

# Staying with nursing: the impact of conflictual communication, stress and organizational problem-solving

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**Aim:** To predict nurses' intent to stay on the job as a function of organizational culture.

**Background:** Organizational climate significantly contributes to retention of nurses. Communication by conflict and organizational control over problem-solving has not thoroughly been studied.

**Methods:** A cross-sectional design was used with a randomly selected final sample of 367 nurses from regional hospitals in Hungary. Organizational climate, perceived stress, locus of control and self-esteem were assessed as main measures. Nurses indicated their intent to stay for the next 5 years. Spearman correlation coefficients were calculated to evaluate associations. Bivariate logistic regression was performed to predict intent to stay in nursing.

**Findings:** Organizational climate was negatively correlated with perceived stress and personal locus of control and positively with personal self-esteem. Organizational level internal locus of control (belief that employees have control over problem-solving) doubled the probability of staying on the job. Conflictual communication and perceived stress both decreased intent to stay by 50%.

**Discussion and conclusions:** Organizational internal locus of control, stress and conflictual communication were main predictors of intent to stay. The belief that nurses had collective control over problem-solving capabilities had a positive and greater impact on nurse retention compared to other measures.

**Implication for nursing policy:** Healthcare organizations should routinely scan workplace culture for conflictual communication, stress and organizational problem-solving capacities. Graduate nurse and nurse manager training should include practices that enable developing positive work atmospheres. Hospital managements should allocate training budget to stimulate and achieve cultural change.

**Implications for nursing practice:** Nurse managers should promote internal trainings to help staff nurses adopt techniques that minimize conflict and emphasize positive impact of collaborative problem-solving.

**Keywords:** Conflictual Communication, Hungary, Intent to Leave, Organizational Climate, Problem-Solving, Stress, Nursing

## Introduction

In its different global reports and action plans, the World Health Organization reiterated that shortages of nursing

personnel continues to burden health systems (WHO 2020). Nurse retention therefore has become the most critical human resources challenge to maintain access to and the quality of nursing services. While nurse retention is influenced by several personality-related factors, work stress and organizational climate remain key aspects. Even WHO's global strategy specifically called for provision of 'adequate work processes, gender-balanced opportunities to correct competency gaps, supportive feedback, group problem-solving, and a suitable work environment' (WHO 2016). Therefore, positively perceived organizational climate, lower stress and recognition can be

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sources of satisfaction that prevent nurses from seeking new employment. Work-related stress, however, is prevalent in today's health care organizations, and reports confirm stress-induced turnover intentions between 25% and 33%, respectively (Ulrich et al. 2019, Zhang et al. 2019a). Destructive work cultures are linked to work-related stress, understaffing and job dissatisfaction and explain nurses' intent to leave, direct line manager support having a positive impact on the decision to stay (Cariciati et al. 2014, Halter et al. 2017, Hämmig 2018, Nantsupawat et al. 2017, Sasso et al. 2019, Shin et al. 2018). While authentic nurse management positively influences turnover intent, work milieu negatively mediates the relationship (Lee et al. 2019). When encouraging attitude of the organization is combined with transformational nurse management style, both positively influence nurses' decision to stay (AbuAlRub and Nasrallah 2017). Nurse staff retention also significantly improves when organizations invest in the development of their culture by use of organizational psychology and personal enablement, including practice autonomy (Fragkos et al. 2020, Han et al. 2018). Low intent to leave nursing is especially associated with a climate that emphasizes nurses having a 'soul' and 'spirit' (Zhang et al. 2019b). Beside low stress, emotional and direct line manager support, positive organizational climate is known for shared control and the ability to collectively respond to challenges and difficulties. The direct effect of personal control over one's job is a lower desire to exit nursing (Yamaguchi et al. 2016). Going from practice to administrative level, increased leadership control and empowerment, especially nurses being included in hospital management, significantly buffers turnover intent and contributes to better organizational atmospheres (Schirle et al. 2019, Trus et al. 2019). However, when professional control is restricted, a culture of distrust is created that facilitates higher turnover (Caylak and Altuntas 2017). Ethical organizational cultures, on the contrary, make nurses feel appreciated and loss of staff is reduced (Abou Hashish 2017, Cariciati et al. 2014, Top and Tekingunduz 2018). However, policies that position nurses lower in organizational power structures push nurses to leave, especially middle and top nurse managers (Labraque et al. 2017). Shared problem-solving may be a potential defence against such challenges, Church et al. (2018) reported that acting as a cohesive team to face challenges significantly lowered turnover intent. Using collective problem-solving and positive communication to manage conflict are both perceived as promoting constructive workplace cultures (McKibben, 2017).

