

The Evaluation of The Peer Coaching Program in Nursing Education: A Validity and Reliability Study

Hemşirelik Eğitiminde Akran Yönderliği Programının Değerlendirilmesi: Geçerlik ve Güvenirlik Çalışması

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ABSTRACT

One of the criteria that a nursing department should have in order to be accredited is that a peer coaching program should be carried out in that department. However, there is no measurement tool to evaluate the peer mentoring program. This study aimed to conduct the validity and reliability study of the Peer Coaching Program Evaluation (PCPE) form, the Mentee Evaluation (MEE) form, and the Mentor Evaluation (MOE) form used to assess the effectiveness of the peer coaching program. The research was conducted in a methodological design. This study was carried out with nursing students between 30.11.2022 and 30.01.2023. The study included 573 nursing students. Data were collected using the personal information form, the PCPE form, the MEE form, and the MOE form. The construct validity of the PCPE form, the MEE form, and the MOE form was tested using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). The validity and reliability analyses revealed that the PCPE form consists of 6 items, the MOE form consists of six questions and the MEE form consist of seven items. The Cronbach's α reliability coefficients of the PCPE form, the MOE form, and the MEE form were found to be 0.95, 0.95, and 0.93, respectively. The PCPE form, the MentoE form, and the Mentee form were valid and reliable measurement tools.

Keywords: Nursing, Students, Peer Coaching Program, Mentor, Mentee

ÖZ

Bir hemşirelik bölümünün akredite olabilmesi için sahip olması gereken kriterlerden biri de o bölümde akran yönderliği programının yürütülmesidir. Ancak, literatürde akran yönderliği programını değerlendiren bir ölçüm aracı mevcut değildir. Bu çalışma, akran yönderliği programının etkililiğini değerlendirmek amacıyla kullanılan olan Akran Yönderliği Programı Değerlendirme (AYPD) formu, Menti Değerlendirme (MİD) formu ve Mentör Değerlendirme (MÖD) formlarının geçerlik ve güvenirliliğini yapmayı amaçlamaktadır. Araştırma metodolojik bir tasarımda yürütülmüştür. Bu çalışma 30.11.2022-30.01.2023 tarihleri arasında Hemşirelik Bölümü'nde öğrenim gören 573 öğrenci ile gerçekleştirilmiştir. Veriler kişisel bilgi formu, AYPD formu, MİD formu ve MÖD formu kullanılarak toplanmıştır. AYPD formu, MİD formu ve MÖD formunun yapı geçerliği Açıklayıcı Faktör Analizi (AFA) ve Doğrulamalı Faktör Analizi (CFA) kullanılarak test edilmiştir. Geçerlik ve güvenirlilik analizleri sonucunda AYPD formu'nun altı maddeden, MÖD formu'nun altı maddeden ve MİD formu'nun da yedi maddeden oluşan son hali verilmiştir. AYPD, MÖD formu ve MİD formunun Cronbach α güvenirlilik katsayıları sırasıyla 0,95, 0,95 ve 0,93 olarak bulunmuştur. AYPD formu, MİD formu ve MÖD formunun geçerli ve güvenilir ölçüm aracı olduğu belirlenmiştir.

Anahtar Kelimeler: Hemşirelik, Öğrenciler, Akran yönderliği programı, Mentör, Menti

Prior to the study, approval was obtained from the Ethics Committee of Yozgat Bozok University (16.11.2022, Decision Number: 38/09). This study was presented as an oral presentation at the I. International VII. National Nursing Enhancement Congress on May 10, 2024.

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INTRODUCTION

Accreditation is a process that ensures quality, safety and continuous improvement in the field of health and academia. This process contributes to the empowerment of both students and graduates in institutions providing nursing education. Qualified nurses who graduated from an accredited department provide higher quality nursing care.^{1, 2} Accreditation positively affects the quality of the nursing department and ensures that nursing is recognized in the society.^{3, 4}

The accreditation of institutions providing nursing education also helps prospective students who want to study nursing at university in terms of choosing a quality program. The institutions providing accredited nursing education offer better learning opportunities and thus, students' level of satisfaction increases.^{1, 5} Nurses who graduate from accredited nursing programs generally graduate with higher scores than those who graduate from non-accredited nursing programs. Nurses who graduate from accredited nursing programs are more likely to pursue post-graduate studies.^{5, 6}

One of the criteria that a nursing department should have in order to be accredited is that a peer coaching program should be carried out in that department. The peer coaching program is significant in terms of students' adaptation to the program they are studying.² Peer coaching is a teaching method that strengthens the professional skills of nursing students, increases their academic success, develops critical thinking skills and provides opportunities for alternative learning.⁷⁻⁹ It facilitates the adaptation of nursing students to the clinic in their first clinical experience and reduces the stress in this transition process. Peer coaching, which strengthens students' ability to be involved in teamwork, collaboration and communication, also improves the leadership skills of students and increases their self-confidence.¹⁰⁻¹³

Ensuring quality in the provision of health care is becoming increasingly important all over the world. Institutions with this

awareness are also more willing to employ graduates of accredited departments. Mentoring starting from student years guides nurses to be good leaders throughout their working lives.

