

Araştırma Makalesi– Research Paper

**VALIDITY AND RELIABILITY OF THE TURKISH VERSION OF THE NURSES’
ASSESSMENT OF QUALITY SCALE – ACUTE CARE VERSION: A
METHODOLOGICAL STUDY**

**HEMŞİRELERİN KALİTE DEĞERLENDİRME ÖLÇEĞİ – AKUT BAKIM
VERSİYONUNUN TÜRKÇE GEÇERLİK VE GÜVENİLİRLİĞİ: METODOLOJİK
BİR ÇALIŞMA**

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Özet

Bu metodolojik çalışmanın amacı, Hemşirelerin Kalite Değerlendirme Ölçeği-Akut Bakım Versiyonu (HKDÖ-ABV) Türkçe'ye uyarlayarak geçerlik ve güvenilirliğini test etmektir. Araştırma, 1 Ocak-31 Mart 2016 tarihleri arasında Türkiye'nin güneyinde yer alan bir ildeki bir tıp fakültesi hastanesi, iki devlet hastanesi ve bir özel hastane hastanede gerçekleştirilmiştir. Araştırmaya, ilgili hastanelerin dahiliye, cerrahi ve obstetri kliniklerinde çalışan 427 hemşire dahil edilmiştir. Verilerin toplanmasında “Hemşire Tanıtım Formu ve HKDÖ-ABV kullanılmıştır. HKDÖ-ABV'nin geçerlik analizinde dil, kapsam, yapı analizi ve iç tutarlılık güvenilirlik analizi kullanılmıştır. HKDÖ-ABV Türkçe formu 3 bölüm ve 8 alt boyutu olan toplam 77 maddeden oluşmaktadır. Ölçeğin alt boyut Kaiser-Mayer-Olkin değerleri 0.775-0.948 arasında değişmiş ve Bartlett testi sonucu $p<0.001$ olarak belirlenmiştir. Ölçeğe ait Doğrulayıcı Faktör Analizi uyum indeksleri istenen değer aralıklarındadır. Ölçeğin Cronbach's Alpha değerleri 0.814-0.960 olarak elde edilmiştir. Yapılan geçerlik ve güvenilirlik analizi sonucunda HKDÖ-ABV Ölçeğinin Türkçe formunda orijinal ölçekte yer alan maddelerden çıkarılma işlemi yapılmamıştır. Sonuç olarak; HKDÖ-ABV Türkçe formunun Türk toplumu için geçerli ve güvenilir bir ölçüm aracı olduğu belirlenmiştir. Ölçeğin, farklı gruplarda kullanılarak tekrar test edilmesi önerilebilir.

Anahtar Kelimeler: Hemşire, Bakım, Kalite, Geçerlik-Güvenirlik, HKDÖ-ABV

Abstract

This is a methodological study that aims to adapt the Nurses' Assessment of Quality Scale – Acute Care Version (NAQS-ACV) to the Turkish context, as well as to test its validity and reliability. The study was conducted in one medical faculty hospital, two public hospitals, and one private hospital in a city located in the southern part of Turkey between the 1st of January and 31st of March 2016. The study included 427 nurses who worked in the internal diseases, surgery, and obstetric clinics of the related hospitals. Data were collected through the Nurse Information Form and NAQS-ACV. While the validity analysis of the NAQS-ACV included language, scope, and construct analysis, reliability analysis included internal consistency reliability analysis. The 77-item Turkish version of the NAQS-ACV was composed of 3 sections and 8 sub-scales. Sub-scale Kaiser-Mayer-Olkin values of the scale ranged between 0.775 and 0.948, and the Bartlett test result was found $p<0.001$. Confirmatory Factor Analysis fit indices of the scale were in an acceptable range. Cronbach's alpha values of the scale were found 0.814 -0.960. No items in the original scale were excluded from the scale as a result of the reliability and validity analyses of the Turkish form of the NAQS-ACV Scale. In conclusion, the Turkish form of the NAQS-ACV scale was found to be a valid and reliable measurement tool. It is recommended to conduct the test-retest analysis of the scale in different groups.

Keywords: Nurse, Care, Quality, Quality Scale, Validity-Reliability



1. INTRODUCTION

Care is a multidimensional phenomenon that starts with the existence of humanity; has become a fundamental part of human growth and development and continues lifelong for every individual; and has subjective and ethical sides (Potter et al, 2016; Karaca & Durna, 2018, pp. 16-23; Blasdell, 2017, pp. 1-5; Yorke, 2016; Mororo et al., 2017, pp. 323-332; Church et al., 2016, pp. E9-E14). In the general sense, care includes assistive, supportive, and facilitative actions to improve an individual's condition or lifestyle (Karaca & Durna 2018, pp.16-23; Gul, 2019, pp. 129-134). As stated in some studies, according to Leininger, general care and professional care are different from each other. Professional care is defined as cognitively and culturally learned behaviors, techniques, processes, or patterns that enable to improve and maintain the health status or lifestyle of individuals, families, or societies (Blasdell, 2017, pp. 1-5; Yorke, 2016; Mororo et al., 2017, pp. 323-332). This concept that we use in our daily life mainly to name or qualify something without thinking of its conceptual content is an original concept for nursing and an occupation that is pursued professionally mainly by nurses (Karaca & Durna, 2018, pp. 16-23; Gül, 2019, pp. 129-134).

