ORIGINAL RESEARCH ARTICLE

The relationship between self-compassion and acute stress disorder in mothers whose babies were hospitalized in the neonatal intensive care unit

DOI: 10.29063/ajrh2025/v29i5.13

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Abstract

Mothers of babies admitted to neonatal intensive care units experience stressful life situations. These experiences can lead to mental conditions such as acute stress disorder or post-traumatic stress disorder. Self-compassion can shape and empower people as they struggle through difficult situations. This study aimed to investigate the relationship between self-compassion and acute stress disorder in mothers whose babies were hospitalized in a neonatal intensive care unit. The study sample consisted of 372 mothers. Data were collected using an Information Form, The Severity of Acute Stress Symptoms Scale and The Self-Compassion Scale. There was a negative weak statistically significant relationship between the total Self-Compassion Scale score of the mothers and the total score of Severity of Acute Stress Symptoms Scale ($p < 0.05$). The self-compassion should consider as a protective factor during challenging life events. Nurses should teach self-compassion skills to parents and identify factors that influence self-compassion skill use. *(Afr J Reprod Health 2025; 29 [5]: 146-157).*

Keywords: Neonatal intensive care, self-compassion, acute stress disorder

Résumé

Les mères de bébés admis en unité de soins intensifs néonatals vivent des situations stressantes. Ces expériences peuvent entraîner des troubles mentaux tels que le trouble de stress aigu ou le trouble de stress post-traumatique. L'autocompassion peut façonner et responsabiliser les personnes confrontées à des situations difficiles. Cette étude visait à examiner la relation entre l'autocompassion et le trouble de stress aigu chez les mères dont les bébés étaient hospitalisés en unité de soins intensifs néonatals. L'échantillon de l'étude était composé de 372 mères. Les données ont été recueillies à l'aide d'un formulaire d'information, de l'échelle de gravité des symptômes de stress aigu et de l'échelle d'autocompassion. Une relation négative faiblement significative a été observée entre le score total de l'échelle d'autocompassion des mères et le score total de l'échelle de gravité des symptômes de stress aigu ($p < 0,05$). L'autocompassion devrait être considérée comme un facteur de protection lors des événements difficiles de la vie. Les infirmières devraient enseigner les compétences d'autocompassion aux parents et identifier les facteurs qui influencent leur utilisation. *(Afr J Reprod Health 2025; 29 [5]: 146-157).*

Mots-clés: Soins intensifs néonatals, autocompassion, trouble de stress aigu

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Introduction

Erik H. Erikson, a developmental theorist (1902–1996), defined young adulthood as isolation versus proximity[1]. Accordingly, people should embrace true intimacy with a well-founded foundation of sharing, love, sexuality, and children. Individuals who cannot fully achieve closeness become isolated from life and experience isolation[1]. Moreover, birth covers a critical stage in which individuals succeed in their tasks and shapes their roles in family and social relationships[1]. The birth of a child is a stressful life situation. It requires parents to adapt to family life, environment and responsibilities. A baby born prematurely or being born sick and being admitted to the Neonatal Intensive Care Unit (NICU) is an unexpected sudden condition that can cause traumatic stress levels[2-4]. At this stage, treating the babies of in the neonatal intensive care unit is a situation that affects mental health of mothers. There is supporting evidence that NICU mothers are at increased risk for birth-related trauma and PTSD[5-6].

Acute Stress Disorder (ASD) encompasses the symptoms of reactions that occur within three

