

Original Article

Factors related to person-environment fit in nurses who have changed workplaces : A cross-sectional study

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Key words

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organizational support, multidimensional person-environment fit

Abstract

Aims: This study aimed to determine the effective organizational and individual factors associated with each dimension (demands-abilities, needs-supplies, person-organization, person-supervisor, and person-group fits) of person-environment (PE) fit among nurses who changed their workplaces (transferred nurses and recently hired nurses with prior clinical experience), five months after their assignment.

Background: Some nurses who change workplaces have low PE fit with their workplace after they have adjusted to it. It is desirable that each dimension of PE fit is high, because it is associated with positive worker outcomes such as performance.

Methods: The person-environment fit was measured using the Japanese version of the Perceived Fit Scale. A cross-sectional, questionnaire-based study was conducted between March and October 2020. Assignment of nurses to their department of choice, nurse managers' and colleagues' support, on-the-job training, and nurses' learning behaviors were assessed. Simple and multiple regression analyses using a stepwise method were conducted on 148 nurses at eight hospitals.

Results: The multiple regression analysis revealed that each dimension of person-environment fit was strongly associated with the different types of support nurses received from their managers. The assignment of nurses' department of choice and emotional support received from colleagues were related to job fit, and consultation with colleagues was related to group fit.

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Conclusions: The influence of nurse managers on the nurses' changing workplaces is important for achieving a high person-environment fit.

Introduction

Many nurses experience a change in the workplace when they are transferred to another department within the same hospital or are hired with prior clinical experience¹. It has been found that nurses who have experienced a change in the workplace feel a lack of confidence, anxiety, and intense stress². Fitting into a new environment, regardless of an individual's educational background or career plans, is never easy. Organizational socialization, a well-known concept in the field of business administration, refers to supporting the early adaptation of employees to a new environment. This process, which includes helping new employees accept the norms, values, and expected behaviors of the organization and acquire the skills necessary to perform their tasks³, progresses in three to six months⁴. However, there are cases of newcomers who feel that their workplace does not fit with their career or work preferences, even after they have become accustomed to the job⁵. As such, some nurses may not fit in with the environment even after organizational socialization, wherein adjustment to the new environment takes place. It is, therefore, necessary to consider the compatibility of the individual with the environment.

Person-environment (PE) fit can be defined as the compatibility between individuals and their work environments that occurs when their characteristics are well matched⁶. It has multiple dimensions: person-organization (PO) fit, which is the compatibility between people and the entire organization; person-supervisor (PS) fit, which is the match between supervisors and subordinates; person-group (PG) fit, which is the compatibility between individuals and their work groups; and person-job (PJ) fit, which is the fit between a person's characteristics and the job or tasks^{6,7}. The PJ fit is further classified into two sub-dimensions: needs-supplies (NS) fit, in which employees' needs, desires, or preferences

are met by the work environment, and demands-abilities (DA) fit, in which employees' knowledge, skills, and abilities are commensurate with the job requirements^{6,8}. The fact that nurses who changed workplaces adjusted to the new environment but did not fit into it may indicate that some dimensions of their PE fit can improve with time, while some others do not. Each of the five dimensions of PE fit is associated with worker outcomes, such as performance and turnover intention⁶. Some nurses, therefore, may not fit in with the environment even after organizational socialization, potentially leading to manpower shortages in clinical practice and poor quality of nursing care. Enhancing all five dimensions of PE fit, which are different in nature, is important; however, to the best of our knowledge, no research has focused on all five dimensions among those who have changed workplaces. Therefore, it is desirable to clarify the factors associated with each of the five dimensions of PE fit to obtain management insights.

Based on previous studies related to PE fit, the following organizational and individual factors are likely to be relevant. Because some nurses feel stressed by unexpected assignments⁵. Whether an organization assigns nurses to the department of their choice can affect each dimension of PE fit. Some studies among newcomers, including graduates, indicated that the social tactics of organizational socialization, such as organizational support and on-the-job training, are associated with PO fit⁹ and PO and PG fit¹⁰. Therefore, this study aimed to clarify the association between support and on-the-job training from supervisors and colleagues and each dimension of PE fit. The identification of such organizational support in the workplace, which could lead to higher PE fit among nurses, could be useful in practice.

Research on the determinants of organizational socialization has revealed not only organizational factors but also individual factors, such

as an employee's proactive behavior, which determines PE fit¹¹⁾. However, there has been very little research into individual factors in determining PE fit. It is important to clarify the findings of both organizational and individual aspects as determinants. Wang et al.¹²⁾ showed that DA fit has been connected to an individual's adaptability to learning. Therefore, this study aimed to examine the relationship between the learning behavior of nurses in clinical practice and each dimension of PE fit.

