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ORIGINAL RESEARCH

Perceived Organizational Support and Work Engagement of First-Line Managers in Healthcare – The Mediation Role of Feedback Seeking Behavior

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Background: First-line managers play a significant role in the management system of a health-care organization because they provide support and bridge for both senior management and their subordinates. Their work engagement becomes the foundation of facility functioning, encompassing both meeting organizational goals and the patient-centered care approach, but also meeting the expectations and needs of subordinate staff. The purpose of our study is to examine the relationship between perceived organizational support and work engagement of first-line health-care managers and the deeper mechanisms in the form of feedback seeking behavior that may positively influence this relationship.

Methods: Data collection was carried out in the form of a questionnaire survey in the period February 2021. Respondents were first-level medical managers from different types of clinical areas and from all Slovak hospitals (221). The PLS-SEM method was used to analyze paths between variables and to analyze direct and indirect effects using SmartPLS 3.3 software.

Results: The findings indicate a positive association of perceived organizational support and work engagement. Hypotheses about the mediation of the two components of feedback seeking behavior (monitoring and inquiring) have support in both their separate and joint mediation. At the same time, in joint mediation, a larger part of the indirect effect is transmitted by the feedback seeking behavior inquiring and thus represents a possible direction of interest for the top management of hospitals to strengthen the work engagement of their first-level managers not only for the purpose of their higher performance, but also of their job satisfaction.

Conclusion: Perceived organizational support enhances the work engagement of first-line managers. However, the total effect is significantly higher when feedback seeking behavior is involved not only in monitoring, but especially in inquiring.

Keywords: work engagement, perceived organizational support, feedback seeking behavior, Slovakia, hospitals

Plain Language Summary

1. Implications for Policy-Makers

- a culture of feedback should become a binding standard within people management processes in health-care facilities, as it contributes to increasing employee engagement,
- it is advisable to consider forms of implementing feedback into all processes, given the specifics of health-care institutions, so as to create space for the involvement of

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employees themselves in evaluation processes; self-assessment creates space for the promotion of feedback seeking behavior inquiring, which contributes significantly to fostering engagement,

- promoting formal management education for health-care managers seems to be an appropriate future strategy, as there is a proven relationship between the completion of such training and the implementation of management practices that increase employee engagement.

2. Implications for Public

Engaged first-line managers are not only dedicated and passionate about their work, but also have a significant impact on the organization's performance and bottom line, especially by reducing operating losses. Hospitals looking for improving employee engagement should focus on how their first-line managers perceive the support they receive from their organization. Our study demonstrated that the relationship between perceived support and engagement is not only direct but can be significantly amplified by feedback seeking behavior. Fostering a culture of providing feedback may be a key factor in efforts to increase engagement of hospitals' first-line managers. Our study has also confirmed that up to 60% of the indirect effect is transmitted through feedback seeking behavior inquiring and a smaller role is played by feedback seeking behavior monitoring. It is therefore essential that hospitals encourage direct, open communication between hospital management and staff, as well as between staff and each other, so that staff are not afraid or embarrassed to ask directly for feedback.

Background

Health systems in developed countries are currently facing various influences from external and internal environments, which are reflected in the management of health facilities and increase the pressure not only on top managers, but also on first-line managers. In addition to the current Covid-19 pandemic and its wide-ranging implications, challenges related to technological advances, demographic developments, chronic diseases, rising societal expectations of the healthcare system, rising health-care costs and many others are continuously increasing the need for efficiently managed and quality healthcare.[1] Within the structure of hospitals in the country, first-line managers (FLMs) are nurse managers and chief nurses responsible for the running of wards, the creation of a healthy working environment,[2] patient satisfaction[3,4] and the effective functioning of interdisciplinary teams.[5] First-line managers are the link between top management and rank-and-file employees. They have to face both pressures from "above! In the form of meeting the organization's objectives and the patient-centered care approach that has almost everywhere replaced the traditional paternalistic approach to health care.[6,7] At the same time, they have to face pressures from below" as too much patient-centered orientation is associated with greater clinician burnout, job dissatisfaction and frustration.[8] FLMs serve as a model that sets the level and expectations for health-care organizations.[9] Researchers in the field of health-care management are becoming interested in examining the factors that contribute to the satisfaction, engagement, interest, or higher commitment of this group of managers, which is crucial for the performance of health-care facilities and the quality of health-care delivery. In the environment of Slovak nursing, the situation is specific also due to the financial underestimation of FLMs, whose salaries, especially in the case of head nurses, have remained low for a long time. To ensure quality health care, it is therefore necessary to look for other tools to increase the satisfaction and commitment of these key employees. Employee engagement remains a matter of discourse in the 21st century. Pangarkar and Kirkwood[10] state that "employee engagement is the holy grail for every business leader". This is generally defined as when employees fully invest emotionally, mentally, and physically so they focus on achieving the organization's objectives.