Evaluating individuals' physiological, emotional, mental, and social health needs as a whole, nursing care enables to help sick or healthy individuals and maintain their well-being, and is a multidimensional practice containing interpersonal relationships and communication (Karaca & Durna, 2018, pp. 16-23; Blasdell, 2017, pp. 1-5; Gul, 2019, pp. 129-134; Kol, 2017, pp.163-172). Recent health-related developments experienced in information and technology have brought the need for increasing individuals' education level, having individuals who have become more active in their care, and defining and evaluating the quality of the service provided. One of the most important indicators of the assessment of the quality of care is patient satisfaction with the care services provided (Karaca, & Durna, 2018, pp. 16-23; Gul, 2019, pp. 129-134; Kol, 2017, pp. 163-172; Costello, 2017, pp. 62-66) Several studies in the literature have evaluated patient satisfaction and patient perception in assessing the quality of nursing care. These studies have assessed the quality of nursing care by patients, and in line with the results, they recommended forming a standard quality of care (Ozturk et al., 2020, pp. 12-18; Costello, 2016, pp. 62-66; Kol et al., 2017, pp. 163-172; Akbas, 2020, pp. 127-136; Koy et. al., 2015, pp. 1824-1836). Karaca, & Durna (2018) reported that the majority of the patients reported that they found the nursing care provided in the hospital sufficient, and perceptions about the quality nursing care were found to be higher in patients who found the nursing care sufficient. Karaman Ozlu & Uzun (2015) reported that 37.7% of the patients assessed the nursing care they received as "very good", 45.3% as "good", and 0.8% as "very poor". Folami and Odeyemi (2019) reported that satisfaction with the quality nursing care was "excellent" to the majority of the patients throughout their hospitalization. Gishu et al. (2019) reported that patients' perceptions about the quality nursing care were not sufficiently satisfying; Hussami et al. (2017) reported that quality nursing care and stated that patients' perception levels were low. Kewi et al. (2018) reported that patients' perception levels about quality nursing care were low.



Increasing the quality of nursing care; reduces the length of hospital stay of patients, increases the rate of recovery, prevents treatment-related complications/side effects, when they develop, they are detected and treated early, and mortality rates and care costs decrease (Buber & Baser, 2012, pp. 265-274; Demirtas et al., 2014, pp. 1-6; Elayan & Ahmad, 2017, pp. 369-374). Providing quality nursing care will contribute to increasing the motivation, job satisfaction and satisfaction of nurses as well as patient outcomes and contribution to the institution (Cinar, 2019, pp. 69-75; Yilmaz & Kandemir, 2019, pp. 241-254).

Nursing care is a multidimensional concept. There is a constant interaction between the patient and the nurse. Therefore, it is stated that in the planning of interventions to improve the quality of care, not only the perception of the quality of care of the patients, but also the perception of the quality of care of the nurses should be evaluated (Aiken et al., 2008, pp. 223-229; Hanrahan & Aiken, 2008, pp. 210-217; Aiken et al, 2013, pp. 143-153; Stimpfel & Aiken, 2013, pp. 122-129; Al-Hamdan et al., 2019, pp. 1-6). Studies have shown that nurses generally evaluate the quality of nursing care provided to patients in their units as moderate/poor between 11.4% and 47% (Aiken et al., 2001, pp. 43-53; Aiken et al., 2002, pp. 187-184; Aiken et al., 2013, pp. 143-153). In the study of Al-Hamdan et al. (2019), nearly half of the nurses evaluated the quality of care in their units as moderate. In the study of Stimpfel & Aiken (2013), 19% of the nurses working in the service and 12% of the nurses working in the intensive care unit evaluated the quality of care as bad. In a qualitative study with nurses by Molina-Mula & Gallo-Estrada (2020), it was determined that the patient did not have autonomy, that nurses preferred obedient patients, and described patients as good patients and bad patients. Kavaslar (2021) reported that nurses' perceptions of individualized care in general and last shift were higher than the average.

A measurement tool to be used in assessing the quality of nursing services should be as comprehensive as possible. It is not possible to improve something that is not measured or assessed, so measurement of the quality of care is one of the topics to be given importance in health institutions. Care is a process pursued with the nurse's skills, behaviors, and knowledge in the nurse-patient relationship. Therefore, nurses' nursing knowledge, discipline, efficiency in practice, and role in the care process are highly important for the assessment of the quality of nursing care (Karaca & Durna, 2018, pp. 16-23; Gul, 2019, pp. 129-134; Blasdell, 2017, pp. 1-5). In addition, the assessment and improvement of the quality of care and considering views and thoughts of nurses as well as patients are believed to improve the quality of nursing care and make it standard in health services.

In our country, there are scales such as Individualized Care Perception Scale (Nurse Version), Nurses' Care Quality Assessment Scale, Nursing Job Index-Nursing Work Environment Assessment Scale, which evaluate the quality of nursing care given to patients by nurses (Göktepe et al., 2021 pp. 139-147; Kavaslar, 2021). The evaluation of nursing care quality and the factors affecting it by nurses is an evaluation that should be made periodically in order to increase the quality of nursing care and patient satisfaction. Although there are



studies and assessment tools on this subject in our country, it is predicted that the NAQS-ACV assessment tool, whose validity and reliability we have done for the Turkish society, will contribute to the multidimensional evaluation of the quality of nursing care.

In this study, the Nurses' Assessment of Quality Scale – Acute Care Version (NAQS-ACV) was adapted to the Turkish nurses and its validity and reliability were tested.

2. METHODS

2.1. Study Design

This is a methodological study that aims to adapt the NAQS-ACV scale to the Turkish nurses, as well as to test its validity and reliability.

2.2. Target population and the sample

The study was conducted between the 1st of January and the 31st of March 2016. The target population of the study was nurses who worked in the internal diseases, general surgery, and obstetric clinics of 1 medical faculty hospital, 2 public hospitals, and 1 private hospital in a city located in the southern part of Turkey. The original form of the NAQS-ACV scale had 77 items. The recommended sample size for methodological studies is reported to be 5-10 times higher than the number of items in the scale (Yurdagul, 2005, pp. 771-774). In line with this information, the sample size was determined a minimum of 385 nurses. The study included 427 nurses who worked in the internal diseases, surgery, and obstetric clinics of the related hospitals and who agreed to participate in the study.

2.3. Data Collection Tools

Data were collected through the “Nurse Information Form” developed by the researchers and “Nurses' Assessment of Quality Scale – Acute Care Version (NAQS-ACV)”, reliability and validity of which were performed in this study (Lynn et al., 2007, pp:328-336)

2.3.1. Nurse information form

The Nurse Information Form includes questions regarding participating nurses' socio-demographic and professional life characteristics. While the socio-demographic characteristics part included questions about the participants' gender, age, marital status, having children, and education level, the professional life characteristics part included questions about performing the profession willingly, working willingly, and duration and type of working.