The objective of this study was to identify the effective organizational and individual factors associated with each dimension of PE fit among nurses who changed their workplaces five months after their assignment, when organizational socialization was in progress. In this study, nurses who experienced a change in the workplace are referred to as "nurses who were transferred from one department to another within the same hospital" (transferred nurses) and "recently hired nurses with prior clinical experience." Both comprised nurses who had recently moved to their current workplace and had clinical experience; however, nurses who had recently graduated were not included in the study.

Identified factors are divided into organizational and individual factors. Organizational factors include assignment to the nurses' department of choice, nurse managers' and colleagues' support, and on-the-job training (teaching and consultation); the individual factor is learning behaviors. This study is significant in that it identifies effective organizational and individual factors related to each aspect of PE fit among nurses who have changed workplaces. This, in turn, can facilitate the development of effective organizational support and individual efforts to enhance each aspect of PE fit in clinical practice. This study is also important in that it verifies the factors related to each aspect of the PE fit that may improve the manpower shortage and quality of nursing care in the medical field.

Methods

1. Study design

This was a cross-sectional study.

2. Participants

The study participants were nursing professionals – registered nurses, public health nurses, and midwives, excluding nurse managers – from eight hospitals, who had been at their new workplace for five months. That is, those who had prior clinical experience and had either been transferred to another department within the same hospital or had been recently hired by their current hospital. Requests for research cooperation were made to 10 general hospitals with 400 or more beds, which were selected using the opportunistic sampling; of these, the nursing management directors of 8 facilities provided consent for research cooperation.

3. Data collection

The survey was conducted between March and October 2020. The ideal sample size was calculated to be 177 with an effect size of 0.1 and a power of 0.8 by multiple regression analysis using G*power ver. 3.1.9.4¹³⁾. In total, 307 nurses (transferred nurses: $n = 201$; recently hired nurses with prior clinical experience: $n = 106$) were provided an explanatory document and an anonymous self-report questionnaire five months after they had been assigned to their new workplaces by their nursing department between October 2019 and March 2020. Participants returned the completed questionnaires by mail to the researcher.

4. Ethical considerations

Nurses were provided a written explanation of the study's purpose and methods, and were informed that participation was voluntary and no disadvantage would result from not participating. To ensure confidentiality, the completed questionnaires were mailed by the nurses directly to the researcher. This study was approved by the Research Ethics Committee of the Graduate School of Medicine, The University of Tokyo (No. 2019287NI).

5. Measurements

All scales with original authors have prior permission for use.

1) PE fit

A Japanese version of the Perceived Fit

Scale¹⁴⁻¹⁶), which has been tested for reliability and validity¹⁵), was used to measure the PE fit. The scale consists of five subscales: NS, DA, PO, PS, and PG fit, with three items each, for a total of 15 items, measured on a seven-point Likert scale, ranging from 1 = "Completely disagree" to 7 = "Completely agree". The average score was calculated for each subscale. Examples of items are as follows: "There is a good fit between what my job offers me and what I am looking for in a job" (NS); "The match is very good between the demands of my job and my personal skills" (DA); "My personal values match my organization's values and culture" (PO); "The things that I value in life are very similar to my supervisor's values." (PS), and "My personal values match my group members' values and culture" (PG). The Cronbach's alpha values of the five subscales in this study ranged from .89 to .99.

2) Assignment to the nurses' department of choice

Assignment to a nurses' department of choice was measured by asking to what extent the nurses' assignments were in line with their requests. A five-point Likert scale (where 1 = "Not as requested"; 5 = "As requested") was used, and the researcher transformed the results into a binary dummy variable with "Fairly as requested" and "As requested" set to "1" and the others ("Not as requested," "Not quite as requested," and "Neutral") to "0".

3) Nurse managers' and colleagues' support

The Workplace Support Scale¹⁷), which has been tested for reliability and validity, was used to measure the support of nurse managers and colleagues. The scale consists of four subscales (emotional support, appraisal support, informational support, and instrumental support), with a total of 14 items: three items each for emotional and informational support and four items each for appraisal and instrumental support. Item examples include: "They give you warm, enthusiastic instruction" (emotional support), "They give you proper appreciation for the work you have done" (appraisal support), "They provide specific and appropriate instructions" (informational support), and "They help share the workload or

lighten the load when you're busy" (instrumental support). The answer options ranged from 1 = "Not at all" to 5 = "Always" on a five-point Likert scale, and the average score was calculated for each subscale. The researcher asked these questions pertaining to the support provided by the nurse manager (including the assistant nurse manager and nurse in-charge) and by colleagues, separately. The Cronbach's alpha values of four subscales in this study ranged from .91 to .97 by the nurse managers and from .86 to .96 by their colleagues.