As highlighted above, organizational culture and work environments continue to make a significant contribution to nurse retention. While stress, nurse leadership style and

emotional aspects of organizational culture have been well studied, shared control, collective problem-solving and the impact of conflictual/respectful communication should be further explored in relation to nurse turnover. The aim of this research therefore was to predict nurses' intent to stay by using a mix of main measures: personality-based (personal locus of control and self-esteem), stress and dimensions of organizational culture (working together to solve problems, problem-solving is under the control of the organization, and conflictual and respectful communication).

## Methods

The study design was prospective, cross-sectional and predictive. All subjects were asked to respond to paper-based questionnaires. A sampling frame of 500 nurses was randomly selected from employment records. Of the 500, a significant number of nurses both in practice and leadership were approached in a university hospital system and in two additional regional hospitals in Hungary. While the sampling frame was randomly selected, final participants were conveniently invited into the study in that those who were on duty on day of data collection, and consented, became participants. Research team asked local nursing administration staff to aid data collection. Instruments were paper and pencil based for ease of administration and for soliciting more responses. Nurses filled out and returned surveys on the same day without discussing answers in their teams. There were no specific exclusion criteria except for length on the job (those less than 1 year were excluded). We used no specific measures to replace missing data, and incomplete answers were removed from analyses. Data collection took place between March and June 2019. All questionnaires had been translated to Hungarian and back-translated to English before use. A small sample (10 subjects) pilot was run to test the validity and reliability of instruments. Sample size considerations were calculated based on statistical tests performed. Sample size was calculated to meet the power needs of the bivariate logistic regression. With alpha set at 5% (0.05), power at 18% (0.82) and an odds ratio of 1.5 considered, a priori sample size calculation indicated 198 subjects in total.

## Measures

The following instruments were applied to measure main concepts. To assess *organization climate*, the Organizational Climate Scale (OCS) was employed (Thompson and Cubbin 1996). The OCS is described as 'a 30-item scale designed to measure the problem-solving and communication patterns of individuals in the workplace that are sensitive to

organizational change.' The OCS has two problem-solving (challenge and control) and two communication subscales (conflictual and respective). Answers are recorded on a 3-point scale, greater scores indicate better climate. The OCS had reliability reported between 0.82 and 0.89 in previous research and was 0.78 in this research.

*Locus of control* was assessed by the Rotter Locus of Control Scale. The RLC is a 29-item questionnaire originally developed by Rotter (Calado et al. 2018) and as stated by the instrument description 'it measures generalized expectancies for internal versus external control of reinforcement.' Internal locus of control is a belief that one is in control about decisions of her life whereas external control refers to outside events determining one's actions. Scoring is from 0 to 29, lower scores indicate internal, high scores show external control. Scale reliability had been reported 0.828 (Calado et al. 2018) and was 0.69 in this paper.

*Perceived stress* was measured by the Perceived Stress Scale (PSS) (Cohen et al. 1983). As indicated, 'items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives'. The PSS has 10 items, and answers are recorded on a 0 to 4 Likert scale (0 = never, 4 = very often). Higher scores suggest greater stress. Validity and reliability were established in earlier research, and Cronbach's alpha for the scale was 0.82 in this study.

To measure self-esteem, the Rosenberg Self-Esteem Scale was utilized (McKay et al. 2014). The instrument has been described as 'a 10-item scale that measures global self-worth by measuring both positive and negative feelings about the self'. Respondents answer to statements on a 4-point Likert scale (from strongly agree to strongly disagree). Greater scores indicate better self-esteem. Sufficient prior validity and reliability had been reported, and we achieved a reliability of 0.80 in our research.

*Intent to stay in nursing* was measured by a forced choice question ('How likely are you going to stay in nursing in the next 5 years?') where 1 = not very likely and 2 = very likely.

### Statistical analysis

All analyses were carried out by SPSS Windows version 25.0. Sample size and power calculations were done by G\*power Windows version 3.1.9.2 (G\*Power 2020). Normality distribution was assessed by one sample K-S test. Spearman correlation coefficients were calculated to evaluate relationships. Mann-Whitney tests were used to detect differences. Bivariate logistic regression was performed to predict intent to stay in nursing. A  $P$ -value  $< 0.05$  was considered as statistically significant, and one-tailed test was used where appropriate.

### Ethical considerations

Participation in the study was strictly voluntary and anonym. Participants were asked to fill out instruments individually and not reveal responses to anyone. Completed instruments were placed in sealed, unmarked envelopes by respondents before returning for collection. Participants received no monetary or in-kind compensation for their participations. No individual consent form was signed. The study was approved by the Ethics Committee of the Faculty of Health, University of Debrecen (decision # ETKB/EÜKAR-DE/46-2018).