We accept the theory of organizational behavior, according to which work engagement (WE) is a multidimensional construct that groups various aspects such as employee satisfaction, employee identification, employee commitment, employee loyalty and employee performance.[11] It is also combined with the Social Exchange Theory (SET)[12] and the Norm of Reciprocity (NoR) published by Gouldner[13] according to which employees feel an intrinsic obligation to repay the organization for the favorable and supportive treatment they have received from the employer by developing favorable attitudes toward the organization and helping the organization to achieve its goals.[14] Based on the above, there is a direct relationship between perceived organizational support (POS) and work engagement. However, organizational behavior is a complex system of relationships, so there is a need to further investigate the mechanism within which the higher positive effect of the interrelationship between organizational support and employee engagement may occur. In our study, we introduce feedback seeking behavior (FSB) as the active behavior of first-line managers in the form of both monitor (FBSM) and inquiry (FBSI)

behavior.[15] We build on studies that have identified positive associations between FBSB and WE[16,17] and our intention is to deepen our understanding of the association with POS as well as the functioning of the overall model thus developed. The central concept of our study is as follows: there is a positive association between POS and WE of first-line health-care managers, which is mediated by their FBSB (FBSBM and FBSBI). The correlation between POS and WE has been investigated in several studies.[18,19] Dai and Qin[18] argue that employee engagement is a property of the relationship between an organization and its employees. Engaged employees are fully immersed in their work, passionate about what they do for the organization and therefore contribute to the fulfilment of the organization's goals, promoting its interests and reputation. Authors Robinson, Perryman and Hayday[20] define engagement as a positive attitude held by the employee towards the organization and its values. Based on their research, an engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the organization. Bakker et al[21] argue that there are two approaches to the perception of engagement in the work environment, with both approaches perceiving as a positive, work-related state of well-being or fulfilment. The first approach is represented by Maslach and Leiter,[22] where engagement is characterized by energy, involvement, and efficiency, ie, the direct opposites of the three dimensions of burnout - exhaustion, cynicism, and inefficiency. However, the second approach considers engagement to be an independent concept that is negatively related to burnout. According to this concept, commitment is built mainly a positive, fulfilling, work-related state of mind that is characterized and manifested by vigor, dedication, and absorption.[23] Zeidan and Itani,[24] claim that engaged employees are perceived as employees who work harder, are willing to go the extra mile, and are more passionate about the work they do and the quality they present to produce better results that drive business growth.

Research results show that POS is less related to WE than to affective organizational commitment.[25] However, if POS is high, employees may find their work environment more pleasant, may feel that their work is more valued and may be more interested in their job. Although POS focuses more on the organization rather than the work itself, findings show that when employees are valued by the organization, their engagement with their work also increases.[26] POS results in greater commitment due to the social exchange view of employee–organization relationships, according to which workers trade effort and dedication to their organization for such tangible incentives as pay and fringe benefits and such socio-emotional benefits as esteem, approval, and caring.[27] The findings of Aktar and Pangil[28] showed that all the HRM practices namely career advancement, job security and performance feedback were positively and significantly related to employee engagement, whereas the POS acts as a mediator in this relationship. A study done by Yongxing et al[29] indicated that POS positively moderated the relationship between work engagement and job performance.

Based on these findings, we formulate the following hypothesis:

H1: We hypothesize that POS is positively related to WE.

Previously conducted studies[18,30] have pointed out that multiple variables may enter into the relationship between POS and WE and amplify the relationship, ie, the effect of POS and WE may not always be direct. Dai and Qin[18] confirmed mediating role of organizational identification in the relationship between POS and WE. Imran et al[30] confirmed the direct and indirect effect of POS on work engagement through flourishing and thriving. Self-efficacy mediating role in the relationship between POS and work engagement was confirmed in the study of Musenze et al.[31] The results of the study of Kose[32] suggested that there is a positive and significant relationship between work engagement behaviors and perceived organizational support and organizational climate and that organizational climate and perceived organizational support had a positive and highly significant relationship.