Qualitative studies have been conducted to evaluate the experiences and opinions of mentor and mentee nursing students regarding the peer coaching program.^{11, 14-16} Different assessment methods and tools were used in these studies. Lombardo et al. (2017) used a semi-structured questionnaire form constructed by the researchers to evaluate the perceptions of mentees about peer coaching.¹⁶ Al-Hamdan et al. (2014) used a measurement tool scored between 0-10 to evaluate the opinions of mentees and mentors about their qualifications in the peer coaching program.¹⁵ Mlaba and Emmamally (2019) used a two-point Likert scale to evaluate the opinions of both mentee and mentor students about the program in terms of the benefits of and barriers to the peer coaching program in the clinical setting.¹¹ In their qualitative study, Payton et al. (2013) used a semi-structured questionnaire developed by the researchers to evaluate the peer coaching program.¹⁴

In the literature, measurement tools that quantitatively evaluate the Peer Coaching Program and the efficiency of the mentee and mentor in the program are not available. This study was carried out to assess the validity and reliability of the PCPE form, the MEE form, and the MOE form used to measure the effectiveness of the PCP. This constitutes the originality of the study.

This study assessed the validity and reliability of the PCPE form, the MEE form, and the MOE form used to measure the effectiveness of the PCP. The contributions of this research to the literature include evaluating the effectiveness of the PCP, quantitatively analyzing the perspectives of mentee and mentor students, and conducting psychometric tests on the forms.

MATERIALS AND METHOD

In the study, reporting was performed using the MISTIC – Methodological Study Reporting Checklist as a guide.

This methodological study was conducted with students from the Nursing Department of the Faculty of Health Sciences of Ondokuz Mayıs University Department of Nursing between 30.11.2022 and 30.01.2023.

The population and sample of the study

580 students studying at Ondokuz Mayıs University, Faculty of Health Sciences, Department of Nursing constituted the population of the study. The study aimed to reach all students, without implementing any sampling procedure, and it was completed with a total of 573 students who volunteered to take part in the study. The study aimed to conduct the validity and reliability studies of the PCPE form, the MEE form, and the MOE form. The literature recommends conducting validity and reliability studies with a sample size 5-10 times the number of items, and to conduct EFA and CFA in different samples.¹⁷ Based on this recommendation, in this study, data were collected from 380 students for EFA and from 200 students for CFA. For the EFA, 373 students completed the PCPE form (6 items). A total of 200 first and second year students (in the mentee group of the department) completed the MEE form (9 items), and 173 third and fourth year students (in the mentor group of the department) completed the MOE form (7 items). According to the PCP implemented in the department, students in their 1st year are mentees and they are matched with third year mentor students. All the second year students completed the MOE form because they were mentees the previous year, and the senior students completed the MEE form as they were mentors the previous year. All the students in the sample completed the PCPE form because they were all involved in the program. For the CFA, 200 students completed the PCPE form, 100 first and second year students filled in the MOE form, and 100 third and fourth year students completed the MEE form.

Data Collection Tools

The personal information form, the PCPE form, the MEE form, and the MOE form were used to collect data.

Personal Information Form: The form includes questions regarding the students' gender and year of study.

An item pool of 6 questions was created for the PCPE form, of 9 questions for the MOE form, and of 7 questions for the MEE form, reviewing the literature.¹⁸⁻²⁰ Experts evaluated each item in the item pool in terms of intelligibility, representation of what is intended to be measured, and suitability for the sample target group. Content validity was tested using the Davis method. Each item was evaluated using the four-point scale of (a) appropriate, (b) item needs minor revision, (c) item needs major revision, and (d) item not appropriate. In this technique, the number of experts who select options (a) and (b) is divided by the total number of experts to obtain the content validity index (CVI) for the item. The CVI is required to be above 0.80.²¹

The scale's surface validity was tested before content validity. Within the scope of surface validity, the draft scale was developed with literature support; the opinions of four nurses academicians and four nursing students, were used to test whether it was understandable when read and the length of the sentences.