4) On-the-job training (teaching and consultation)

On-the-job training consisted of two concepts: teaching and consultation. Through discussions among several researchers, the researcher developed three items to measure the teaching aspect and three items to measure the consultation aspect. Consultation refers to the discussion of issues that arise in the work of the newly assigned nurse. Item examples include: "When you were doing a job that was new or unfamiliar to you, they showed you how to do it" and "When you were unsure about a patient's nursing plan, they consulted with you". All items were measured on a five-point Likert scale, ranging from 1 = "Strongly disagree" to 5 = "Strongly agree". The six items were divided into two factors as expected. The average value of each of the three items was calculated. The Cronbach's alpha values in this study were .91 for the teaching and .94 for the consultation, confirming internal consistency.

5) Individual learning behaviors

To measure individual learning behaviors, the Learning Experience Scale in nursing¹⁸), which has been tested for reliability and validity, was used. The scale includes five subscales and 20 items: four items for learning through reflection, five items for learning from practice, five items for learning from feedback, three items for learning from others, and three items for learning from training. The examples of items for learning through reflection, from practice, from feedback, from others, and from training, respectively, are as follows: "Thinking about the causes

and solutions by reflecting on my own practice that did not go well,” “Learning from the consequences of my own actions,” “Learning by receiving immediate feedback about my successes and failures in work,” “Learning through dialogue with a co-worker or superior,” and “Learning practical knowledge and skills by participating in external training.” Answer options ranged from 1 = “Never” to 6 = “Always,” and the average score was calculated for each subscale. The Cronbach’s alpha values of the five subscales in this study ranged from .76 to .84.

6. Statistical analysis

First, the researcher examined the descriptive statistics and correlations between each variable. Although there were no significant differences between the personal characteristics and the scores of each variable for transferred nurses and those recently hired with prior clinical experience (Table. 1), both groups were analyzed together while controlling for the assignment type (transferred or recently hired with prior clinical experience). Single regression analysis was preliminarily conducted to confirm the association between each independent variable and each dependent variable. Next, the researcher applied multiple regression analyses to clarify the relationship between each independent variable (assignment to the nurse’s department of choice, nurse managers’ and colleagues’ support, on-the-job training, and individual learning behavior) and each dimension of the dependent variable, PE fit (NS fit, DA fit, PO fit, PS fit and PG fit). The bivariate correlations among the

independent variables were strong, so the researcher selected a stepwise method of variable increase and decrease to avoid multi-collinearity and search for the best model that helps identify more effective association factors. Criteria for the stepwise method were $p < 0.05$ for inclusion and $p > 0.1$ for exclusion. Multicollinearity was confirmed as variance inflation factor ≤ 5 ¹⁹. Participants’ gender, total years of nursing experience, employment position, number of prior affiliated facilities, assignment type (transferred or recently hired with prior clinical experience), and qualification were forced entry for control purposes (control variables) because they were likely to be associated with PE fit. Data were analyzed using SPSS Statistics ver. 26 (IBM) for Windows.

Results

1. Participants’ flow

Figure 1 shows the participants’ flow. A total of 170 nurses returned the completed questionnaires by mail to the researcher (response rate: 55.2%), but 22 were excluded from the calculation (non-consenting: $n = 3$; missing variables: $n = 19$), leaving the researcher with $n = 148$ nurses (transferred nurses: $n = 101$; recently hired nurses with prior clinical experience: $n = 47$) for analysis (valid response rate: 48.1%).

2. Descriptive statistics

Table 1 shows the descriptive statistics. Regarding the nurses’ age, the mean \pm standard deviation was 38.9 ± 8.9 years. Most of the nurses were female (88.5%) and registered

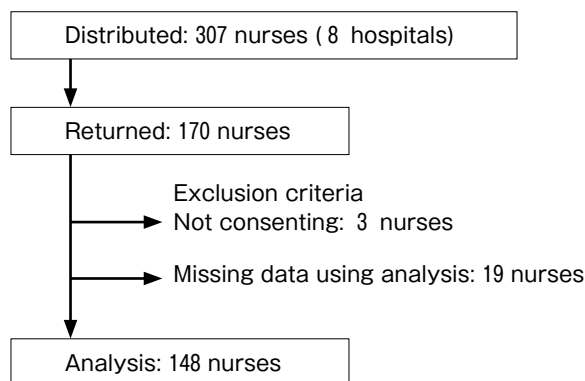


Figure 1 Participants’ flow

nurses (91.2%). The majority of them were staff (63.5%). The mean number of years of nursing experience was 16.1 ± 8.8 years, and the mean number of prior affiliated facilities was 2.1 ± 1.4 .