Our intention is to test the influence of feedback seeking behavior (FSB) of first-line managers in health-care on the investigated relationship between POS and WE, as we hypothesize that FSB could play an important role here. FSB as the proactive search for feedback information in the environment[15] is a valuable resource for individuals in work and educational settings as it aids their adaptation, learning and performance.[33] The majority of FSB researchers used an overall measure of FSB, Ashford and Cummings[15] originally postulated that different motives and situations would lead employees to directly ask colleagues for feedback (feedback inquiry) instead of using a more indirect method of observing and inferring feedback information from the environment (feedback monitoring). The FSB itself includes two

components. Monitoring involves attending to and taking in information that an individual perceives in his or her environment. Monitoring entails an in-depth observation of the situation and other people's behavior (ie, one's environment) in order to collect information about one's own performance.[33] These feedbacks must then be interpreted by the individual, which carries some risk – eg, that the individual may read the feedback differently to how others actually evaluate their behavior.[15] Inquiry is the second form of feedback seeking behavior. It is the individual's attempt to actually increase the amount of personally relevant data in his or her information environment by directly asking actors in that environment for their perception and/or evaluation of the behavior in question.[15] Inquiry is a useful method, but individuals are often afraid and apprehensive about directly asking for feedback. Some studies have compared differences between individuals preferring FBSBM and FBSBI. For example, de Stobbeleir et al[34] found that FBSBI related to supervisor ratings of employee creative performance and that FBSB is not only a strategy that facilitates individual adaptation, but also a resource for achieving creative outcomes. The results of Anseel et al[35] indicated that the two dimensions of FSB are not interchangeable. Authors found significantly different relationships between inquiry and monitoring with perceptions of the cost of feedback seeking and with job performance, indicating that the two feedback-seeking methods are separable.[35]

The relationship between POS and FBSB has been investigated in several studies. For example, a study by Li, Long and Er-Yue[36] confirmed that the relationship between job insecurity and feedback-seeking behavior is negative under conditions of high perceived organizational support and is positive under conditions of low perceived organizational support. The relationship between feedback and WE is not clear in the research. Authors such as Ajibola et al,[37] Hamzah et al[38] confirmed that the relationship between FSB and WE is not significant. On the contrary, there are studies that have shown that FSB has a positive relationship with WE.[16,39] A study by Aktar and Pangil[17] confirmed a positive relationship between performance feedback and WE, which is similar to the study by Menguc et al.[40] This confirms that providing corrective measures to get employees back on track or reinforcing their effectiveness motivates employees to be more engaged. Also based on these, we assume that FSB has a positive impact on WE.

Therefore, we formulate the following hypotheses:

H2: We hypothesize that FBSBM mediates the relationship between POS and WE.

H3: We hypothesize that FBSBI mediates the relationship between POS and WE.

H4: We hypothesize that both factors FBSBM + FBSBI mediate the relationship between POS and WE.

Methods

All data were collected by questionnaire survey in general hospitals in Slovakia in the period February 2021. Medical managers at the first level of management (chiefs and head nurses) from different types of clinical areas and from all hospitals that are in Slovakia (total number 62) were approached to participate in the study and the meaning and purpose of the study was explained to them. They were sent a link to the questionnaire via a Google Form and by completing and submitting it they agreed to data processing. A total number of 221 responses were obtained from health-care managers with a mean age of 48.22 years (min.=40, max.=65, SD=9,67), mean experience in management position of 14.06 years (min.=2 years, max.=29 years, SD=10,51). Of the 221 managers, 65% were women and 35% were men, all had a university degree and 61.1% had attended and completed a specialization course in management. The hospitals in which the managers work are both government-owned (52%) and privately owned (49%) and are facilities with staff numbers predominantly between 50 and 250 (75%) and over 250 (25%).

Measurements

The survey was conducted in the conditions of Slovakia. As the measurement tools used by us are not available in the Slovak language, we used some best practices for verifying the validity and methodological soundness of the used constructs, presented by the authors Schaffer and Riordan[41] in solving cross-cultural complexities. Some of the recommendations that were not feasible in our research area were listed in the research limitations. For establishing semantic equivalence, we used back-translation before administering an instrument. Bilingual experts translate the instrument from English to Slovak and then back again to English, and subsequently, in the event of inconsistencies, the individual items were reworded to establish meaning conformity. At the same

time, we tried to use short, simple sentences and repeat nouns instead of using pronouns. A 5-point Likert type scale (1 = strongly disagree; 5 = strongly agree; 1 = never; 5 = very frequently) was used.

Feedback Seeking Behaviour (FBSB)

We used a tool by Williams and Johnson[42] and Vandewalle et al[43] to measure FBSB, which evaluates this variable in terms of two aspects. The first is the monitor (FBSBM), in which respondents respond to five items related to the frequency with which they monitor their environment for feedback. Items on the monitoring scale were measured using a 5-point Likert scale ranging from 1 (never) to 5 (very frequently). Example items: "How often do you compare your performance with that of your co-workers ?", "How often do you pay attention to the informal remarks of others about your work performance?"

The second aspect is the questioning aspect (FBSBI), in which the respondents evaluated the frequency of SV search from their superior and colleagues using 6 items. 6 items concern their performance, technical aspects of their work, organizational values, expectations with regard to their role and social norms concerning expected behavior (their performance, technical aspects of their job, organizational values, expectations with respect to their role, and social norms regarding expected behaviors). Examples of items are: "How often do you ask your supervisor for information about what is required of you to function successfully on the job?", "How often do you ask your supervisor how well you are performing on the job?" and "How often do you ask your coworkers how well you are performing on the job?".