2.3.2. Nurses' assessment of quality scale – acute care version

The 4-point type scale was developed by Lynn, McMillen and Sidani (2007, pp. 328-336) to enable nurses to assess the quality of the care they provide to patients. The scale is composed of 77-item, 3 sections and 8 sub-scales. The first section, which evaluates the relationship between nursing care and nurse-patient, consists of 45 items, the second part, which



evaluates the suitability of the working environment for acute patient care, consists of 21 items, and the third part, which evaluates the personal characteristics of nurses, consists of 11 items. NAQS-ACV Scoring of the 4-point Likert scale was done as “-1=I strongly disagree, -2=I disagree, 1=I agree and 2=I strongly agree”. There is no reverse item in the scale. The sub-scales included vigilance, advocate, individualization, interaction, work environment, unit collaboration, characteristics, and mood. The scale was composed of three sections: vigilance, individualization, advocate, and interaction are in the first section; work environment and unit collaboration are in the second section; and characteristics and mood are in the third section. Three sections of the scale can be used together, or a section or two sections can be used together depending on the purpose. Each section is evaluated by scoring separately. (Lynn et al., 2007, pp. 328-336).

The NAQS-ACV enables nurses to determine the quality of care in various situations. Besides, the items enable to make an external evaluation of nurses' performance. Through the NAQS-ACV, the quality of care is evaluated at various points in time and in various systems (Lynn et al., 2007, pp. 328-336). Cronbach's alpha values of the original scale were found to range between 0.74 and 0.94 (Lynn et al., 2007, pp. 328-336). In our study, Cronbach's alpha values of the scale were found between 0.814 and 0.960 (for three sections and sub-dimensions of three sections).

2.4. Analysis of the data

Data were analyzed on the computer using suitable analysis methods in the “Statistical Package for Social Sciences” (SPSS) for Windows 20.0 statistical package program and “Analysis of Moment Structures” (AMOS) 22.0 program. Study data were analyzed using descriptive statistical analysis methods (means, standard deviation, frequency); Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) for the construct validity; Cronbach's alpha analysis for the internal consistency for reliability; and Pearson correlation analysis for item-total score correlation (Alpar, 2016).

2.5. Ethics Statement

Ethics committee approval was obtained from the Ethics Committee of Medical Faculty Non-invasive Clinical Studies Ethics Committee (3 July 2015/44). It was conducted in accordance with the principles of the Declaration of Helsinki. The permission of the relevant hospitals and informed consent of the participants were also obtained. The author's permission was obtained for the use of the PAQS-ACV.

3. RESULTS

The average age of participating nurses was 31.35 ± 8.57 . Of all the participants, 92% (n=393) were females, 56.9% were married, and more than half of them had an education level of university and above. Besides, 58.2% had a working duration of 6 years and more, 74.2% worked in both day and night shifts, and 77.3% performed their profession willingly (Table 1).



Table-1: Findings about the Participants' socio-demographic and professional characteristics

Characteristics	n	%
Gender		
Female	393	92.0
Male	34	8.0
Marital Status		
Single	184	43.1
Married	243	56.9
Having Children		
No	160	43.8
Yes	205	56.2
Education		
Vocational School of Health	80	18.7
Associate degree program	102	23.9
Undergraduate	225	52.7
Postgraduate	20	4.7
Duration of working as a nurse		
5 years and less	178	41.7
6-15 years	131	30.6
16 years and over	118	27.6
Wanting the nursing profession		
Yes	330	77.3
No	97	22.7
Type of working		
Day shift	84	19.7
Night Shift	26	6.1
Both	317	74.2

In line with the regulations determined for the intercultural adaptation, the scale was translated from English to Turkish by two experts, one in the English Language Teaching and one in the Nursing field for enhancing language validity (Beaton et al., 2000). After consensus was reached by the researcher and two translators, back translation of the scale from Turkish to English was performed by two different experts. The newly formed English version was sent to the person who developed the original scale, and the Turkish form was revised in line with the suggestions of the experts to give its final form.

For content validity, the Turkish version of the form was sent to 9 experts, who were asked to evaluate each statement by indicating one of the options as completely appropriate (4), appropriate (3), partly appropriate (2), and not appropriate (1). The experts were asked to evaluate how the items are expressed, if the items are clear and comprehensible and if the items are ambiguous. Content validity index (CVI) according to the item evaluations of 9 experts was found 0.945. The scale was revised in line with the expert opinions (minor word changes), and

the scale was piloted with 20 individuals. The nurses who were included in the pilot study were not included in the research sample (Figure 1).