3. Simple regression analysis

Table 2 shows the results of the simple regression analysis with each dimension of the PE fit as the dependent variable. There was a significant positive association between the independent variables and each dimension of the PE fit. However, there was no significant association between a) assignment to the nurses' department of choice and PO, PS, and PG fit, b) instrumental support from colleagues, and the PO fit, c) learning through reflection and NS, PO, and PG fit, d) learning from practice and PO fit, e) learning from others and NS fit, and f) learning from training and all the PE fit dimensions.

4. Multiple regression analysis

Table 3 shows the results of the multiple regression analysis. The NS fit was significantly positively associated with assignment to the nurse's department of choice and informational support from the nurse manager ($\beta = .29$ and $.32$, respectively; $p = < .001$ and $< .001$). The DA fit was significantly positively associated with assignment to the nurse's department of choice, appraisal support from the nurse manager, as well as emotional support from colleagues ($\beta = .17$, $.34$, and $.21$, respectively; $p = .028$, $< .001$, and $.015$). The PO fit was significantly positively associated with informational support from the nurse manager ($\beta = .44$; $p = < .001$). The PS fit was significantly positively associated with emotional support from the nurse manager, appraisal support from the nurse manager, and learning from practice ($\beta = .39$, $.29$, and $.15$, respectively; $p = < .001$, $.005$, and $.027$). Furthermore, the PG fit was significantly positively associated with appraisal support from the nurse manager and consultation of on-the-job training ($\beta = .34$ and $.37$, respectively; $p = < .001$ and $< .001$).

Discussion

In this study, I conducted multiple regression analysis using a stepwise method to clarify the organizational and individual factors that were

positively related to each dimension of the PE fit of nurses who changed workplaces. The simple regression analysis, which was performed as a preliminary step, showed that most assignment to the nurse's department of choice, nurse managers and colleagues' support, on-the-job training (teaching and consultation), and individual learning behaviors were associated with each dimension of the PE fit. However, in the multiple regression analysis, mainly nurse managers' support and some assignment to the nurse's department of choice, colleagues' support, and individual learning behaviors remained as positive related factors. Furthermore, different types of support and learning were associated with different PE fit dimensions.

1. Positive related factors for PJ fit (NS and DA fit)

The factor which was positively related to the PJ fit (both NS and DA fit) was assignment to the nurse's department of choice. Nurse managers' informational support was related to the NS fit, and nurse managers' appraisal support and colleagues' emotional support were related to the DA fit. Nurses prefer to work in a workplace where they perceive that they are able to utilize their experience and expertise²⁰. Therefore, NS fit may have been high because an assignment to the nurse's department of choice satisfied the nurses' need for a job where they could utilize their abilities. In addition, being assigned to a workplace with job requirements that matched their abilities may have ensured a high DA fit.

With regards to nurse managers' support, informational support was a positive factor for the NS fit and appraisal support for the DA fit. Informational support indicates the perception of receiving instruction and advice on the job. The perception of receiving personal growth opportunities for professional growth in nursing is related to the NS fit¹⁶. Thus, it is possible that receiving instruction and advice from the nurse manager enhanced the nurses' growth or that they perceived that they received opportunities for growth. Appraisal support indicates the perception that one's competence and effort are valued. Feeling that their abilities and efforts were