days to a month in individual situations caused by trauma. Individuals with ASD may re-experience the traumatic event, recall the retrospective traumatic event (flashbacks), have hallucinations and have terrible dreams[7]. Acute stress disorder is a situation that occurs when the individual has trauma or a fact that causes stress. A trauma or precipitating cause is a situation related to a violent accident or crime, a military conflict or attack, witnessing a kidnapping or abduction, experiencing a natural disaster, being diagnosed with a terminal illness, or experiencing physical or mental abuse. A person constantly experiences desperation and fear and tries to avoid being reminded[8]. Many scientific studies have examined mental health and the effect of the difficulties experienced by mothers who have a baby in in the neonatal intensive care unit. In studies on stress factors during this period, Keklikci *et al*[9]. examined the stress levels and coping methods of families, while Garg *et al*[10]. examined stress, postpartum depression, and anxiety in mothers of neonates admitted in the NICU. When studies are examined, it is seen that parents whose babies are hospitalized have high levels of stress, depression and anxiety[9-10]. ASD scores are associated with mother who employed, younger age, higher education, large family, urban residence, middle socioeconomic status, and unplanned pregnancy[9-10].

Especially in times of great stress, we find it difficult to offer ourselves the goodness and kindness that we offer others. Self-compassion can shape and empower people as they struggle through these difficult situations. Through self-compassion, we can approach ourselves with help and kindness and compassion, be conscious of sharing, and remain open to our pain and struggle[11]. Many studies are being done to reveal the relationship between self-compassion and mental health. Self-compassion positively affects mental health[12]. In addition, it has been found to have a negative relationship with situations, such as PTSD, anxiety, and depression[13-14]. A significant percentage of women experience psychopathological symptoms in the postpartum period, which can affect not only their mental health and well-being, but also the relationship between mother and baby. In studies conducted in the context of motherhood, self-compassion has been associated with less depression and shame[15-16], stronger mother-infant bonding, greater breastfeeding competence, and increased psychological resilience[17-19.]

Although self-compassion has been studied with many variables, its effect on the mental health of mothers whose baby treated in the neonatal intensive care unit has not yet been evaluated. This study aimed to evaluate the relationship between self-compassion and acute stress disorder in mothers whose babies were treated as inpatients in the neonatal intensive care unit. For this purpose, answers to the following research questions were sought.

Is there a relationship between the self-compassion score and the acute stress disorder score of mothers?

Is there a relationship or difference between the characteristics of the mother and the baby and self-compassion?

Is there a relationship or difference between the characteristics of the mother and the baby and acute stress disorder?

Methods

Design, sample and setting

This study was conducted using descriptive and correlational designs. Data were collected between 01.06.2021 and 04.02.2022. Study data were obtained from two health institutions in a province in eastern Turkey with a neonatal intensive care unit. The study population consisted of mothers of babies treated in the neonatal intensive care units of two health institutions. The first medical institution is the neonatal intensive care unit of a training and research hospital affiliated with a state university that treats 2000 patients annually. The second health institution is a neonatal intensive care unit affiliated with the Ministry of Health, which treats 4000 patients annually. The research sample size was calculated as 362 based on the formula if the number of elements in the universe is known (https://sampsize.sourceforge.net/iface/index.html). The sample selection was calculated according to the rates of health institutions in the universe. Accordingly, 119 mothers from the first health institution and 243 mothers from the second health institution paticipant the study sample.

The inclusion criteria were as follows;

Mothers whose baby had been in the neonatal intensive care unit for more than three days[7] and Mothers whose baby in the neonatal intensive care unit for the first time.

The exclusion criteria were as follows;

Mothers who did not give consent, Mothers who wanted to finish the interview during the interview, Mothers with major psychiatric disorders[10,6], Mothers whose baby had been intubation or mechanical ventilation[3,6], Mothers whose baby had been in the neonatal intensive care unit for more than a month[7], Mothers who had been a premature baby before and Mothers whose baby had been a surgical procedure for the baby[3,6].

A total of 394 participants were surveyed during the data collection process. Of the 22 questionnaires, due to exclusion criteria were not included in the study. The final data collection process was completed by 372 mothers.
Independent Variables: The Individual characteristics of the mother and the baby.
Dependent Variables: The total score of Severity of Acute Stress Symptoms Scale, The total score of Self-Compassion Scale

Data collection

The study data were collected using the Personal Information Form, The Severity of Acute Stress Symptoms Scale, and The Self-Compassion Scale. Filling the questionnaire took an average of 15-20 minutes. The participants filled out the survey themselves.