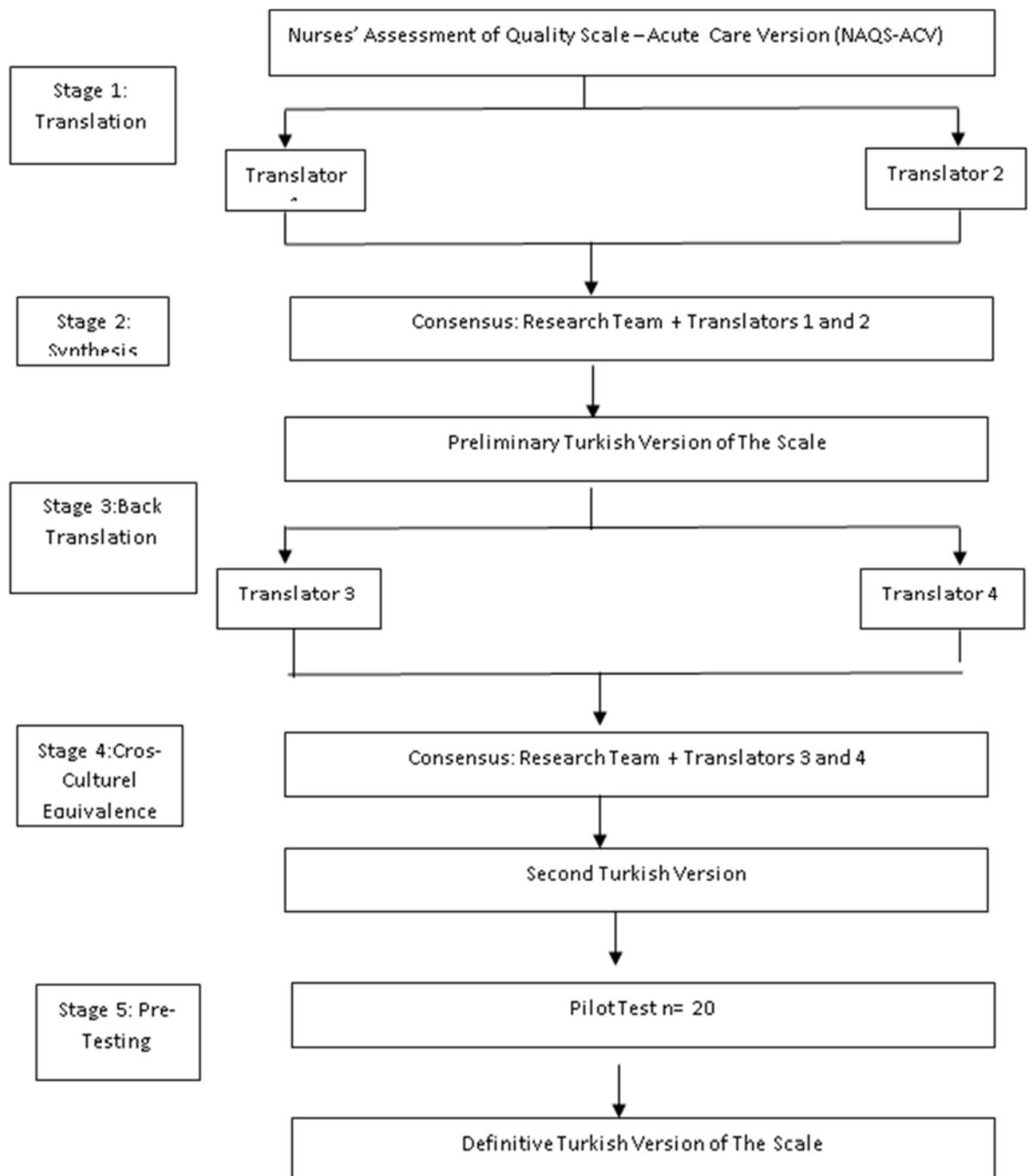


Fig. 1. Process of translation, back-translation, and cultural adaptation of the Turkish version of the Nurses' Assessment of Quality Scale – Acute Care Version (NAQS-ACV).

Exploratory and confirmatory factor analyses were utilized for the construct validity analysis of the scale. The NAQS-ACV Scale is composed of 3 sections and 8 sub-scales. The first section includes 4 sub-scales (interaction, vigilance, individualization, advocate) and 45 items; the second section includes 2 sub-scales (work environment, unit collaboration) and 21 items; and the last section includes 2 sub-scales (personal characteristics, mood) and 11 items. Table 2 demonstrates factors, the number of items, loadings, mean inter-item correlations, and reliability estimates within the 3 sections of the NAQS-ACV. Sub-scale KMO values of the scale ranged between 0.775 and 0.948, and the Bartlett test result was found $p < 0.001$ (Table 2).

Table-2. Factors, number of items, loadings, mean inter-item correlations and reliability estimates within the sections of the NAQS-ACV

Factor Name	Number of items	KMO	TVE	Loadings	Mean inter-item correlations	Reliability*
Section 1						
Interaction	19	0.948	59.869	0.557-0.844	0.572	0.960
Vigilance	10	0.898	52.744	0.549-0.824	0.470	0.894
Individualization	6	0.820	57.405	0.700-0.803	0.487	0.845
Advocate	10	0.908	55.790	0.607-0.843	0.504	0.908
Section 2						
Work environment	12	0.896	51.887	0.240-0.824	0.454	0.909
Unit collaboration	9	0.902	63.587	0.766-0.818	0.590	0.928
Section 3						
Personal characteristics	7	0.855	54.067	0.482-0.820	0.453	0.814
Mood	4	0.775	73.906	0.789-0.906	0.650	0.882

KMO: Kaiser-Meyer-Olkin Measure of Sampling Adequacy, TVE: Total Variance Explained, *Cronbach's Alpha

Figure 2 displays the PATH diagram of the factor structure obtained from the results of the confirmatory factor analysis regarding the sections of the NAQS-ACV. Path coefficients belonging to all the items in Section 1 were found to be statistically significant ($p < 0.001$). Model fit indices as a result of the analysis were found as CMIN= 3655.003, DF= 933, $p < 0.001$, RMSEA= 0.083, GFI= 0.705, AGFI= 0.673, CFI=0. 822 and TLI=0. 812. Path coefficients belonging to all the items in Section 2 were found to be statistically significant ($p < 0.001$). Model fit indices as a result of the analysis were found as CMIN=794.572 DF=183, $p < 0.001$, RMSEA= 0.089, GFI= 0.853, AGFI= 0.814, CFI= 0.814 and TLI= 0.883). Path coefficients belonging to all the items in Section 3 were found to be statistically significant ($p < 0.001$). Model fit indices as a result of the analysis were found as CMIN=185.847, DF=39, $p < 0.001$, RMSEA= 0.094, GFI= 0.922, AGFI= 0.868, CFI= 0.944 and TLI= 0.921 (Figure 2).

Cronbach's alpha values of the scale were found between 0.814 and 0.960. As a result of the reliability and validity analysis of the Turkish form of the NAQS-ACV Scale, no items in the original scale were removed (Figure 2).