Perceived Organizational Support (POS)

Perceived organizational support was measured by evaluating 5 items developed by Eisenberger et al[14] and validated in many other studies.[44–46] An example of items is: "My organization takes great pride in my accomplishments", "My organization really cares about my well-being".

Work Engagement (WE)

Workload was measured using a 9-point scale, which is an abbreviated version of the original 17-point Utrecht Work Engagement Scale (UWES), which has excellent psychometric properties.[47] Because the three basic dimensions of work commitment (energy, determination and absorption) are usually highly correlated, the 9-item scale provides a good indicator of work commitment.[47] Respondents rated how often they had experience with each of the nine items on a 5-point scale from 1 ("never") to 5 ("always"), for example, "I feel energized at work", "I'm proud of the work I do", and "I get carried away while I work".

The relationship between POS and WE has been investigated in several studies. As stated in study of Dai and Qin[18] POS significantly affects employee engagement – when employees perceive the support from the organization, the employees belonging sense to the organization will be strengthened and it makes the employees work hard to achieve the organization's goals, showing a higher degree of employee engagement.

Control variables were age (in years), management experience (in years), gender (male = 0, female = 1), completed specialization study in management (0 = no, 1 = yes), ownership and size of the facility that were selected as control variables given their theoretical relevance and the possibility of their influence on the investigated relationships. The control variables we selected were also used in other previous studies; Vesterinen et al[48] in this study of FLMNs leadership also works with the control variables age, education, length of work experience as nurse manager, and updating education. Same Shader et al[49] considers the age of nurses and the experience of nursing to be a variable related to their job satisfaction. According to Kalisch et al[50] education is a factor influencing nurses' job satisfaction. Stefanidis and Strogilos[51] also pointed to the role of gender, age and education in research into the impact of organizational support on health-care employee engagement.

The questionnaire contained a set of 25 indicator variables for the measurement model. As common method bias is a common and serious problem in research, we have taken several steps to alleviate it. The items in the questionnaire were randomly scattered, mixed, the scales of some answers were inverted, and at the same time we divided the questionnaire and presented each part in a different context so that the respondents were not affected by their previous answers and their idea of the results. We also used the calculation of the VIF indicator. The occurrence of a VIF greater 3.3 is proposed as an indication of pathological collinearity and as an indication that a model may be contaminated by common method bias. Therefore, if all VIFs resulting from a full collinearity test are equal to or lower than 3.3, the model can be considered free of common method bias.[52] After realizing collinearity statistics in

Smart Pls, we found that the inner VIF values are all lower than 3.3.

Data Analysis

We used the PLS-SEM (partial least squares structural equation modeling) method to test our research model and proposed hypotheses and to better understand the relationships between the selected constructs.[53] This method makes it possible to test several hypotheses simultaneously within direct and indirect effects in a complex system.[54–56] We chose to use it for several reasons. The first is the relatively small sample size (221). Other reasons are the complexity of the research model, the focus of the study on predicting dependent variables, and the use of latent variable scores for predictive purposes. We used the SmartPLS 3.3 software[57,58] for the assessment of both the measurement model and the structural model. The advantage of this program is that it assesses both models simultaneously.

Results

The analysis within the PLS model consists of two stages[59] following one another. The first is to verify the reliability and validity of the measurement model and the second is to evaluate the structural model, which is shown in Figure 1. The models show links between constructs through a set of paths, which reflects the tested hypotheses. The relationships between constructs capture direct, indirect and interaction effects.

Measurement Model

The evaluation of the measurement model is the first step in the analysis and is performed to determine that the proposed model meets all the common requirements. It is performed in the form of reliability and validity analysis, which we use to verify the quality of the criteria we set. Our results (see Table A.1 in the Annex) show that the measurement model meets the reliability requirement because all the standardized loadings are greater than 0.70.[60] At the same time, the requirement of internal construct reliability is also met. This reliability was monitored by Cronbach's alpha and composite reliability (CR), all values being greater than 0.70 and less than 0.95.[61] Multiple measurements are used to better verify the reliability of constructs. Cronbach's alpha is considered an older and more conservative criterion. Cronbach's alpha is excellent for all constructs (from 0.936 to 0.949). CR is considered the most liberal one.[62] In our model, the CR is in the range of 0.940–0.952. Another tool we measured was rho_A, which is also satisfactory (range 0.939 to 0.951) and based on the theory should be between the value of Cronbach's alpha and CR.[62]