Table 1. Results of descriptive statistics

	Cron- bach' -s a	All (n=148)	Transferred nurses (n=101)	Recently hired nurses with prior clinical experience (n=47)	p
Mean ± SD or n (%)					
Participants' characteristics					
Age		38.9 ± 8.9	39.3 ± 8.6	38.2 ± 9.5	.513 †
Gender					.150 ‡
Female		131 (88.5)	92 (91.1)	39 (83.0)	
Male		17 (11.5)	9 (8.9)	8 (17.0)	
Qualification					.026 ‡
Registered nurses		135 (91.2)	96 (95.0)	39 (83.0)	
Midwives		10 (6.8)	3 (3.0)	7 (14.9)	
Public health nurses		3 (2.0)	2 (2.0)	1 (2.1)	
Employment position					.474 ‡
Senior Staff		53 (35.8)	38 (37.6)	15 (31.9)	
Staff		94 (63.5)	62 (61.4)	32 (68.1)	
Missing		1 (0.7)	1 (1.0)	0 (0)	
Total years of nursing experience		16.1 ± 8.8	16.6 ± 8.4	14.9 ± 9.5	.279 †
Number of prior affiliated facilities		2.1 ± 1.4	1.8 ± 1.2	2.6 ± 1.5	.001 †
Person-environment fit					
Needs-supplies fit	.89	3.65 ± 1.15	3.59 ± 1.13	3.77 ± 1.19	.390 †
Demands-abilities fit	.90	3.73 ± 1.18	3.77 ± 1.11	3.64 ± 1.33	.533 †
Person-organisation fit	.95	3.33 ± 1.21	3.25 ± 1.26	3.48 ± 1.10	.289 †
Person-supervisor fit	.97	3.61 ± 1.28	3.58 ± 1.27	3.67 ± 1.29	.681 †
Person-group fit	.99	3.50 ± 1.15	3.49 ± 1.14	3.51 ± 1.18	.926 †
Assignment to the nurses' department of choice					
As requested		70 (52.7)	46 (45.5)	24 (48.9)	
Others		78 (47.3)	55 (54.5)	23 (51.1)	
Nurse managers' and colleagues' support					
Nurse managers' emotional support	.91	2.95 ± 1.20	3.04 ± 1.19	2.76 ± 1.23	.193 †
appraisal support	.97	2.97 ± 1.16	3.07 ± 1.13	2.73 ± 1.20	.098 †
informational support	.96	2.90 ± 1.20	2.96 ± 1.18	2.76 ± 1.26	.337 †
instrumental support	.96	2.60 ± 1.29	2.69 ± 1.28	2.44 ± 1.31	.279 †
Colleagues' emotional support	.86	3.28 ± 1.05	3.28 ± 1.03	3.28 ± 1.12	.942 †
appraisal support	.96	3.08 ± 1.10	3.09 ± 1.05	3.05 ± 1.22	.813 †
informational support	.95	3.49 ± 1.08	3.48 ± 1.04	3.52 ± 1.20	.852 †
instrumental support	.95	3.58 ± 1.06	3.60 ± 1.02	3.52 ± 1.16	.660 †
On-the-job training					
Teaching	.91	3.57 ± 1.12	3.57 ± 1.12	3.58 ± 1.12	.957 †
Consultation	.94	3.63 ± 1.06	3.66 ± 1.07	3.55 ± 1.05	.559 †
Individual learning behaviors					
Learning through reflection	.81	4.33 ± 0.83	4.36 ± 0.82	4.27 ± 0.87	.565 †
Learning from practice	.82	4.16 ± 0.82	4.19 ± 0.80	4.10 ± 0.87	.564 †
Learning from feedback	.84	3.89 ± 0.95	3.92 ± 0.97	3.83 ± 0.91	.562 †
Learning from others	.79	4.49 ± 0.92	4.55 ± 0.87	4.35 ± 1.02	.204 †
Learning from training	.76	2.42 ± 1.18	2.45 ± 1.22	2.35 ± 1.11	.647 †

Note. SD, standard deviation; †, T-test; ‡, Chi-square test.

Table 2. Results of simple regression analysis (n = 148)