The comprehensibility of the data collection forms was tested through a pilot study with 30 students for each form. There were no alterations in the forms after the pilot study.

Following the validity and reliability analyses, the PCPE form was finalized with 6 items under one factor. The items are scored on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The possible scores range from 6 to 30, with higher scores indicating more positive attitudes towards the PCP.

The validity and reliability analyses indicated that the final version of the MOE form consists of 7 items under one factor. These items are also scored on a five-point Likert scale from strongly disagree (1) to strongly agree (5). The possible scores range from 7 to 35, with higher scores reflecting more positive attitudes towards the mentoring program.

Similarly, the validity and reliability analyses showed that the final version of the MEE form consists of 6 items under one factor. These items are scored on a five-point Likert scale from strongly disagree (1) to strongly agree (5). The possible scores range from 6 to 30, with higher scores indicating more positive attitudes towards the mentee program.

Data Analysis

The data were analyzed using SPSS 23 and AMOS 26. The construct validity of the forms was tested performing the EFA and the

CFA. The suitability of the data for factor analysis was evaluated using the Kaiser-Meyer-Olkin (KMO) value and the Bartlett's test. The Cronbach's alpha was calculated to test the internal consistency of the PCPE form, the MEE form, and the MOE form. The mean, standard deviation and item-total correlation were calculated for the item analysis of the scale items. The level of statistical significance was accepted as 0.05.

Ethical Considerations

Prior to the study, approval was obtained from the Ethics Committee of Yozgat Bozok University University (16.11.2022, Decision Number: 38/09), and institutional permission was granted by the relevant faculty (E-28050591-044-283450). Written consent was obtained from the students after informing them about the study's purpose, and the study complied with the Declaration of Helsinki at every stage.

RESULTS AND DISCUSSION

25.8% of the students were first year, 24.9% were second year, 24.2% were third year, and 25.1% were fourth year students. 76.4% of the students are female.

Exploratory Factor Analysis

Validity Analysis

The EFA showed that the KMO value was 0.922 and the Bartlett's test result was $\chi^2 = 2076.628$ for the PCPE form ($p < 0.001$). The factor loadings of the items in the form varied between 0.82-0.92. The total variance explained was 78.83 (Table 1). The EFA revealed that the KMO value was 0.941 and the Bartlett's test result was $\chi^2 = 2459.974$ for the MOE form ($p < 0.001$). The factor loadings of the items in the form varied between 0.78-0.93. The total variance explained was 77.20 (Table 1). Two items with a factor loading below 0.40 were excluded from the form. The EFA showed that the KMO value for the MEE form was 0.876, and the Bartlett's test result was $\chi^2 = 1779.610$ ($p < 0.001$). The factor loadings of the items in the form varied between 0.81-

0.89. The total variance explained was 73.12 (Table 1).

As a result of the EFA, one item with a factor loading below 0.40 was removed from the form. The adequacy of sample size for EFA was evaluated through the KMO coefficient and Bartlett's test. A KMO value between 0.9 and 1.0 is considered excellent, 0.8 to 0.89 is very good, 0.7 to 0.79 is good, 0.6 to 0.69 is moderate, 0.5 to 0.59 is weak, and below 0.5 is unacceptable. Additionally, Bartlett's test should be significant ($p < 0.05$) to indicate adequacy.^{22, 23} In this study, the KMO values were found to be 0.922 (excellent) for the PCPE form, 0.941 (excellent) for the MOE form, and 0.876 (very good) for the MEE form. Since Bartlett's tests were significant ($p < 0.001$) for all forms, the sample size was deemed appropriate for factor analysis.

Factor loadings of scale items are expected to be above 0.30, and it is generally recommended to remove items with a factor loading of 0.40 or less from scales.^{24, 25} In our study, according to the EFA results, two

items with a factor loading below 0.40 were removed from the MEE form, and one item was removed from the MEE form. The final distributions of the factor loadings of the forms were 0.82-0.92 for the PCPE form, 0.78-0.93 for the MOE form, and 0.81-0.89 for the MEE form.

In general, the variance explained in scales should be greater than 40%, with higher total variance indicating stronger construct validity.^{26, 27} In this study, the total variances explained were determined as 78.83 in the PCPE form, 77.20 in the MOE form, and 73.12 in the MEE form. These values show that the construct validity of all three evaluation forms is strong.