Personal ınformation form: The Individual characteristics of the participants were evaluated using a personal information form. This form consisted of 27 questions, 20 questions about the mother and seven about the baby (Age, education level, income, occupation, health insurance, family type, living space, numbers of helper to the family, mental illness, smoking and alcohol use, pregnancy week, planned babay status, having a premature baby, having a baby in a neonatal intensive care unit, having problems during pregnancy and birth, type of delivery, number of live births, communication with the nurse, miscarriage status, baby's gender, birth weight, diagnosis, feeding method, being on a ventilator, length of hospital stay, surgical procedure application status). The infant's feeding style was assessed using three options: "enteral," "parenteral," and "enteral+parenteral." Breastfeeding was evaluated using enteral nutrition. The communication with the nurse style was assessed using two options: “bad”, and “good”.

Severity of acute stress symptoms scale-adult (national stressful events survey acute stress disorder short scale [NSESSS]): The Severity of Acute Stress Symptoms Scale, developed by Lindeman in 1944, was administered by Aşcıbaşı *et al*[20], 50 patients diagnosed with acute stress disorder were being treated in an inpatient or outpatient clinics in the psychiatry service and met the diagnostic criteria for any post-traumatic stress disorder according to DSM-V criteria. It was conducted with 150 volunteers who did not have a disease. The Cronbach's alpha coefficient for the internal consistency of the NSESSS was 0.95. Item-total score correlation coefficients were found to be between 0.76-0.88. A single-factor solution was obtained from explanatory factor analysis of the NSESSS. The factor loads of the scale items were between 0.82 and 0.92. Based on ROC analysis, the area under the curve was 0.99. The NSESSS is a 7-item measurement tool with a 5-point Likert-type rating that is (0) not at all, (1) some, (2) moderately, (3) quite a lot, and (4) extremely. Higher scores indicate more severe acute stress disorder symptoms. Scoring ranges from 0 to 28 points[20]. In the current study, the NSESSS reliability coefficient was determined as 0.76.

Self-compassion scale (SCS): The Self-Compassion Scale developed by Neff in 2003 to Turkish and its validity and reliability analyses were carried out by Akın *et al*[21] with 633 university students. SCS is a self-report scale that allows people to report their emotional thoughts. The internal consistency coefficients of the scale ranged from 72 to 80, and the test-retest reliability coefficients ranged between 56 and 69. In the confirmatory factor analysis of the SCS, the existence of six sub-dimensions (self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification) that make up the self-compassion structure was

confirmed. The high scores obtained by the individual from each subscale indicate that the individual has characteristics evaluated by the relevant subscale. The SCS is a 26-item measuring instrument with a 5-point Likert-type rating of (1) never, (2) rarely, (3) often, (4) usually, and (5) always. Separate and total scores are obtained for each sub-dimension of the scale[21]. In the current study, the total internal consistency coefficient of the Self-Compassion Scale was determined as 0.87.

Data analysis

Data were analyzed using SPSS 20 (Statistical Package for Social Sciences) program (IBM Inc., Armonk, NY, USA). The reliability of the scale in data analysis was examined using Cronbach's alpha. The skewness and kurtosis values were used to evaluate the distribution of the total scale score. The Mann-Whitney U test was used for the comparison of the total score of the SCS and the NSESSS with the two-category variables, and the Kruskal-Wallis H test was used for the comparison of the total score of the SCS and the NSESSS with more than two categorized variables. Spearman Rho Correlation Analysis was used to analyze the total score relationship between SCS and the NSESSS. Statistical significance was set at $p < 0.05$.