### Results

The final sample consisted of 367 subjects of whom 60 (16.3%) were employed in leadership position, the rest as staff nurses. The majority of our respondents were women (86.7%), holding an undergraduate degree, less than a bachelor of science (BSc). The remaining sample held a BSc (29.7%) or master of science (MSc) degree (5.6%). The average age of our sample was 39.5 (SD  $\pm$  9.47) years, and nurses had worked in health care for an average of 18.7 (SD  $\pm$  10.9) years and 11.8 (SD  $\pm$  9.54) years in their current positions. Of all staff nurses, 16.7% responded unfavourably in terms of staying in the profession. The ratio was about half (8.3%) for nurse managers in this sample.

Descriptive statistics of main measures are presented in Table 1. Respondents rated their hospital organizational climate below average, reported more internal locus of control and higher self-esteem, and about average levels of perceived stress.

As for testing the difference between nurse managers and staff nurses on their perception of organizational climate, we found that nurse managers appraised the climate more positively than their staff ( $Z = -2.88$ ;  $P = 0.005$ ).

Since the OCS is constructed of four subscales, we decided to explore where in the organizational climate differences

**Table 1** Descriptive statistics of main measures

	N	Minimum	Maximum	Mean	Std. Deviation
Organization climate	239	32.00	74.00	55.82	7.51
Locus of control	216	2.00	23.00	12.62	3.87
Self-esteem	248	20.00	40.00	32.16	4.21
Perceived stress	256	1.00	34.00	16.71	6.33

OCS: ORGANIZATION CLIMATE SCALE; PSS: Perceived stress; RLC: ROTTER LOCUS OF CONTROL SCALE; RSE: ROSENBERG SELF-ESTEEM SCALE.

may have occurred. Nurse managers and staff members differed in terms of their views on how much the organization 'works together to solve problems' and whether the organization is based on a culture of respectful communication. In both cases, nurse managers had more favourable opinions compared to their staff ( $Z_{\text{problem\_solving}} = -2.26$ ;  $P = 0.034$  and  $Z_{\text{respectful\_com}} = -4.36$ ;  $P = 0.009$ ).

Results revealed significant correlations for all main measures (Table 2). Positive appraisal of organizational climate was negatively related to locus of control, positively to self-esteem and negatively to stress. That is, better organizational climate increased personal self-esteem and lowered stress. The more self-esteem nurses felt the less stress they also perceived. Greater stress was positively associated with locus of control, that is, those with external locus of control experienced higher levels of stress. Finally, locus of control and self-esteem were inversely correlated, that is, those with external locus of control showed lower self-esteem.

To evaluate intent to stay, binary logistic regression was used, intent to stay in the next 5 years being the dependent variable of interest. Data with studentized residuals greater than  $\pm 2$  were removed as influential outliers in the sample. We were aware that staff nurses and nurse managers differ on their perceptions about main measures, two independent regression models were developed. Results of the regression analysis only for nursing staff are displayed in Table 3 because the model for nurse managers did not reach significance. The omnibus test indicated a significant model with a good fit (Nagelkerke's  $R^2 = 0.73$ ). According to Cox and

**Table 2** Correlations between organization climate, locus of control, self-esteem and stress

			OCS	RLC	RSE	Stress
Spearman's rho	OCS	Correlation Coefficient	1.000	-0.336	.385	-0.371
		P-value	.	<0.001	<0.001	<0.001
	RLC	Correlation Coefficient	-0.336	1.000	-0.180	0.311
		P-value	<0.001	.	0.013	<0.001
	RSE	Correlation Coefficient	0.385	-0.180	1.000	-0.486
		P-value	<0.001	0.013	.	<0.001
	Stress	Correlation Coefficient	-0.371	0.311	-0.486	1.000
		P-value	<0.001	<0.001	<0.001	.

OCS: Organization climate scale; RLC: Rotter locus of control scale; RSE: Rosenberg self-esteem scale.

Snell's  $R^2$ , the current model explained 35% of the probability to stay in the nursing profession. The model also achieved a correct classification of 94%. Variables that reached significance in the model were: age, OCS internal locus subscale (problem-solving is under control of the organization), conflictual communication and stress. Exp (B) (odds) inform about the probability of the event happening in the dependent variable caused by the unit change in the independent. Therefore, an increase of 1 year in age will increase the probability of staying in the nursing profession by 50% (the older nurses become, the more likely they will stay). Similarly, one-point increase on the internal locus subscale of the OCS will almost double the odds of staying in nursing (1.9 times). However, a point increase on the conflictual communication subscale of OCS or on the PSS will decrease the odds of staying in nursing by almost 50% (0.48 and 0.53, respectively).