Content Validity

The content validity of each form was tested by three faculty members in Public Health Nursing, two faculty members in Nursing Education, two faculty members in Nursing Management, two faculty members in Psychiatric Nursing, and one faculty member in Gynecology and Obstetrics Nursing. The content validity analysis revealed that the CVI values were 0.90 for the PCPE form, 0.90 for the MOE form, and 0.90 for the MEE form. Since there was no item with a CVI value below 0.80 in all three

forms, no items were removed from the item pool.

Reliability Analysis

The Cronbach's α of the PCPE form, the MOE form, and the MEE form were found to be 0.95, 0.95, and 0.93, respectively (Table 1). The examination of the item-total score correlation coefficients of the forms revealed that the largest and smallest values were 0.75-0.88 for the PCPE form, 0.71-0.89 for the MOE form, and 0.72-0.84 for the MEE form (Table 1).

Cronbach's alpha is used to test the reliability of scales. A coefficient below 0.60 indicates that the reliability of the scale is low. A coefficient between 0.60 and 0.80 indicates that the scale is moderately reliable, and a coefficient between 0.80 and 1.00 indicates that the scale is highly reliable.^{28, 29} The Cronbach's α of the PCPE form, the MOE form, and the MEE form were 0.95, 0.95 and 0.93, respectively. These values indicate that all three forms are highly reliable. Item analysis is conducted to evaluate the internal consistency of a scale, and the correlation coefficients for each item should be above 0.30.³⁰ In this study, the correlation coefficients for each item ranged from 0.75-0.88 for the PCPE form, 0.71-0.89 for the MOE form, and 0.70-0.87 for the MEE form.

Table 1. Exploratory Factor Analysis of the PCPE form, MOE form, and MEE form

| PCPE form | | | | |
|--|----------------------------------|------------|---------------|----------------|
| | Corrected Item-Total Correlation | Mean±SD | Cronbach alfa | Factor loading |
| 1. It contributes positively to the academic success of the students. | 0.75 | | | 0.82 |
| 2. There is a planned organization, monitoring, and evaluation process. | 0.80 | | | 0.86 |
| 3. Mentors and mentees take part in the program willingly and voluntarily. | 0.84 | 28.82±3.96 | 0.95 | 0.89 |
| 4. Mentors and mentees show empathy towards each other. | 0.88 | | | 0.92 |
| 5. Mentors are supported by the responsible advisor when needed. | 0.87 | | | 0.92 |
| 6. It is carried out within the framework of ethical principles. | 0.87 | | | 0.92 |
| Total Exp. Variance | | 78.83 | | |
| MOE form | | | | |
| 1. The mentor has critical thinking skills. | 0.82 | | | 0.87 |

Table 1. (Continued)

| | | | | |
|--|------|------------|------|------|
| 2. The mentor has high communication skills. | 0.83 | | | 0.88 |
| 3. The mentor is effective in reducing stress during the implementation process. | 0.85 | 27.85±4.59 | 0.95 | 0.90 |
| 4. The mentor can be reached any time. | 0.71 | | | 0.78 |
| 5. The mentor increases the problem-solving skills of the mentee. | 0.89 | | | 0.93 |
| 6. The mentor is a good role model. | 0.87 | | | 0.91 |
| 7. The mentor informs the mentees about the services offered by the university. | 0.84 | | | 0.89 |

Total Exp. Variance

77.20

MEE form

| | | | | |
|---|------|------------|------|------|
| 1. The mentee has communication skills. | 0.72 | | | 0.81 |
| 2. The mentee has the ability to cooperate. | 0.74 | | | 0.82 |
| 3. The mentee participates in university adaptation activities. | 0.80 | 23.75±3.86 | 0.93 | 0.86 |
| 4. The decision-making skills of the mentee improve. | 0.82 | | | 0.88 |
| 5. The mentee's sense of loneliness is reduced. | 0.80 | | | 0.87 |
| 6. The mentee's sense of belonging to the school increases. | 0.84 | | | 0.89 |

Total Exp. Variance

73.12

Confirmatory Factor Analysis

According to the CFA, the SEM results for the PCPE form indicated that the 6 items were significant at the $p = .000$ level. Improvements were made for the variables that reduced compliance in the model. Specifically, new covariances were generated for variables with higher covariances (e3-e4).

The renewed compliance index calculations also revealed acceptable values (Table 2). The results revealed that the form was acceptable according to the value of RMSEA 0.07 and perfect based on the values of CMIN/Df 2.03, NFI 0.98, CFI 0.99, IFI 0.99, GFI 0.97, TLI 0.98, and AGFI 0.93 (Table 2).