Ethical issues

Permission was obtained from the local Non-Interventional Research Ethics Committee, dated 02.04.2021, and numbered 165. Institutional permission to conduct the research was obtained from the relevant institutions (01.07.2021/E-44650114 and 03.05.2021/208). The mothers who participated in the survey were verbally informed of the purpose of the study and written consent was obtained

Results

The average age of the mothers was 29.23±5.08 (18-43). It was determined that 32% of the mothers were illiterate, 61% were at the moderate income level, 80.1% were housewifes, 77.4% had health insurance, 60.2% were core family type, 38.4% lived in the city center, 59.7% received help from their partner's family, 93.5% did not have a mental illness, and 66.7% did not smoke or drink alcohol (Table 1). Of the mothers, 60.5% gave birth at 38-40 weeks of gestation, 74.5% had no health problems during pregnancy, 78.2% had no health problems during delivery, 55.6% had a normal vaginal delivery, 81.7% had one live birth, 80.6% planned their baby, 53% did not experience miscarriage, and 92.7% had good communication with the nurse (Table 2). The mean hospital stay of the baby in the NICU was determined to be 11.20±6.80 days. In addition, 56.2% of the babies were male, 65.6% were in the range of 2500-4300 grams, 42.7% were followed up with a diagnosis of hyperbilirubinemia, 58.3% received oxygen, and 37.1% were fed enterally and enterally + parenterally (Table 3). In Table 1, It was determined that there was a statistically significant difference between the education level of the mothers, the mothers' occupation, the living place of the mothers, the presence of a helper in the family and the total score of the SCS ($p< .05$). There was no statistically significant difference between age, health insurance, income level, presence of mental illness, family type, smoking/alcohol use status, and the total SCS score ($p> .05$). It was determined that there was a statistically significant difference between the education level of the mothers, family type, living place and the total score of the NSESSS ($p< .05$). There was no statistically significant difference between age, occupation, health insurance, income level, presence of mental illness, smoking/alcohol use status, the presence of helpers in the family, and the total NSESSS score ($p> .05$).

In Table 2, There was a statistically significant difference between the gestational weeks of the mothers, mothers' health problems during pregnancy, health problems during delivery, delivery method, number of live births, miscarriage status, communication with the nurse, and the total SCS score ($p< .05$). There was no statistically significant difference between the planned infant status and total SCS score ($p> .05$). It was determined that there was a statistically significant difference between the mothers' health problems and miscarriage status during pregnancy and the total score of the NSESSS ($p< .05$). There was no statistically significant difference between the mothers' gestational week, health problem status during delivery, mode of delivery, number of live births, planned babyhood, income level, and nurse communication variables and the total ASSS score ($p> .05$).

Table 1: Comparison of mother's socio-demographical characteristics with self-compassion scale and the severity of acute stress symptoms scale total score (n=372)

			SCS	**NSESSS**
Characteristics	**n**	$\bar{X}$ **±Sd**	***r/p***	***r/p***
Age	372	29.23±5.08	-0.011/0.826	0.569
Educational Level		**%**	***Median***	***Median***
Illiterate[1]	119	32	3.50	15
Literate[2]	67	18	3.24	11
Primary School[3]	59	15.9	3.25	14
High School[4]	82	22	3.17	14
University and Postgraduate[5]	45	12.1	2.92	13
KWX²/p			**31.404/0.000 (5<1,2,3,4)**	**18.470/0.001 (2<1)**
Income				
Low	87	23.4	3.15	14
Moderate	227	61	3.28	14
High	58	15.6	3.30	12
KWX²/p			5.330/0.070	5.152/0.076
Occupation				
Housewife[1]	298	80.1	3.30	14
Officer[2]	47	12.6	2.95	13
Other[3]	27	7.3	3.19	11
KWX²/p			**9.091/0.011 (2<1)**	0.449/0.799
Health Insurance				
Yes	288	77.4	3.22	14
No	84	22.6	3.30	12
Z/p			-1.656/0.098	-2.356/0.018
Family Type				
Core[1]	224	60.2	3.18	12
Extensive[2]	148	39.8	3.30	14
Z/p			-1.780/0.075	**-3.204/0.001(1<2)**
Living Place				
City Center[1]	143	38.4	3.14	12
District Center[2]	122	32.8	3.30	14
Village[3]	107	28.8	3.30	14
KWX²/p			**6.743/0.034**	**9.690/0.008 (1<3)**
Numbers of Helper to the Family				
Wife's Family[1]	222	59.7	3.34	14
Own Family[2]	86	23.1	3.28	13
No one [3]	64	17.2	2.96	14
KWX²/p			**43.838/0.000 (3<1, 3<2, 2<1)**	0.554/0.758
Mental Illness				
Yes	24	6.5	3.03	12.5
No	348	93.5	3.28	14
Z/p			-1.606/0.108	-0.213/0.831
Smoking/Alcohol				
Yes	124	33.3	3.30	14
No	248	66.7	3.20	14
Z/p			-0.995/0.320	-0.090/0.928