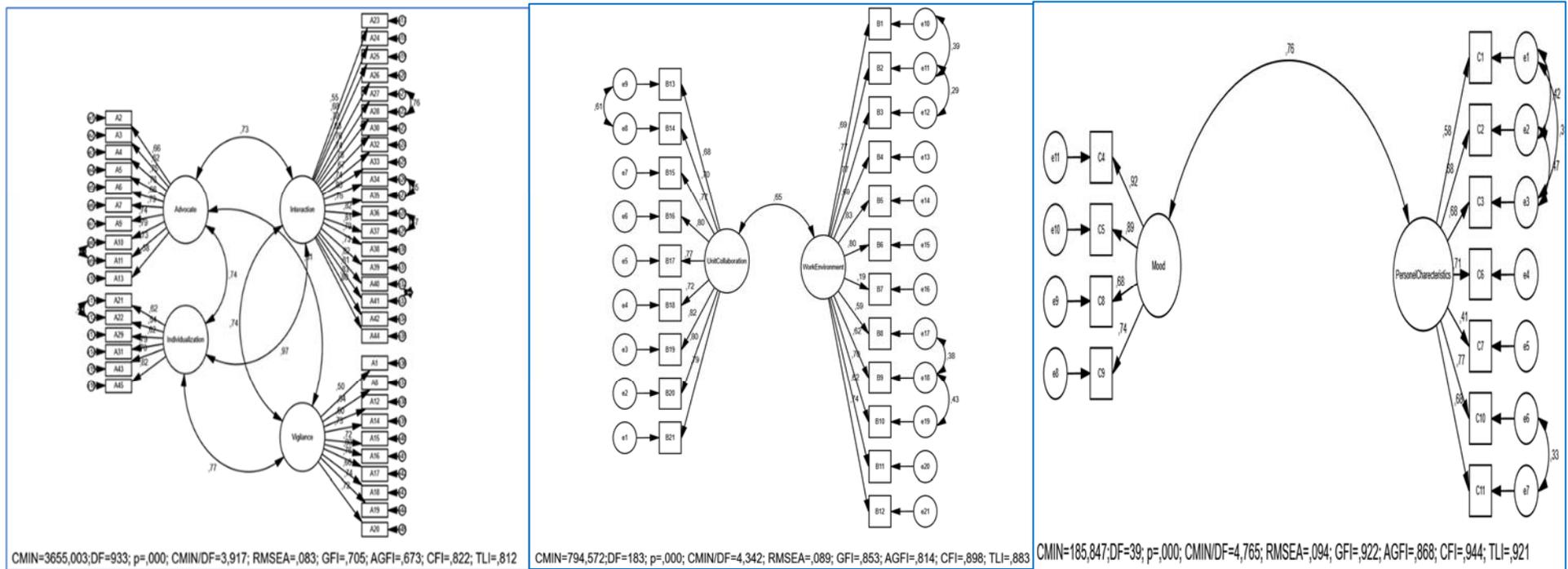


Fig. 2. Confirmatory factor analysis of the sections of NAQS-ACV

4. DISCUSSION

Turkish form of the NAQS-ACV scale was found to be an appropriate tool in terms of language and content validity (Yurdagül, 2005, pp. 771-774). There is a need for evidence for the content validity of the scale and the items on it. In nursing studies, the content validity index (CVI) based on expert ratings could provide this evidence for multi-item scales. The validity of the scale is supported by expert reviews on the issue (Polit & Beck, 2006, pp. 489-497; Tavsancil, 2014). CVI value of the scale was found 0.945 according to the scale item assessments of 9 experts for content validity, indicating that the scale has sufficient content validity according to the literature. The original NAQS-ACV was developed based on qualitative interviews conducted by nurses working in acute care units. Appropriate to language and content validity, items formed by reviewing the qualitative data were converted to quantitative data through two phases by an evaluation panel of 6 nurses who were not interviewed. Nurses confirmed these items as the comprehensive and accurate descriptors of good nursing care (Lynn et al., 2007, pp. 328-336).

This study found that the sub-scale KMO values of the scale ranged between 0.775 and 0.948. These values indicate that the sample size was sufficient for factor analysis (Alpar, 2016). Besides, the Barlett test result of the NAQS-ACV Scale was found $p < 0.001$ in this study. These findings indicate that the data are appropriate for factor analysis (Alpar, 2016).

Lynn et al. (2007, pp. 328-336) stated that nurses who actively worked in patient care services became a source in the formation of items throughout the process. They stated that nurses whose further views were received also confirmed the items in the scale unanimously, but since quality nursing care also contains patient outcomes, they stated that the construct validity of the scale is not easy to evaluate (Lynn et al., 2007, pp. 328-336).

EFA results of the original scale were found 51% in the first section that is composed of 45 items, 43% in the second section that is composed of 21 items, and 55% in the third section that is composed of 11 items (Lynn et al., 2007, pp. 328-336). The explained variance of the scale in this study was found 52% to 59% in the first section, 51% to 63% in the second section, and 54% to 73% in the third section. In line with the literature, the explained variance was found to be at a sufficient level according to EFA findings in this study, indicating similarity with the original scale (Alpar, 2016; Lynn et al., 2007, pp. 328-336).

Since the questions in each section are very different, three parts of the scale were analyzed separately as in the original scale (Figure 2). Factor loads of the confirmatory factor analysis of the original scale were found to range between 0.45 and 0.83 (Lynn et al., 2007, pp. 328-336). This study found the factor loads of the NAQS-ACV scale as a result of CFA between 0.24 and 0.90. Besides, fit indices of the scale were calculated as RMSEA=0.83 GFI=0.705, AGFI= 0.673, CFI=0,822 in the first section; RMSEA= 0.089, GFI=0.853, AGFI= 0.814, CFI=0.898 in the second section; and RMSEA= 0.094, GFI=0.922, AGFI= 0.868, CFI=0.944 in the third section (Figure 2). These findings indicate that the tool had appropriate fit index values and met the construct validity of the scale (Celik & Yilmaz, 2016, pp. 23-51; Capik, 2014, pp. 196-205).