Table 2. PCPE form Fit indexes before and after modification

| Fit indices | Perfect values | Acceptable values | Pre-modification | Post-modification |
|-------------|----------------------------|----------------------------|------------------|-------------------|
| CMIN/Df | $0 \leq \chi^2/df \leq 3$ | $3 \leq \chi^2/df \leq 5$ | 3.09 | 2.03** |
| GFI | $0.90 \leq GFI$ | $0.80 \leq GFI$ | 0.96 | 0.97** |
| AGFI | $0.90 \leq AGFI$ | $0.80 \leq AGFI$ | 0.90 | 0.93** |
| CFI | $0.95 \leq CFI$ | $0.85 \leq CFI$ | 0.98 | 0.99** |
| RMSEA | $0.0 \leq RMSEA \leq 0.05$ | $0.06 \leq RMSEA \leq 1.0$ | 0.10 | 0.07* |
| NFI | $0.95 \leq NFI$ | $0.80 \leq NFI$ | 0.97 | 0.98** |
| TLI | $0.90 \leq TLI$ | $0.80 \leq TLI$ | 0.97 | 0.98** |
| IFI | $0.95 \leq IFI$ | $0.85 \leq IFI$ | 0.98 | 0.99** |

*Acceptable values, **Perfect values

The CFA revealed that the SEM results for the MOE form were meaningful at the $p=.000$ level for 7 items. The form was acceptable with the values of RMSEA 0.08 and AGFI 0.87 and perfect with the values of CMIN/Df 1.59, NFI 0.97, CFI 0.98, IFI 0.98, GFI 0.94, and TLI 0.98 (Table 3).

The CFA also demonstrated that the SEM results for the MEE form were significant at the $p = .000$ level for 6 items. Improvements were made for the variables that reduced compliance in the model, and new covariances were generated for variables with higher covariances (e1-e2).

Table 3. MOE form Fit indexes

| Fit indices | Perfect values | Acceptable values | Results |
|----------------|-----------------------------------|-----------------------------------|---------|
| CMIN/Df | $0 \leq \chi^2/df \leq 3$ | $3 \leq \chi^2/df \leq 5$ | 1.59** |
| GFI | $0.90 \leq \text{GFI}$ | $0.80 \leq \text{GFI}$ | 0.94** |
| AGFI | $0.90 \leq \text{AGFI}$ | $0.80 \leq \text{AGFI}$ | 0.87* |
| CFI | $0.95 \leq \text{CFI}$ | $0.85 \leq \text{CFI}$ | 0.98** |
| RMSEA | $0.0 \leq \text{RMSEA} \leq 0.05$ | $0.06 \leq \text{RMSEA} \leq 1.0$ | 0.08* |
| NFI | $0.95 \leq \text{NFI}$ | $0.80 \leq \text{NFI}$ | 0.97** |
| TLI | $0.90 \leq \text{TLI}$ | $0.80 \leq \text{TLI}$ | 0.98** |
| IFI | $0.95 \leq \text{IFI}$ | $0.85 \leq \text{IFI}$ | 0.98** |

*Acceptable values, **Perfect values

The results revealed that the form was acceptable according to the values of RMSEA 0.09 and AGFI 0.89 and perfect based on the values of CMIN/Df 1.83, NFI 0.97, CFI 0.99, IFI 0.99, GFI 0.96, and TLI 0.97 (Table 4) (Figure 1). More than one fit index is obtained as a result of CFA, which tests the construct validity of a scale. The accuracy of the model is not evaluated with a single fit index, but rather by considering all indexes together.³¹ As a result of the CFA, a CMIN/DF value between 3 and 5 and an RMSEA value between 0.06 and 0.10 indicate an acceptable fit. GFI, AGFI, NFI, and TLI values of 0.80 and above, and CFI and IFI values of 0.85 and above correspond to an acceptable fit.³²⁻³⁴ The CFA revealed that the post-modification fit indices of the PCPE form were CMIN/Df (1.83), GFI (0.97), AGFI (0.93), CFI (0.99), NFI (0.98), TLI (0.98) and IFI (0.99), indicating a perfect fit, and a RMSEA of 0.07, indicating an

acceptable fit. When the fit indices of the MOE form were examined, the following values indicating a perfect fit were found: CMIN/Df (1.59), GFI (0.94), CFI (0.98), NFI (0.97), TLI (0.98) and IFI (0.98). The AGFI (0.87) and RMSEA (0.08) values for the MOE form indicated an acceptable fit.^{32,33} When the fit indices of the MEE form were examined after the modification, an excellent fit was found in CMIN/Df (1.83), GFI (0.96), CFI (0.99), NFI (0.97), TLI (0.97) and IFI (0.99) indices, and an acceptable fit was found in AGFI (0.89) and RMSEA (0.09) indices. The CFA for each form revealed that the fit indexes were within the desired range.³²⁻³⁴

In the literature, measurement tools that quantitatively evaluate the Peer Coaching Program and the efficiency of the mentee and mentor in the program are not available. This scale is a valid and reliable measurement tool.