n: Number of samples, SCS: Self-Compassion Scale, NSESSS: Severity of Acute Stress Symptoms Scale,
Z: Mann-Whitney U Test, KWX²: Kruskall Wallis H Test, R: Spearman Rho Correlation Analysis X: Mean,
Sd: Standard deviation, *p < 0.05

Table 2: Comparison of pregnancy and birth process characteristics with self-compassion scale and the severity of acute stress symptoms scale total score (n=372)

Features	n	%	SCS *Median*	NSESSS *Median*
Pregnancy Week				
24-29 Week[1]	23	6.2	2.98	14
30-34 Week[2]	44	11.8	2.91	14
35-37 Week[3]	80	21.5	3.19	14
38-40 Week[4]	225	60.5	3.30	14
KWX²/p			**58.431/0.000 (4>1,2,3; 3>2)**	4.123/0.248
Having Health Problems During Pregnancy				
No[1]	95	25.5	3.02	15
Yes[2]	277	74.5	3.30	13
Z/p			**-5.177/0.000 (2>1)**	**-3.177/0.001 (1>2)**
Having Health Problems During Birth				
No[1]	81	21.8	3.05	14
Yes[2]	291	78.2	3.30	14
Z/p			**-4.384/0.000 (2>1)**	-0.852/0.394
Type of Delivery				
Perimortem c-section[1]	165	44.4	3.17	13
NVD[2]	207	55.6	3.30	14
Z/p			**-2.246/0.025 (2>1)**	-1.297/0.195
Number of Live Births				
One[1]	304	81.7	3.30	14
More than One [2]	68	18.3	3	14
Z/p			**-5.104/0.000 (1>2)**	-0.626/0.531
Planned Baby Status				
Yes	300	80.6	3.26	14
No	72	19.4	3.21	12
Z/p			-1.163/0.245	-0.942/0.346
Miscarriage Status				
Yes[1]	175	47	3.30	14
No[2]	197	53	3.15	12
Z/p			**-2.827/0.005 (1>2)**	**-2.306/0.021 (1>2)**
Communication with the Nurse				
Good[1]	345	92.7	3.30	14
Bad[2]	27	7.3	2.85	14
Z/p			**-3.792/0.000 (1>2)**	-0.061/0.951

n: Number of samples, SCS: Self-Compassion Scale, NSESSS: Severity of Acute Stress Symptoms Scale,
Z: Mann-Whitney U Test, KWX²: Kruskall Wallis H Test, NVD: Normal Vaginal Delivery * p<0.05

Table 3: Comparison of ınfant characteristics with self-compassion scale and the severity of acute stress symptoms scale total score (n=372)

Features	n	%	SCS *Median*	NSESSS *Median*
Gender				
Girl	163	43.8	3.29	14
Male	209	56.2	3.24	14
Z/p			-1.192/0.233	-0.796/0.426
Baby's Birth Weight				