Each item in the scale was positive and the item-total mean correlations of all the items were higher than 0.20, so none of the items were excluded from the scale, and the item-total correlations of all the items were found to be sufficient (Alpar, 2016) (Table 2). Cronbach's alpha values of the NAQS-ACV scale developed by Lynn et al. (2007, pp. 328-336) were



reported to be between 0.74 and 0.94 (Lynn et al., 2007, pp. 328-336). This study found Cronbach's alpha values of the Turkish form of the NAQS-ACV scale between 0.814 and 0.960 (Table 2). These results indicate that the NAQS-ACV scale is highly reliable (Alpar, 2016).

5. CONCLUSION

Psychometric analyses of the scale in which nurses assess the care provided by them showed that the NAQS-ACV scale is a valid and reliable tool for Turkish society. Reliability and validity analyses could be performed with other samples from different groups. Studies on the perceptions of patients and nurses about the quality of care and the affecting factors could enable to provide and maintain qualified nursing care. In addition, the studies on the assessment of the quality of care in the literature included mainly tools that evaluated patients' perceptions of the quality of care. Hence, this scale that evaluates nurses' perceptions about the care they provide could be translated into other languages to enable comparisons of the results at an international level.

6. REFERENCES

- Aiken, L.H., Clarke, S.P., Sloane, D.M., Sochalski, J.A., Busse, R., & Clarke, H. et al. (2001). Nurses' reports on hospital care in five countries. *Health affairs*, 20(3), 43-53.
- Aiken, L.H., Sermeus, W., Van den Heede, K., Sloane, D.M., Busse, R., & Mc Kee, M. et al. (2012). Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *Journal of Bmj*, 344, e1717. 89
- Aiken, L.H., Clarke, S.P., & Sloane, D.M. (2002). Hospital staffing, organization, and quality of care: Cross-national findings. *Nurs Outlook*, 50(5), 187-194.
- Aiken, L.H., Clarke, S.P., Sloane, D.M., Lake, E.T., & Cheney, T. (2008). Effects of hospital care environment on patient mortality and nurse outcomes. *J Nurs Adm*, 38(5), 223-229. doi:10.1097/01.NNA.0000312773.42352.d7
- Aiken, L.H., Sloane, D.M., Cimiotti, J.P., Clarke, S.P., Flynn, L., & Seago, J.A. et al. (2010). Implications of the California nurse staffing mandate for other states. *Health services research*, 45(4), 904-921.
- Aiken, L.H., Sloane, D.M., Bruyneel, L., Van den Heede, K., Sermeus, W., & Consortium, R. (2013). Nurses' reports of working conditions and hospital quality of care in 12 countries in Europe. *Int J Nurs Stud*, 50(2), 143-153.
- Akbas, M. (2019). Patient satisfaction on nursing care: the case of gynecology and obstetrics clinics. *Acta bioethica*, 25(1), 127-136. <http://dx.doi.org/10.4067/S1726-569X2019000100127>
- Al-Hamdan, Z., Smadi, E., Ahmad, M., Bawadi, H., & Mitchell, A.M. (2019). Relationship between control over nursing practice and job satisfaction and quality of patient care. *J Nurs Care Qual*, 34(3), 1-6. doi: 10.1097/NCQ.0000000000000390
- Al-Hussami, M., Muwafaq, A.M., Sawsan, H., Mahmoud, M., & Muhamad, D. (2017). Patients' perception of the quality of nursing care and related hospital services. *Health and Primary Care*, 1(2), 1-6.



Alpar, C. (2016). Applied statistics and validity and reliability with examples from sports, health and education sciences. Ankara: Detail Publishing.

Blasdell, N.D. (2017). The meaning of caring in nursing practice. *Int J Nurs Clin Pract*, 4(238), 1-5. <https://doi.org/10.15344/2394-4978/2017/238>

Buber, R., & Baser, H. (2012). Customer satisfaction in health enterprises: an application in a foundation university hospital. *Journal of Social and Human Sciences*, 4(1), 265-274.

Burhans, L.M., & Alligood, M.R. (2010). Quality nursing care in the words of nurses. *Journal of advanced nursing*, 66(8), 1689-1697.

Capık, C. (2016). Use of confidential factor analysis in validity and reliability studies. *Anatolian Journal of Nursing and Health Sciences*, 17(3):196-205.

Celik H. E., & Yilmaz V (2016). *Structural Equation Modeling*. 3rd Ed. Ankara, Turkey: Anı Publishing, 23-51.

Church, C.D. (2016). Defining competence in nursing and its relevance to quality care. *Journal for Nurses in Professional Development*, 32(5), E9-E14. doi: 10.1097/NND.0000000000000289

Cinar, I. (2019). Nursing and Health Economic. *Journal of Izmir Katip Celebi University Faculty of Health Sciences*, 4(2), 69-75.

Costello, M. (2017). Nurses' Self-Identified Characteristics and Behaviors Contributing to Patients' Positive Perceptions of Their Nursing Care: A Qualitative Study. *Journal of Holistic Nursing*, 35(1), 62-66. 10.1177/0898010116643835

Demirtas, U., Ozturk, G., & Ozden, A. (2014). A Historical Survey of Military Health Services: The Crimean War and Florence Nigtingale., *TAF Preventive Medicine Bulletin*, 13(1), 1-6. doi:10.5455/pmb 1-1379188835

Elayan, R.M., & Ahmad, M.M. (2017). Assessment of the quality of nursing care from perspectives of nurses who experienced hospitalization as patients. *J Nurs Care Qual*, 32(4), 369-374.

Folami, O.A., & Odeyemi, O. (2019). Assessment of patient satisfaction with nursing care in selected wards of the Lagos University Teaching Hospital (Luth). *Biomedical Journal of Scientific & Technical Research*, 17(1), 124, 89–97.

Gishu, T., Weldetsadik, A.Y., & Teklea, A.M. (2019). Patients' Perception of quality of nursing care; a tertiary center experience from Ethiopia. *BMC Nursing*, 18, 1–6.