Table 4. MEE form Fit indexes before and after modification

| Fit indices | Perfect values | Acceptable values | Pre-modification | Post-modification |
|-------------|-----------------------------------|-----------------------------------|------------------|-------------------|
| CMIN/Df | $0 \leq \chi^2/df \leq 3$ | $3 \leq \chi^2/df \leq 5$ | 7.53 | 1.83** |
| GFI | $0.90 \leq \text{GFI}$ | $0.80 \leq \text{GFI}$ | 0.83 | 0.96** |
| AGFI | $0.90 \leq \text{AGFI}$ | $0.80 \leq \text{AGFI}$ | 0.60 | 0.89* |
| CFI | $0.95 \leq \text{CFI}$ | $0.85 \leq \text{CFI}$ | 0.87 | 0.99** |
| RMSEA | $0.0 \leq \text{RMSEA} \leq 0.05$ | $0.06 \leq \text{RMSEA} \leq 1.0$ | 0.26 | 0.09* |
| NFI | $0.95 \leq \text{NFI}$ | $0.80 \leq \text{NFI}$ | 0.86 | 0.97** |
| TLI | $0.90 \leq \text{TLI}$ | $0.80 \leq \text{TLI}$ | 0.79 | 0.97** |
| IFI | $0.95 \leq \text{IFI}$ | $0.85 \leq \text{IFI}$ | 0.86 | 0.99** |

*Acceptable values, **Perfect values

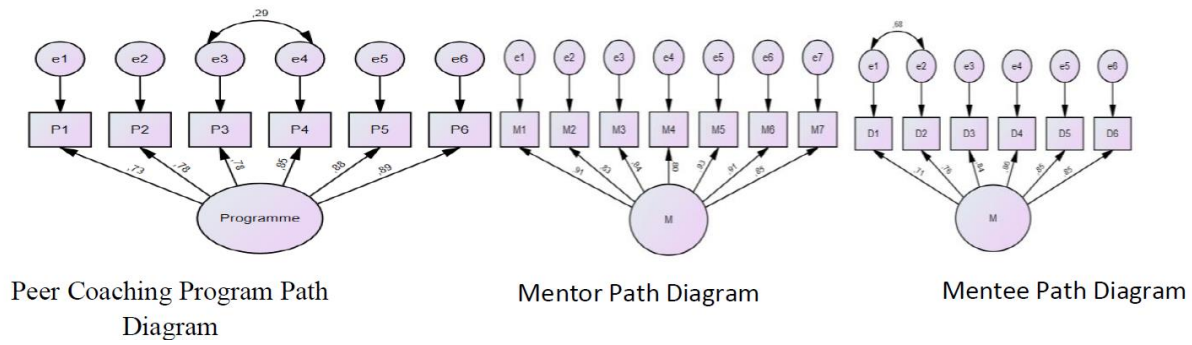


Figure 1. Path Diagram of Peer Coaching Program, Mentor and Mentee Evaluation Forms

CONCLUSION AND RECOMMENDATIONS

This methodological study was carried out with the students of an accredited Department of Nursing. Our results revealed that the PCPE form, the MOE form, and the MEE form are valid and reliable measurement tools. System-related problems such as limited clinical areas, increasing number of students, and budget constraints are encountered in nursing education institutions. Educational institutions can improve the learning environment, create a student-centered education approach, and thus support academic achievement of students by using the PCP to deal with such problems. As an educational strategy, the PCP provides an opportunity to support

nursing students and to create a positive and valuable learning environment for educators and educational institutions. In addition, with this program, nursing students acquire the ability to manage their own learning processes, interact socially through cooperation, gain competence, and become a leader and role model. The forms developed for and administered to nursing students in this study can be used for the evaluation of mentors, mentees and programs in all institutions where the PCP is carried out. In addition, the forms can be adapted to the peer coaching programs implemented in different accredited disciplines.

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