	NS fit	DA fit	PO fit	PS fit	PG fit
	β (95% CI)	β (95% CI)	β (95% CI)	β (95% CI)	β (95% CI)
Assignment to the nurses' department of choice as requested (Ref = Others)	.30** (.33 to 1.05)	.18* (.05 to .81)	.08 (-.19 to .60)	.07 (-.25 to .59)	.09 (-.17 to .58)
Nurse managers' support					
Emotional support	.28** (.11 to .41)	.33** (.20 to .50)	.39** (.24 to .54)	.63** (.54 to .81)	.42** (.26 to .55)
Appraisal support	.29** (.14 to .45)	.46** (.32 to .62)	.38** (.24 to .55)	.61** (.53 to .81)	.49** (.34 to .63)
Informational support	.36** (.12 to .49)	.42** (.27 to .56)	.43** (.29 to .59)	.56** (.45 to .74)	.43** (.27 to .56)
Instrumental support	.21* (.05 to .33)	.29** (.12 to .41)	.26** (.10 to .39)	.43** (.28 to .57)	.27** (.10 to .39)
Colleagues' support					
Emotional support	.26** (.11 to .46)	.41** (.30 to .63)	.27** (.13 to .50)	.35** (.25 to .62)	.45** (.33 to .65)
Appraisal support	.26** (.10 to .43)	.43** (.30 to .62)	.18* (.02 to .38)	.31** (.18 to .54)	.51** (.39 to .68)
Informational support	.26** (.10 to .44)	.38** (.25 to .58)	.26** (.12 to .47)	.27** (.13 to .50)	.48** (.36 to .67)
Instrumental support	.20* (.04 to .39)	.29** (.15 to .50)	.15 (-.02 to .35)	.19* (.03 to .42)	.42** (.29 to .61)
On-the-job training					
Teaching	.19* (.04 to .37)	.31** (.16 to .49)	.31** (.14 to .48)	.29** (.16 to .51)	.37** (.22 to .54)
Consultation	.17* (.01 to .36)	.29** (.15 to .50)	.25** (.11 to .47)	.26** (.12 to .50)	.51** (.40 to .70)
Individual learning behaviors					
Learning through reflection	.13 (-.05 to .40)	.26** (.14 to .59)	.14 (-.03 to .44)	.25** (.15 to .63)	.13 (-.05 to .40)
Learning from practice	.18* (.02 to .47)	.24** (.12 to .57)	.15 (-.02 to .45)	.34** (.29 to .76)	.20* (.05 to .50)
Learning from feedback	.21* (.06 to .44)	.37** (.27 to .65)	.31** (.19 to .59)	.46** (.42 to .81)	.22** (.16 to .53)
Learning from others	.16 (-.01 to .40)	.29** (.17 to .58)	.25** (.12 to .54)	.33** (.24 to .66)	.22** (.07 to .47)
Learning from training	.08 (-.08 to .24)	.10 (-.06 to .26)	.10 (-.06 to .27)	.09 (-.08 to .27)	.14 (-.02 to .29)

Note. NS, Needs-supplies; DA, Demands-abilities; PO, Person-organisation; PS, Person-supervisor; PG, Person-group; β , Standardized beta coefficient; CI, Confidence interval; Ref, Reference; *, p value < .05; **, p value < .01.

Table 3. Results of multiple regression analysis (n = 148)

		NS fit	DA fit	PO fit	PS fit	PG fit
		β (95% CI)	β (95% CI)	β (95% CI)	β (95% CI)	β (95% CI)
Gender (Ref = Female)	Male	.10 (-.22 to .90)	.11 (-.13 to .94)	.02 (-.53 to .66)	.03 (-.40 to .62)	.06 (-.27 to .72)
Total years of nursing experience		.07 (-.02 to .03)	.05 (-.02 to .03)	.16 (-.00 to .05)	.02 (-.02 to .02)	.04 (-.02 to .03)
Employment position (Ref = Staff)	Senior staff	.10 (-.19 to .64)	.13 (-.10 to .72)	.01 (-.40 to .47)	.06 (-.22 to .55)	.01 (-.34 to .40)
Number of prior affiliated facilities		-.13 (-.25 to .03)	-.07 (-.20 to .07)	-.09 (-.23 to .07)	.05 (-.09 to .17)	-.14 (-.24 to .01)
Assignment type		.08 (-.19 to .60)	-.02 (-.43 to .35)	.14 (-.05 to .80)	.10 (-.11 to .63)	.07 (-.17 to .54)
	Recently hired with prior clinical experience (Ref = Transferred nurses)					
Qualification	Midwives & PHN (Ref = Registered nurses)	.10 (-.22 to 1.02)	.03 (-.48 to .73)	.07 (-.38 to .95)	.01 (-.53 to .62)	.09 (-.20 to .92)
Assignment to the nurses' department of choice	As requested (Ref = Others)	.29** (.30 to 1.01)	.17* (.04 to .75)	-	-	-
Nurse managers' support						
	Emotional support	-	-	-	.39** (.19 to .63)	-
	Appraisal support	-	.34** (.19 to .53)	-	.29** (.10 to .55)	.34** (.19 to .49)
	Informational support	.32** (.16 to .46)	-	.44** (.29 to .61)	-	-
	Instrumental support	-	-	-	-	-
Colleagues' support						
	Emotional support	-	.21* (.05 to .42)	-	-	-
	Appraisal support	-	-	-	-	-
	Informational support	-	-	-	-	-
	Instrumental support	-	-	-	-	-
On-the-job training						
	Teaching	-	-	-	-	-
	Consultation	-	-	-	-	.37** (.25 to .57)
Individual learning behaviors						
	Learning through reflection	-	-	-	-	-
	Learning from practice	-	-	-	.15* (.03 to .43)	-
	Learning from feedback	-	-	-	-	-
	Learning from others	-	-	-	-	-
	Learning from training	-	-	-	-	-
R²		.256	.340	.233	.489	.407
Adjusted R²		.212	.296	.194	.455	.372
F		5.852**	7.739**	5.942**	14.356**	11.672**

