, it can be said that students who choose the department willingly may be more motivated and more willing.

In the study, it was found that the general education method of the school from which the nurses graduated was not a significant variable for transition shock. No similar studies were found in the literature. The fact that nursing education includes similar standards with clinical practice, regardless of the method, and inconsistencies and differences between education and clinic may have been effective in the emergence of the result. In the study, it was observed that students who did internships experienced more transition shock than those who did not and felt more inadequacy in professional decisions and practices, social life, roles, and responsibilities. It can be thought that the result is due to the prejudice that the intern students have because they have had the closest experience in the field.

When the working characteristics of the nurses were examined in the study, it was found that the unit of study was not an important variable in terms of transition shock. While some studies reported that the characteristics of the working environment (negative/positive), working in the desired place and the unit of work affect the transition shock (Cao, Li & Gong, 2021; Kim S.O. & Kim J.S., 2021), other studies are important for the transition shock of the working unit and the desired unit. found no variable (Kim & Yeo, 2021; Labrague & De los Santos, 2020; Su et al., 2021).

Nurses' work characteristics are associated with both physical and mental fatigue (Wenxia et al., 2022). In the study, it has been found that the way nurses who have just started their profession, working during the day or on duty, and the time they start working and look after patients alone do not affect the transition shock. In parallel with our findings, Labrague and De los Santos reported that the time that nurses started to work and the time they were on duty were not important variables in terms of transition shock (Labrague & De los Santos, 2020). Contrary to our study, Wenxia et al. found that nurses with more than 8 shifts per month experienced more transition shock (Wenxia et al., 2022). In addition, no study has been found in the literature that examines transition shock as long as the patient starts to look after the patient alone. It can be thought that the result emerged because our research sample had similar working conditions.

In the study, it was observed that the nurses who did not receive orientation training at the beginning of the profession experienced significant inadequacy in interpersonal relations, while the nurses who did not receive in-service training experienced more transition shock and inadequacy in interpersonal relations, but there was no significant difference in other sub-

dimensions. In many health institutions, orientation programs, and in-service training are organized for new nurses. However, these programs and training do not have a certain standard, the institution makes it according to its preferences. The general content of these training programs is on theoretical and technical subjects and does not include processes related to emotions such as transition shock (Fitzpatrick & Gripshover, 2016; Powers, Herron & Pagel, 2019). However, it was expected that the interpersonal relations of the students included in these training programs would be more adequate and the shock they experienced would be lower since it allowed the new nurses to get to know the people and environment they will work with and to repeat the theoretical knowledge specific to the clinic. Our finding is valuable in that it reveals the meticulous preparation of these training and orientation programs.

In the study, it was found that the transition shock experienced by a guide/training nurse and nurses who did and did not work at the beginning of the profession was similar. Although there are similar results to our findings in the literature, there is a study showing that nurses working with a guide/training nurse experience lower transition shock (Cao et al., 2021; Kim & Yeo, 2021). It can be thought that the result is because the new nurse encounters many new situations even if she works with the guidance/training nurse.

In the study, it was seen that the nurses who were not confident and did not feel competent in applying the knowledge and skills required by the nursing profession experienced a transition shock to a higher profession. Kim and Yeo and Liu et al. reported a significant relationship between self-efficacy and self-confidence and transition shock in their studies (Kim & Yeo, 2021; Liu X., Sun & Liu Y., 2018). Our finding supports the literature. It can be thought that nurses who feel confident and competent in applying knowledge and skills are more motivated and adapt more easily.

In the study, it was found that students who think that they have the communication skills required by the nursing profession experience significantly lower transition shock. Su et al. reported that professional communication skills are important for transition shock (Su et al., 2021). It can be said that nurses with good communication adapt to the process more easily and express themselves more easily.

In the study, it was observed that nurses who experienced stress during the transition from student role to profession experienced higher transition shock. It is quite possible that the solid professional identity that many new nurses have developed at the end of their undergraduate years will be shattered under the weight of performance anxiety and self-doubt. New nurses' entry-level skills and knowledge are constantly challenged by their shaky confidence, limited experience with applying the skills and knowledge they have acquired through training, and the

predictability and lack of familiarity with the many variations in clinical contexts (Windey & Duchscher, 2018). Labrague and De los Santos found in their study that job stress has an effect on the role, which is one of the sub-dimensions of transition shock (Labrague & De los Santos, 2020). Similar results were reported by Newton and McKenna (Newton & McKenna, 2007). Our finding supports the literature. Nurses, who are faced with many new, complex, and unknown situations, are expected to experience stress and accompanying higher transition shock.

CONCLUSIONS

The study demonstrated that new nurses experienced a moderate level of transition shock. Also, transition shock was affected by the variables of choosing the profession willingly, doing internships, starting time to work, receiving orientation training, receiving in-service training, being self-confident in applying the knowledge and skills required by the nursing profession, feeling competent, having the necessary communication skills and experiencing stress during transition from the student to the professional role.

The research provides a perspective to nursing educators and nurse managers in terms of showing the transition shock experienced by nurses who have just started to work and the affecting factors. Nurse educators should strive to help nursing students successfully cope with transitional shock. It can be recommended to raise awareness about the differences and gaps between the clinic and the theory, to provide the opportunity to practice in every possible clinic and to provide training on topics such as roles and responsibilities, interpersonal relations, and professional identity, especially in the last year of school. It can also be suggested that nurse managers/hospital management create a positive working environment, provide orientation training and in-service training, and have a trainer or guide nurse for new nurses. In addition, it can be suggested that new nurses should be given the opportunity to express the difficulties they face, hospital managers and responsible nurses should help them to cope with these difficulties, and the professional competencies of new nurses should be evaluated and supported.

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