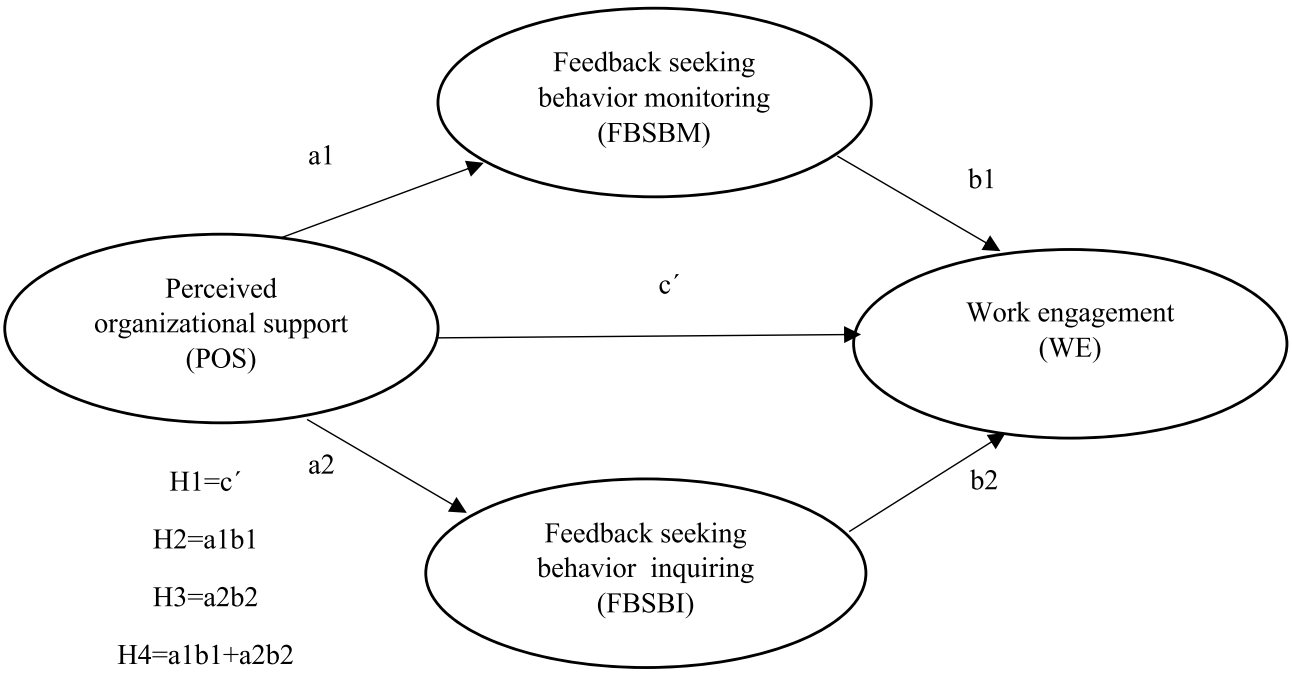


Figure 1 The mediation model and the 5 tested hypotheses.

Scientists should also assess the convergent validity. For this purpose, we used the calculation of the average variance extracted (AVE), which in our model exceeds the level of 0.5[60] for all constructs, which means that the construct explains an average of at least 50% of its item's variance. Finally, we also subjected our model to a discriminant validity analysis. As the validity of the use of the three recommended tools in its measurement is discussed,[63] we used in addition to the traditional the Fornell-Larcker criterion and cross loadings[54] also the HTMT criterion[62] that is measured as the mean value of the indicator correlations across constructs. The authors recommend its value lower than 0.85–0.9 depending on the similarity or difference of constructs.

Discriminant validity was assessed by Fornell-Larcker criterion, and the table shows that square-root of AVE for the construct was greater the inter-construct correlation. Discriminant validity was also assessed by heterotrait-monotrait ratio of correlations and whereas not all are below the threshold of 0.90,[63] we also performed cross-loading, used in case of problems with discriminant validity. Through crossloading, we verified the loading of factors into parent constructs. We state that discriminant validity is established (see Table A.2 in the Annex). We do not provide values in the case of crossloading due to the large volume of data.

Structural Model

The structural model reflects the paths hypothesized in the research framework. The model is evaluated based on R2. Q2 values that assess predictive significance[61] and significance of paths. The goodness of the model is determined by the strength of each structural path determined by R2 value for the dependent variable[64] the value R2 should by equal to or over 0.1.[65] The results in Table 1 show that all R2 values are over 0.1. Hence, the predictive capability is established. Further Q2 established the predictive relevance of the endogenous constructs. A Q2 above 0 shows that the model has predictive relevance. The results show that there is significance in the prediction of the constructs (see Table 1). Furthermore, the model fit was assessed using SRMR. The value of SRMR was 0.052. SRMR values should be less than or equal to 0.100, indicating acceptable model fit.[66] Table 1 lists all the results obtained and lists the path coefficients and other related values (STDev, T statistics, p values).