1500-2500 gr[1]	128	34.4	3.12	14
2500-4300 gr[2]	244	65.6	3.30	14
Z/p			**-3.408/0.001 (2>1)**	**-2.191/0.028**
Baby Diagnosis				
Hyperbilirubinemia[1]	159	42.7	3.19	12
Sepsis[2]	120	32.3	3.20	14
Pneumonitis[3]	75	20.2	3.54	14
Other[4]	18	4.8	2.98	17.5
KWX²/p			**22.421/0.000 (3>1,2,4)**	**9.935/0.019 (4>1)**
Condition of Connecting to the Respirator				
Oxygen uptake[1]	217	58.3	3.39	14
Not Oxygen uptake [2]	155	41.7	3.05	14
Z/p			**-6.798/0.000 (1>2)**	-0.424/0.671
Infant's feeding				
Enteral[1]	**138**	**37.1**	3.19	11
Parenteral[2]	96	25.8	3.02	14
Enteral+Parenteral[3]	**138**	**37.1**	3.45	16
KWX²/p			**39.579/0.000 (1>2; 3>2)**	**21.083/0.000 (3>1)**
		$\bar{X}$ ±Sd	**R/p**	**R/p**
Length of stay	372	11.20±6.80	0.004/0.931	**0.279/0.000**

n: Number of samples, SCS: Self-Compassion Scale, NSESSS: Severity of Acute Stress Symptoms Scale,
Z: Mann-Whitney U Test, KWX²: Kruskall Wallis H Test, Sd: Standard deviation, * p < 0.05

Table 4: Relationship between self-compassion scale and the severity of acute stress symptoms scale (n=372)

	***X*± Sd**	**1**	**2**
Total NSESSS	13.83±5.17	**1**	
R/p		**0.000**	
Total SCS	3.23±0.53	-0.205**	**1**
R/p		0.000	**0.000**

In Table 3, It was determined that there was a statistically significant difference between the birth weight and respiratory status of the baby, the diagnosis of the baby, the baby's diet and the total score of the mothers' SCS (p< .05). There was no statistically significant difference between the sex of the baby, the length of hospital stay, and the total score of the mothers' SCS (*p*> .05). It was determined that there was a statistically significant difference between the birth weight of the baby, the diagnosis of the baby, the baby's diet and the total score of the mothers's NSESSS (*p*< .05). There was a statistically significant weak and positive relationship between the duration of the baby's hospital stay and the total NSESSS score of the mothers (*p*< .05). It was determined that there was no statistically significant difference between the sex of the baby and the status of attachment to the respirator and the total score of the mothers for NSESSS (p> .05).

In Table 4, It was determined that the mean of the total the SCS score of the mothers was 3.23±0.53, and the mean of the total score of the NSESSS was 13.83±5.17. It was determined that there was a statistically significant relationship between the total score of Self-Compassion Scale and the total score of Severity of Acute Stress Symptoms Scale in a weak negative direction ($p < 0.05$).

Discussion

The aim of the present study was to evaluate the relationship between self-compassion and acute stress disorder in mothers whose babies were treated as inpatients in the NICU. In our study, we found a statistically significant relationship between the total score of Self-Compassion Scale and the total score of The Severity of Acute Stress Symptoms Scale at a weak level in a negative direction. Accordingly, as the total self-compassion score of the mothers

increased, the total acute stress symptom severity score decreased.

In a study conducted on a sample of parents with premature babies, psychological resilience and self-compassion were identified as important predictors of depression and anxiety in parents of preterm babies. Components of psychological resilience are important predictors of individual and relational adjustment, while self-compassion has been identified as a predictor of individual harmony rather than relational harmony[22]. Some studies have shown that people with high levels of self-compassion report better overall health through perceived stress and less stress through better coping with stress[23-24]. Premature birth and subsequent hospitalization is a challenging task for parents. It leaves many parents vulnerable to depression, anxiety, and adjustment difficulties. Self-compassion is a phenomenon that must be understood to ensure effective functioning in such challenging contexts, which can help us understand differences in parental experiences and adjustment[22]. Self-compassion enables one to find ways to relate to oneself in times of suffering, regardless of whether the suffering is due to failure, perceived inadequacy, or general life difficulties[25].