Note. Gender, total years of nursing experience, employment position, number of prior affiliated facilities, assignment type, and qualification were forced in as control variables. Assignment to the nurses' department of choice, nurse managers' and colleagues' support, and individual learning behaviours were entered using a stepwise method. NS, Needs-supplies; DA, Demands-abilities; PO, Person-organisation; PS, Person-supervisor; PG, Person-group; PHN, Public health nurses; β , Standardized beta coefficient; CI, Confidence interval; Ref, Reference; R², Coefficient of determination; Adjusted R², Adjusted coefficient of determination; -, Excluded variable; *, p value < .05; **, p value < .01.

properly evaluated and recognized by the nurse manager may have raised nurses' awareness of their abilities and the realization that they were able to meet the requirements of the job, prompting a strong DA fit.

Concerning colleagues' support, emotional support was found to be the positive related factor for the DA fit in multiple regression analysis. Although Takeuchi and Takeuchi²¹⁾ reported that the DA fit was related to training, neither informational support nor on-the-job training were positive factors in this study. Perhaps the supportive involvement on the job of their colleagues created an emotionally safe learning environment for nurses where they could develop their abilities to meet the job requirements.

Therefore, organizations should, as far as possible, assign nurses to the department of their choice to ensure a strong PJ fit later. However, whether this is feasible or not, the nurse manager's support may be crucial for an effective fit into the new environment.

2. Positive related factors for PO fit

Oh¹⁰⁾ indicated that social tactics of organizational socialization, such as colleagues' support, are related to the PO fit. However, little is known about the relationship between nurse managers' support for individual nurses and PO fit. In this study, although PO fit was positively related to all the types of support under nurse managers' support, except instrumental support in the simple regression analysis. However, after performing the main multiple regression analysis, informational support from their nurse manager was selected to be positive related factor in the multiple regression analysis. The nurse manager is more likely to provide guidance and advice that reflect the values and norms of the organization to the nurses. Therefore, it is possible that the nurse manager's guidance and advice may help the nurses feel aligned with the organizational values. Based on the results of this study, it is possible that the nurse manager's instruction and advice could generate a strong PO fit.

3. Positive related factors for PS fit

In multiple regression analysis, nurses who

perceived that they received emotional and appraisal support from their manager also had a higher PS fit. Although it was found that supervisors' leadership affects employees' PS fit²²⁾, not much is known about the relationship between supervisors' specific support and PS fit. The perceptions of both receiving emotional support and having one's competence evaluated and approved by the nurse manager may have promoted the alignment of the values between the nurse and nurse manager, which in turn resulted in a strong PS fit.

With regard to individual factors, this study further revealed the relationship between PS fit and learning from practice. In the simple regression analysis, each learning behavior was associated with each dimension of PE fit. However, the multiple regression analysis highlighted learning from practice as a positive related factor. Learning from practice requires more active learning by reflecting on one's own experiences, rather than resources provided by others, including feedback. The nurses who tended to reflect on their own experiences and draw from lessons learnt also observed the words and actions of the nurse manager, possibly considering their meaning and intention and thereby establishing a stronger PS fit. Although the relationship between individual learning and the DA fit¹²⁾ is known, its relationship with the PS fit was a new finding presented in this study. The results suggest that the nurse manager's emotional and appraisal support and the nurses' active learning from their own experiences and practices may generate a stronger PS fit.

4. Positive related factors for PG fit

In previous studies, PG fit was reported to be related to colleagues' support¹⁰⁾. In this study, the preliminary simple regression analysis suggested that colleagues' support was associated with the overall PG fit. However, the consultation aspect of on-the-job training and the nurse manager's appraisal support were highlighted in the multiple regression. The nurse manager's appropriate evaluation and approval are important and may influence their colleagues' attitudes, leading to a strong PG fit. The reason why only

the consultation aspect of on-the-job training was selected can be explained as follows: While the other colleague support factors measured in this study, including the teaching of on-the-job training, was the colleague's approach to the newly assigned nurse, the consultation aspect of on-the-job training was unique in a way that the colleague responded to the newly assigned nurse's request for consultation. This suggests that it may be easier to match values with those nursing colleagues who provide sought-after support for problems that arise in their practice, when necessary, rather than unilaterally providing support to the newly assigned nurses. Although the single regression analysis suggested that colleague support had a significant positive relation with each aspect of PE fit, the multiple regression analysis revealed that colleague support was not significantly positively related, except for "DA fit and emotional support" and "PG fit and consultation of on-the-job training." One possible reason for this could be that in departments where the nurse manager's support was often provided, colleague support is also often offered through the guidance of the nurse manager²³⁾, which may have been a confounding variable. Moreover, since the influence of the nurse manager was stronger, it was possible that the nurse managers' support was eventually opted for.