The research model is shown on Figure 2.

Further assessment of the goodness of fit, hypotheses were tested to ascertain the significance of the relationship. All relationships entering mediation are significant. Hypothesis 1 proposed that POS is positively associated with WE. The results revealed that the association is positive and significant. Hypothesis H1 has support. The direct effect is significant ($\beta = 0.198$, $t = 2.715$, $p < 0.05$).

Mediating Effects

With the help of bootstrapping method, we investigated the effect of mediation variables, namely FBSBm and FBSBi.[67] We developed three sets of hypotheses: H2 for mediation of FBSBM between POS and WE, H3 for mediation of FBSBI between POS and WE and H4 for mediation of both FBSBM a FBSBI between POS and WE. The individual mediations are listed in Table 2.

All three hypotheses (H2, H3 and H4) have support. For the H2 hypothesis, which is based on the action of FBSBM as a mediator, the direct effect is $\beta = 0.295$ and the indirect effect $\beta = 0.563$ (in percentage terms, the share of the direct effect is 34% and the indirect effect 66% of the total effect). In hypothesis H3, in which FBSBI is a mediator, the direct effect is $\beta = 0.261$ (ie, only slightly lower than in FBSBM) and the indirect effect is $\beta = 0.597$ (only slightly higher than in FBSBM). In percentage terms, when mediating via the FBSBI, the share of the direct effect and the indirect effect (70%) is the share of the total effect.

H4 on the action of both mediators (FBSBM and FBSBI) has support. Their indirect effect is significant, but for the total effect (0.858) the proportion of direct effect (0.198) is only 23% and the proportion of indirect effect (0.660) is 77% (of which 60% is transmitted via the FBSBI mediator and 40% is transmitted via FBSBM).

Multigroup Analysis

Before performing multigroup analysis, we performed measurement invariance of composite models (MICOM) in all three required steps.[68] Based on criteria: gender, specialization and length of practice was determined partial invariance and we were able to perform a multi-group analysis (MGA). Variable ownership and size of the medical facility did not meet one of the three conditions, so we did not implement the MGA.

Regarding gender, significant differences were found in the POS-FBSBI path in favor of women. Thus, the relationship between POS and FBSBI is higher in women. For the variable completed managerial specialization, we found

Table 1 Predictive Capability, Predictive Relevance, SRMR and Direct Effects Results

	Original Sample (β)	Sample Mean (β)	Standard Deviation	T Statistics	P values	LLCI	ULCI
FBSBI -> WE	0.443	0.444	0.099	4.478	0.000	0.264	0.638
FBSBM -> WE	0.286	0.282	0.094	3.028	0.003	0.104	0.455
POS -> FBSBI	0.906	0.907	0.011	82.830	0.000	0.884	0.926
POS -> FBSBM	0.906	0.906	0.012	75.712	0.000	0.880	0.927
POS -> WE	0.198	0.201	0.073	2.715	0.007	0.054	0.332
	R2	Q2	SRMR = 0.052 Chi-Square = 1607.26 NFI = 0.807				
FBSBI	0.821	0.655					
FBSBM	0.821	0.720					
WE	0.820	0.609					

Note: $p < 0.05$.

Abbreviations: WE, work engagement; POS, perceived organizational support; FBSBM, feedback seeking behaviour monitoring; FBSBI, feedback seeking behaviour inquiring; LLCI, lower limit confidence interval; ULCI, upper limit confidence interval; R2, R square; Q2, construct cross validated redundancy.

a significant positive difference for paths POS - WE, FBSBI - WE, which means that relationships are more significant for managers who completed managerial studies and a significant negative difference for paths POS - FBSBM, ie, for managers without managerial specialization this relationship was more significant. Differences by length of experience again indicate that significant differences were found in the POS - WE, POS - FBSBI, FBSBI - WE path in favor of managers with a lower length of experience (see Tables A.3 and A.4 in the Annex for results).

Discussion

The results of the presented research study, motivated by the need for a deeper examination of the role of the FBSB in supporting the involvement of first-line health-care managers, can be considered beneficial for academics and health-care management professionals. Our analyzes and obtained data point to positive associations between POS and work engagement, which are mediated by work with feedback.