Goktepe, N., Turkmen, E., Fener, I., Yalcın, B., & Sarikose, S. (2021). The effect of nurses' individual, professional and work environment characteristics on their perception of quality of nursing care. *Journal of Health And Nursing Management*, 2021;8(2):139-147. doi:10.5222/SHYD.2021.54366

Gul, S. (2019). Nursing care in the light of care concept and affecting factors. *ACU Sağlık Bil Derg*, 10(2), 129-134. <https://doi.org/10.31067/0.2019.134>



Hanrahan, N.P., & Aiken, L. H. (2008). Psychiatric nurse reports on the quality of psychiatric care in general hospitals. *Quality Management in Health Care*, 17(3), 210–217. <https://doi.org/10.1097/01.QMH.0000326725.55460.af>

Karaca, A., & Durna, Z. (2018). Nursing Care Quality and Associated Factors. *Health and Society*, 28(3), 16-23.

Karaca, A., & Durna, Z. (2018). Nursing care quality and associated factors. *Health and Society Journal*, 3, 16–23.

Karaman-Ozlu, Z., & Uzun, O. (2015). Evaluation of satisfaction with nursing care of patients hospitalized in surgical clinics of different hospitals. *International Journal of Caring Sciences*, 8(1), 19–24.

Kavaslar, I. (2021). The Relationship Between Nurses' Perceptions of Individualized Care and Quality of Care and Working Characteristics. Istanbul University-Cerrahpaşa Graduate Education Institute, Department of Nursing Management. Master Thesis. Istanbul.

Kewi, S.Y., Tesem, A.A., & Negussie, B.B. (2018). Patient's perception towards quality of nursing care in inpatient department at public hospitals of Benishangul Gumuz Regional State, North West Ethiopia." *Journal of Nursing Care Quality*, 7(4), 1–10.

Kol, E., Geckil, E., Arıkan, C., İlter, M., Özcan, O., Sakırgun, E., ... & Uslular, E. (2017). Investigation of nursing care perception in Turkey. *Acibadem University Journal of Health Sciences*, 8, 163-72.

Koy, V., Yunibhand, J., Angsuroch, Y., & Fisher, M.L. (2015). Relationship between nursing care quality, nurse staffing, nurse job satisfaction, nurse practice environment, and burnout: literature review. *International Journal of Research in Medical Sciences*, 3(8), 1825-1831. DOI: <http://dx.doi.org/10.18203/2320-6012.ijrms20150288>

Lynn, M.R., McMillen, B.J., & Sidani, S. (2007). Including the provider in the assessment of quality care: development and testing of the Nurses' assessment of quality scale—acute care version. *Journal of Nursing Care Quality*, 22(4), 328-336. doi: 10.1097/01.NCQ.0000290414.42640.c0

Molina-Mula, J., & Gallo-Estrada, J. (2020). Impact of nurse-patient relationship on quality of care and patient autonomy in decision-making. *International Journal Of Environmental Research And Public Health*, 17(3), 835.

Mororo, D.D.D.S., Enders, B. C., Lira, A.L.B.D.C., Silva, C.M.B.D., & Menezes, R.M.P.D. (2017). Concept analysis of nursing care management in the hospital context. *Acta paulista de enfermagem*, 30, 323-332. <https://doi.org/10.1590/1982-0194201700043>

Ozturk, H., Demirsoy, N., Sayligil, O., & Florczak, K.L. (2020). Patients' perceptions of nursing care in a university hospital. *Nursing Science Quarterly*, 33(1), 12-18. DOI: 10.1177/089431841988179

Polit, D.F., & Beck, C.T. (2006). The content validity index: Are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health*, 29(5), 489–497. doi:10.1002/nur.20147



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Potter, P.A., Perry, A. G., Stockert, P., Hall, A., & Ostendorf, W.R. (2016). *Fundamentals of Nursing*. (9th Ed.), USD: Elsevier, Retrieved from: EVELVE.ELSEVIER.COM.

Stimpfel, A.W., & Aiken, L.H. (2013). Hospital staff nurses' shift length associated with safety and quality of care. *J Nurs Care Qual*, 28(2), 122-129. doi: 10.1097/NCQ.0b013e3182725f09

Tavsancil, E. (2014). *Measuring attitudes and data analysis with SPSS*. Ankara, Turkey: Nobel Publications.

Yilmaz, S., & Kandemir, V. (2019). Factors affecting the motivation level of nurses in the elderly care sector. *New Horizons in Social, Humanities and Administrative Sciences-4*, Publisher: Gece Publishing, 241-254.

Yorke, D. (2016). Patient care: what is it. *Journal of Patient Care*, 2(2), DOI: 10.4172/2573-4598.1000e101

Yurdugul, H. (2005). Using content validity indexes for content validity in scale development studies. XIV. National Educational Sciences Congress, 1, 771-774.

Appendix:
Versiyonu

Hemşirelerin Kalite Değerlendirme Ölçeği–Akut Bakım

Anketin bu bölümü için, son zamanlarda iyi hatırladığınız ve bakım verdiğiniz **bir hasta** hakkında düşününüz. Aşağıdaki ifadelere bu hastanıza göre cevap veriniz. İfadelerin hastanıza verdiğiniz hemşirelik bakımını ne ölçüde tanımladığınızı belirtiniz. İfadeleri işaretlerken aşağıdaki yönergeyi kullanınız: **Soruların doğru ya da yanlış cevabı yoktur.**

- Hastaya verdiğiniz bakımınızı açıklayan ifadeyi güçlü bir şekilde kabul etmiyorsanız; “**Kesinlikle Katılmıyorum**” sütununa (X) işareti koyunuz.
- Hastaya verdiğiniz bakımınızı açıklayan ifadeyi kabul etmiyorsanız; “**Katılmıyorum**” sütununa (X) işareti koyunuz.