## Discussion

The purpose of the current research was to predict the impact of organizational climate on nurses' intent to stay in the profession. Our study demonstrated that organizational internal locus of control (employees agree that they have collaborative

**Table 3** Logistic regression: staying in nursing in the next 5 years (dep. var.)

Variables in the Equation				
	B	Wald	P-value	Exp(B)
Degree		2.030	0.362	
BSc(1)	-15.147	0.000	1.000	0.000
MSc(2)	-10.925	0.000	1.000	0.000
Years in health care	-0.170	2.065	0.151	0.844
Age	0.411	6.450	0.011	1.508
OCS: Working together to solve problems	0.356	3.164	0.075	1.427
OCS: Problem-solving is under control of organization (internal locus)	0.644	4.409	0.036	1.903
OCS: Conflictual communication	-0.734	4.212	0.040	0.480
OCS: Respectful communication	0.182	0.909	0.340	1.199
RLC <sup>†</sup>	0.415	2.691	0.101	1.515
RSE <sup>‡</sup>	0.294	2.026	0.155	1.42
Stress <sup>§</sup>	-0.424	3.850	0.050	0.528
Constant	-27.020	0.000	0.999	0.000

<sup>†</sup>Rotter's Locus of Control Scale.

<sup>‡</sup>Rosenberg Self-Esteem Scale.

<sup>§</sup>Perceived Stress Scale.

control of problem-solving within the organization) doubled the probability of nurses staying on the job. However, job stress and confrontative communication decreased nurses' intent to stay in nursing by 50%. We also found that perceived stress and organizational climate were negatively correlated, better climate significantly lowered personal stress. These results were in line with that of Halter et al. (2017), Johansen and Cadmus (2016) and Fragkos et al. (2020). However, authors argue that developing a culture of collaborative problem-solving at the organizational level may be difficult to achieve in the short term. Such changes require commitment from top management that may not have the same focus as nurse managers. Therefore, nurse managers in the organization need to align on the importance of cultural changes and need to secure budget to achieve unit specific transformational targets. Based on findings, improving collaborative problem-solving in which employees have shared control, should achieve twice as big retention rates if conflict-based communication or job stress were individually addressed (Halter et al. 2017, Hämmig 2018, Labrague et al. 2017). Our findings confirm and support WHO's recommendation concerning the institutionalized use of *group problem-solving* (WHO 2016).

We also found that, compared to staff, nurse managers overestimated the level of respectful communication and how well their organization works together to solve problems. This is an important finding that shows nurse managers being positively biased towards their culture and explains why managers potentially delay opportunities to intervene. While we successfully predicted staff nurses' intent to stay, we recommend that future research investigate additional factors that help develop a useful model for nurse managers as well. As we saw in earlier research, nurse managers had a direct influence over staff nurses to stay, therefore it is critical to understand where differences in their view of the organization emerge, also to help nurse managers identify what type of different support they and their staff need in order to continue in their nursing career.

### Implications for nursing practice and policy

Outcomes support that healthcare organizations should regularly assess workplace culture to understand how much communicating by conflict, and stress, impact on nurses' turnover and how well collaborative problem-solving is being used across the organization. Results stress that creating environments where problem-solving is a cooperative effort, and is controlled by both staff and management, should double retention of staff nurses. Authors argue that building a positive culture begins in early education, therefore, graduate nurse programs should include practices that enable future

nurses to develop supportive work environments. Hospital leadership should support nurse managers attend trainings and study positive organizational development. An example may be the Master of Science in Positive Organization Development and Change, taught at Case Western Reserve University in the USA; however, similar programs may be available in many universities and countries (CWRU 2020). In order to achieve the preferred cultural transformation, nurse managers need to request top management to allocate annual funds for staff training and development. In support of Labrague et al. (2018), we recommend nurse managers use coaching and promote training to help staff adopt techniques that minimize conflict and emphasize team problem-solving. Finally, building a positive professional culture based on collaborative problem-solving should be part of the mission and vision of all healthcare organizations.

### Limitations

Authors acknowledge that the RLC scale achieved lower reliability (0.69) which may have influenced statistical conclusions. While the study was limited to Hungary, universal patterns in the organization of nursing services should offer generalizations for other health systems.

### Author contributions

Study design: ASU, MZ, AO, MG, EHJ, NF

Data collection: ASU, MG, EHJ, NF

Data analysis: MZ

Study supervision: ASU, AS, AO

Manuscript writing: MZ

Critical revisions for important intellectual content: ASU, AS, AO, NF

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