The impact and importance of WE for every organization is unquestionable. WE has a great influence on performance[11,24,69] job satisfaction,[70] motivation to provide extra work and service for organization.[71] Therefore, it is in the interest of every health-care organization to look for a way to increase the level of engagement. As in other studies in the past,[18,51,72–79] we have also shown that there is a direct relationship between POS and WE. Perceived organizational support, which is perceived by first-line managers from their superiors and organizations, is positively related to their work commitment. The organizational support provided promotes the development of a positive work culture, which Biggs et al[75] have reported to have positive long-term effects on work engagement as well as overall organizational outcome. By confirming previous findings based on the sample we examined, we contribute to their consistency and validation in different environments. This means, if first-line managers perceive, that their employer values and cares for them, they repay this care to a greater degree of commitment – that is, greater interest in work, greater commitment, higher performance and involvement in work, which is also consistent with other studies, eg, Kurtessis.[26]

The aim of our study was to examine the relationship of perceived organizational support and work engagement of first-line health-care managers in more depth, focusing on the mediation effect of FBSB. Since FBSB consists of two components – FBSBI (inquiring) and FBSBM (monitoring),[15] we examined both the individual influence of these components and their combined influence on the relationship between POS and WE. Our findings indicated that FBSB is a significant mediation variable in the relationship between POS and WE.

The findings confirm that the FSBS plays an important role in the relationship examined, which helps FLM to proactively assess whether their work meets performance standards and whether their behavior is considered

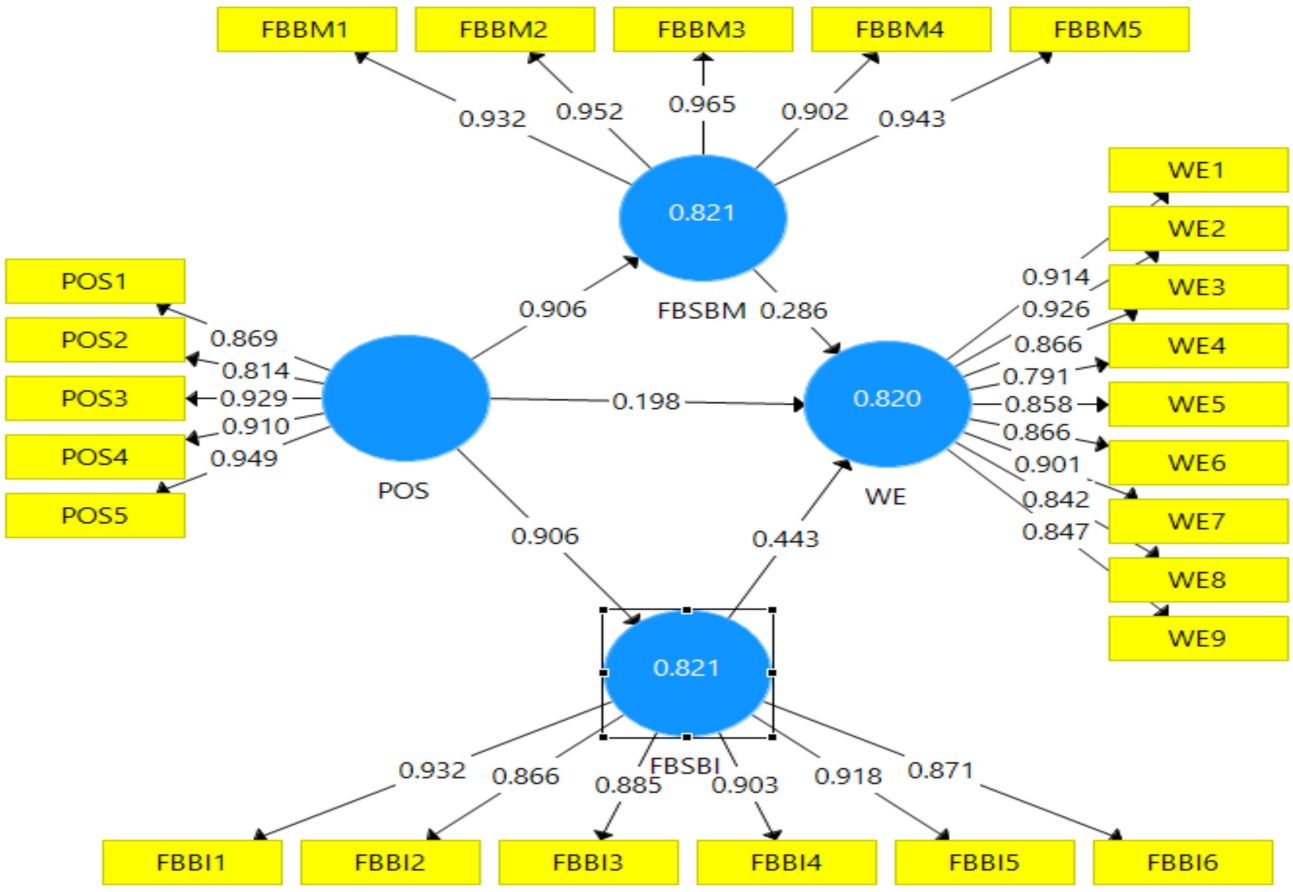


Figure 2 The research model.