Many previous studies have focused on single or double dimensions of the PE fit. To the best of our knowledge, this is the first study to identify differences in the factors related to each of the five dimensions of the PE fit. In addition, studies involving only transferred nurses and recently hired nurses with prior clinical experience nurses are few. This study is important as it provided specific suggestions for clinical nurses and nurse managers on how to effectively enhance each dimension of the PE fit among nurses who have changed workplaces.

Our findings have implications for clinical practice. To achieve a high PE fit of five dimensions, nurse managers should treat nurses, especially those who have changed workplaces, with empathy, properly evaluate their competence

and efforts, and provide them with specific guidance on the job. In addition, as assignment to the nurses' department of choice was found to be positively related to some dimension of PE fit, the managers could take into account the nurses' preferences in taking assignments, if possible, which could well lead to a higher PE fit. Previous studies have shown that workplace mismatch with nurses' own desired work style and career plans can induce turnover^{24) 25)}. Indeed, not just health care organizations, Japan also needs to further consider building a health care system that allows nurses to adopt a diverse and flexible working style.

5. Limitations

The number of participants analyzed in this study was slightly smaller than the sample size, which may have resulted in lower power. Due to the small sample size, it was not possible to conduct a separate analysis for transferred nurses and recently hired nurses with prior clinical experience. However, in this study, the demographic and descriptive statistics of the two groups were checked, and variables with significant differences were controlled and analyzed together. In addition, this study may have been influenced by professional norms, such as hospital recruitment systems. Furthermore, some nurses may have been affected by changes in their designations before and after the change in workplace. Further, this study did not consider the career background, future career plans, family structure, caregiving and childcare environment, salary, and leave system of individual nurses, which may have affected each aspect of the PE fit. This study was a cross-sectional study, and so, the causal direction of factors related to PE fit could not be determined. Furthermore, this study included eight large general hospitals with over 400 beds including multiple departments, which limits the generalizability of the results. Finally, the researcher did not include the results of nurses who resigned or left the organization before the end of the first five months of their assignment. Therefore, nurses with very low PE fit scores may not have been included in the study.

Conclusion

This study identified organizational and individual factors related to five dimensions of PE fit among nurses who changed workplaces. The NS fit was related to the assignment of the nurses to their department of choice and nurse managers' informational support. The DA fit was related to the assignment of the nurses to their department of choice, the nurse managers' appraisal support, and the colleagues' emotional support. Moreover, PO fit was related to nurse managers' informational support, and PS fit to nurse manager's emotional support, appraisal support, and learning from practice. PG fit was related to the nurse manager's appraisal support and consultation of on-the-job training. Results suggest that the nurse manager's support is particularly important for nurses who have changed workplaces.

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Conflicts of Interest

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職場が変わった看護職の個人-環境適合感の 各側面に関連する要因の探索：横断研究

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キーワード

横断研究, 個人の学習行動, 職場が変わった看護職, 組織の支援, 多側面での個人-環境適合感

要 旨

【背景・目的】個人-環境適合感は、パフォーマンスなどのアウトカムと関連しており、高いことが望ましい。本研究は、職場が変わった看護職の個人-環境適合感の各側面と関連する組織的・個人的要因を明らかにすることを目的とした。【方法】病院内異動もしくは他施設からの新規入職（転職）によって職場が変わった8病院の看護職148名を対象に、2020年3月から10月にかけて移動後5か月時点で質問紙による横断調査を実施し、個人-環境適合感の各側面、希望部署への配属、看護師長および同僚のサポート、On-the-Job Training、学習行動などを測定した。記述統計、単回帰分析、ステップワイズ法による重回帰分析を行った。【結果】重回帰分析の結果、個人-環境適合感の複数の側面は、看護師長からのサポートと正の関連があった。また、希望部署への配属と同僚からの情緒的サポートは欲求-供給および需要-能力適合感と正の関連があった。【結論】職場が変わった看護職の適合感を高めるためには、看護師長のサポートが重要だと示唆された。