Below, the results of the relationship between the characteristics of the mother and baby and the total score of Self-Compassion Scale were discussed. In our study, it was determined that those who were low educational level and high gestational weeks had significantly higher total SCS scores than those who high educational level and low gestational weeks. Additionally, it was determined that the total SCS score of housewives was significantly higher than that of civil servants. Self-compassion is a way to deal harmoniously and positively with one's problems, regardless of their level of performance or self-ability, without relentlessly harsh assessments or social comparisons[26]. Our study shows that mothers with high education levels, low gestational weeks and civil servants judge themselves more and identify more with the problem they experience and feel lonely in this problem. In our study, it was determined that mothers who had no health problems during pregnancy and birth, had a normal vaginal delivery, had one live birth, and had a previous miscarriage had statistically significantly higher total SCS scores than others. Muramoto *et al*[27] evaluated the self-compassion of mothers who gave birth after the pandemic period. According to the results of this study, while experiencing health problems during pregnancy and mode of delivery did not affect self-compassion, the self-compassion scores of mothers who experienced physical complaints in the first month after birth were high. In our study, it was determined that the total SCS score was significantly higher in mothers who received help than in those who had no one to help. Additionally, the current study determined that mothers with good communication with nurses had a significantly higher total SCS score than the others. When our study results were examined, mothers evaluated their communication with nurses positively, at a high rate of 92.7%. Supportive nursing interventions, accurate and honest information sharing, and individualized care have been found to be effective in reducing stress due to the intensive care environment[28-29]. Nurses in the neonatal intensive care unit can help mothers in need of help with the communication skills they use. These two results from our study are important in terms of drawing attention to the importance of mothers' need for support and the communication styles of neonatal nurses. In our study, it was determined that mothers of babies weighing 2500-4300 grams had statistically significantly higher SCS total scores than mothers of babies weighing 1500-2500 grams. These results show that mothers' self-compassion increases as their babies' weights increase. Muramoto *et al*[27] in their study determined that mothers whose baby's birth weight was above 2500 grams had higher levels of self-compassion than mothers whose baby's birth weight was lower.

In our study, It was determined that the total SCS score was statistically significantly higher in the mothers of enteral fed babies and enteral+parenteral fed babies than in the mothers of the babies who were fed parenterally only. In our study, it can be thought that mothers' contact with their babies and their participation in treatment improves self-compassion. Rosenbaum *et al*[30] found that there was no difference in self-compassion between mothers who experienced nutritional inconsistency and those who did not. On the other hand, in their study, Mahurin-Smith and Beck[31] found that mothers' self-compassion levels were negatively related to stress status and feeding

problems of the baby. Mitchell et al[32] found that as the level of self-compassion increased in newborn mothers with breastfeeding difficulties, the level of stress decreased, indicating subjective breastfeeding experience as well as overall satisfaction with breastfeeding.

In our study, it was determined that higher SCS total scores the mothers of babies whose babies were followed up with the diagnosis of pneumonia were statistically significantly higher than the mothers of babies who were followed up with hyperbilirubinemia, sepsis, and other diagnoses (malnutrition, hydrocephalus, COVID positive, etc.) and the mothers of babies who received oxygen were statistically significantly higher than the mothers of babies who did not receive oxygen. This result is consistent with the higher level of self-compassion in mothers who did not have health problems during birth and pregnancy. Muramoto et al[27] found in their study that mothers whose babies did not have a medical problem after birth had a statistically higher level of self-compassion compared to those whose babies did.