Söz konusu olan hastamın bakımında yapabildiklerim:

	Kesinlikle katılmıyorum	Katılmıyorum	Katılıyorum	Kesinlikle Katılıyorum
1. Hastaya acele etmeden yeterli zaman ayırım.				
2. Hastaya nazikçe davranırım.				
3. Açık ve güvene dayalı bir ortam yaratırım.				
4. Hasta mahremiyetini korurum.				
5. Hastanın kendisine ilişkin kararlara katılmasını sağlama ve hastayı kendi bakımına katılma konusunda cesaretlendiririm.				
6. Hastayı durumu hakkında bilgilendiririm.				
7. Hastanın haklarına saygı gösteririm.				
8. Hastanın benimle konuşabilmesi için yeterli zamanı olduğundan emin olmasını sağlarım.				
9. Hastanın bağımsızlığını desteklerim.				
10. Hastaya işlemleri ve yeni durumları açıklarım.				
11. Hastanın sorularını cevaplarım.				
12. Hasta ile zaman geçiririm.				
13. Hastayı, mümkün olduğunca kendi işini kendisinin yapmasına teşvik ederim.				
14. Sık aralıklarla hastanın durumunu veya tepkilerini izlerim.				
15. Hastayı dikkatlice dinlerim.				
16. Hastanın isteklerine zamanında cevap veririm.				
17. Hastayı sık sık kontrol ederim.				
18. Dakik olmak için zamanı planlarım.				
19. Hasta ihtiyaç duyduğunda hemen yanında olurum.				
20. Hasta bakımını zamanında bitiririm.				
21. Hasta bakımını planlarken özellikle hastanın gereksinimlerini sorarım.				
22. Bakımı, hastanın ailesi ya da onun için önemli olan kişileri dikkate alarak planlarım.				
23. Hasta ve hastanın ailesine kendimi tanıtırım.				
24. Hasta ile etkileşim halinde iken kültürel olarak uygun bir şekilde göz temasını sürdürürüm.				

25. Gerektiğinde hastaya olumlu geribildirimler veririm.				
26. Hastanın önünde endişeli veya gergin görünmem.				
27. Kendi hemşirelik mesleği bilgi sınırlarımı bilirim.				
28. Kendi hemşirelik mesleği beceri sınırlarımı bilme.				
29. Bakımı hastanın beklentilerine göre planlarım.				
30 Hastaya karşı nazik ve yakın davranırım.				
31. Hasta eğitiminde hastanın gereksinimlerini öngörme.				
32. Hasta ile etkileşim halinde iken neşeli ve keyifli olma.				
33. Hastanın rahatı ile ilgilenirim.				
34. Şefkatli davranırım.				
35. İş için hazır görünürüm.				
36. İşime kendini adarım ve vicdanlı olurum.				
37. Duyarlı olurum.				
38. Giyimime özen gösteririm.				
39. Bir ekibin üyesi olduğumu hissederek çalışırım.				
40. Dürüst olurum.				
41. Hastayı bir birey olarak görürüm.				
42. Profesyonelliği yansıtan bir dış görünümde olurum.				
43. Hastanın kültürel geçmişi ile tutarlı bir bakım planlarım.				
44. Profesyonel bir tutuma sahip olurum.				
45. Hastayı kendi bakımına dahil ederim.				

Hastane ortamında söz konusu hastanızın bakımında aşağıda belirtilen ifadeleri ne oranda kabul ettiğinizi belirtiniz.

	Kesimlikle katılmıyorum	Katılmıyorum	Katılıyorum	Kesimlikle Katılıyorum
1. Malzeme ve ekipmanlarım bu hasta için kolayca ulaşılabilirdi.				
2. Hastanın bakımını sağlamak için yeterli alanım vardı.				
3. Servisin fiziksel planı hasta gözlemini yükseltiyor ve enerji israfını azaltıyordu.				
4. Hasta odası hemşire deskine yakındı.				
5. Hastanın bakımı sırasında beni sürekli olarak işimden alıkoyan bir şeyler yoktu.				
6. Hemşire dağılımı (hemşire-hasta oranı) hasta yoğunluğuna göre ayarlandı.				
7. Hemşire dağılımı, tüm servisi kapsayacak şekilde değildi.				
8. Hastane birimleri arasında iletişim vardı.				
9. Hastanenin diğer birimleri benim uyarım ya da diğer görevlilerin müdahalesi olmadan hasta hizmetlerini tamamladı.				
10. Hastane politikaları hasta bakımını bireyselleştirmeme izin veriyordu.				
11. Dokümantasyon ve evrak işlerinin gereklilikleri azdı.				
12. Bakımın sürekliliğini güvence altına almak için uygun hasta-hemşire dağılımı sağlandı.				
13. Servis çalışanları birbirleriyle iyi anlaşılıyorlardı.				
14. Bu serviste çalışanlar arasında iyi derecede iş birliği vardı.				



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15. Servis çalışanları arasında yargılayıcı olmayan resmi bir meslektaş denetim sistemi vardı.				
16. Çalışanlar gönüllü olarak eleştirileri kabul ediyordu.				
17. Çalışanlar sürekli olarak birbirlerinden öğreniyordu.				
18. Servis çalışanları arasında hiçbir kişisel çatışma yoktu.				
19. Her çalışan servisin önemli bir üyesi olarak görülüyordu.				
20. Servis çalışanlarına yönelik yargılayıcı olmayan meslektaş incelemesinde, bana gayri resmi değerlendirme fırsatı verildi.				
21. Servis çalışanları birbirine destek veriyordu.				

Son bölüm sizin hastalarımıza verdiğiniz bakımın hangi özelliklerinizden ne oranda etkilendiğini belirten daha bireysel sorulardan oluşmaktadır. Her bir soruda, söz konusu hastanız için verdiğiniz bakımın kişisel özelliklerinizden ne oranda etkilendiğini belirtiniz.

	Kesinlikle katılmıyorum	Katılmıyorum	Katılıyorum	Kesinlikle Katılıyorum
1. Hemşirelikteki eğitimindeki düzeyim etkiler.				
2. Hemşirelik hakkındaki hislerim etkiler				
3. Benim hemşirelik mesleğine yatkınlığım etkiler				
4. Ruh halim etkiler.				
5. Stres düzeyim etkiler.				
6. Beceri düzeyim etkiler.				
7. Bilgi düzeyim etkiler.				
8. Kişiliğim etkiler.				
9. Yorgunluk düzeyim etkiler				
10. Yetkinliğim etkiler.				
11. Hemşire olmaktan memnuniyetim etkiler.				