Below, the results of the relationship between the characteristics of the mother and baby and the total score of Severity of Acute Stress Symptoms Scale were discussed. Acute Stress Disorder has been suggested to be an important predictor of post-traumatic stress disorder in mothers[33-34]. In our study, the mean total NSESSS score was significantly higher in illiterate mothers than in literate ones. Previous studies have identified low educational level as a risk factor for mental disorders[35-37]. It was determined that the mean NSESSS score was statistically significantly higher for those living in extended families than for those living in nuclear families and for those living in villages compared to those living in the city center. In a study conducted in Gahana, it was determined that common mental illnesses were frequently seen in mothers of babies receiving treatment in the neonatal intensive care unit. Accordingly, living in an urban area was determined as a protective factor for mental illnesses[37]. Kaya &Akdogan[38] determined in their study that the psychological well-being of the mothers who had their babies in the NICU was lower than those living in the village compared to those living in the city. The low accessibility of those living in extended families and villages compared to those living in the city center may have affected the study results. It should also be considered that mothers living in extended families take on more than one role. In subsequent studies, an evaluation of accessibility is recommended. In our study, the mean total NSESSS score was significantly higher in those who had health problems during pregnancy and those who experienced miscarriage. Previous studies have identified that those who had health problems in pregnancy had higher NSESSS scores than those who did not[39-41]. In our study, It was determined that there was a statistically significant difference between the birth weight of the baby and the with the NSESSS total score of the mothers, and the difference disappeared between the groups. As the mother or parent of a baby with low birth weight has been associated with high stress levels in many studies[42-43]. In the current study, it was determined that the NSESSS total score was statistically higher in mothers whose babies were enteral+parenterally fed than in mothers whose babies were enterally fed and in mothers. It was determined that the NSESSS total score was statistically higher in mothers whose babies were diagnosed with other diagnoses (malnutrition, hydrocephalus, COVID-19) than in those whose babies were diagnosed with hyperbilirubinemia. Mothers' subjective experiences with childbirth and breastfeeding are important in understanding the early mother-infant relationship. In a study by Whittingham & Mitchell, breastfeeding difficulties, negative subjective childbirth, and breastfeeding experiences were associated with poorer psychological resilience, lower self-compassion, and lower emotional accessibility[18]. It was determined that there was a statistically significant and positive relationship between the duration of the infant's hospital stay and the total score of the mothers in NSESSS. Accordingly, it can be said that as the length of hospital stay increases, the severity of acute stress symptoms also increases. The effect of hospital stay on anxiety and stress has also been demonstrated in other studies[38,44].

Conclusion

The impact of premature babies being admitted to the Neonatal Intensive Care Unit on mothers' mental health is a global problem.[37,45] It was determined that

there was a statistically significant difference between the mothers' level of education, occupation, place of residence, presence of a helper in the family, the gestational week, the status of having health problems during pregnancy and at birth, the type of delivery, the number of live births, the status of miscarriage, the communication with the nurse, the baby's birth weight and diagnosis, the status of being connected to a ventilator, the type of feeding and the total score of Self-Compassion Scale ($p<0.05$). It was determined that there was a statistically significant difference between the mothers' level of education, the status of having health problems during pregnancy, the type of family, place of residence, the status of miscarriage and the total score of Severity of Acute Stress Symptoms Scale ($p<0.05$). In the same time this study showed that the relationship between self-compassion and acute stress symptoms in mothers with an baby in the NICU. Mothers who live in rural areas and have health problems during pregnancy need more support. Psychosocial support should be provided to vulnerable mothers. Primary care nurses should be aware of self-compassion can shape and empower people as they struggle through these difficult situations.

Limitations

The current study had some limitations. When examining the results of this study, it should be considered that the study is descriptive and relationship-seeking. However, descriptive and relationship-seeking studies cannot make causal inferences. The data were based on participants' self-reports. While self-report questionnaires are a valuable method of psychological research, relying on such questionnaires alone is a limitation, as a potential for subjective bias exists. This is a hospital-based study and the findings cannot be generalized to a larger population

Acknowledgement

This study is derived from Author, Burhan AK's master's thesis.

Conflict of interest statement

No potential conflict of interest was reported by the authors.

Funding

The author(s) reported that they received no funding for this study.

Authors' contributions

Study design: BA and FKS. Data collection: BA Data analysis: FKS. Study supervision: FKS. Manuscript writing: BA and FKS. Critical revisions for im-portant intellectual content: FKS and BA.

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