appropriate. The goal of the FBSB is to obtain feedback information, that is not available to individuals through normal organizational channels. If the FSB makes it possible to obtain quality feedback information, it can be expected that individuals can use it to change their work behavior and thus to achieve their work goals and improve their work performance.[80] Both components, FBSBM and FBSBI, have been identified as mediators through which the relationship between POS and WE is realized. The results point to the fact that for the high involvement of first-line health-care managers, it is important to integrate feedback work into managerial processes in addition to the organizational support itself. Our findings are consistent with the results of the Huang study,[81] which confirmed the role of the FBSB as a mediator in the relationship between empowerment and trust in superiors, which are part of perceived support and employee performance. If FLMs feel organizational support, they may have more opportunities to additionally obtain information about their performance in less commonly available ways. Providing support to managers presupposes direct active contact with superiors, which creates a suitable environment for active search as well as continuous monitoring of feedback information. These, if they have FLMs, can subsequently be a source of their higher commitment to achieving goals.

Regarding the role of gender in the relationship examined, significant differences were found in the POS - FBSBI path in favor of women, ie, the link between POS and FBSBI is higher for women. Health-care managers are more active in seeking and obtaining feedback than their male counterparts.

For the variable managerial specialization, we found a significant positive difference for paths POS - WE, FBSBI - WE, which means that relationships are more significant for managers who have completed managerial studies and a significant negative relationship for path POS - FBSBM, ie, for managers without managerial specialization this relationship was more significant. The results show that FLMs who have completed formal management training are more aware of the importance of feedback and are more actively seeking it. At the same time, the support from the organization and the information obtained about

Table 2 Path Coefficients, Total, Direct, and Indirect Effects

1.Mediation of FBSBM Between POS and WE – H2: Supported						
	Original Sample (β)	**Sample Mean (β)**	**Standard Deviation**	**T Statistics**	**P values**	
FBSBM -> WE	0.621	0.619	0.061	10.216	0.000	
POS -> FBSBM	0.906	0.906	0.011	80.852	0.000	
POS -> WE (direct effect)	0.295	0.299	0.065	4.545	0.000	Significant
POS -> WE /(total effect)	0.858	0.859	0.017	51.062	0.000	
POS -> FBSBM -> WE (indirect effect)	0.563	0.561	0.058	9.724	0.000	Significant
2.Mediation of FBSBI Between POS and WE – H3: Supported						
	Original Sample (β)	**Sample Mean (β)**	**Standard Deviation**	**T Statistics**	**P values**	
FBSBI -> WE	0.659	0.661	0.061	10.841	0.000	
POS -> FBSBI	0.906	0.907	0.011	82.360	0.000	
POS -> WE (direct effect)	0.261	0.259	0.066	3.935	0.000	Significant
POS -> WE (total effect)	0.858	0.859	0.017	50.866	0.000	
POS -> FBSBI -> WE (indirect effect)	0.597	0.600	0.057	10.470	0.000	Significant
3.Mediation of FBSBM and FBSBI Between POS and WE – H4: Supported						
	Original Sample (β)	**Sample Mean (β)**	**Standard Deviation**	**T Statistics**	**P values**	
FBSBI -> WE	0.443	0.444	0.099	4.478	0.000	
FBSBM -> WE	0.286	0.282	0.094	3.028	0.003	
POS -> FBSBI	0.906	0.907	0.011	82.830	0.000	
POS -> FBSBM	0.906	0.906	0.012	75.712	0.000	
POS -> WE (total effect)	0.858	0.859	0.017	51.833	0.000	
POS -> WE (direct effect)	0.198	0.201	0.073	2.715	0.007	Significant
POS -> FBSBM -> WE (indirect effect)	0.259	0.256	0.086	3.015	0.003	Significant
POS -> FBSBI -> WE (indirect effect)	0.401	0.403	0.091	4.405	0.000	Significant
POS -> WE (total indirect effect)	0.660	0.659	0.065	10.174	0.000	

their performance to a greater extent influences their work commitment. First-line analysts who lack managerial qualifications are less active in terms of their FBSB.

Differences according to the length of practice again indicate that for the POS - WE, POS - FBSBI, FBSBI - WE path, significant differences were found in favor of FLMs with a lower length of practice. On the one hand, younger managers appreciate the support of their employer and this more significantly affects their involvement than in the case of older colleagues. At the same time, they are more actively looking for additional information about their own performance, which they then use to change their work behavior.

We note that our research has also shown not only a direct relationship between POS and WE, but a much more significant indirect relationship between these variables. The indirect relationship between POS and WE has also been investigated by other authors,[18,30,31] who have shown that there are several variables that can amplify the relationship - eg, Dai and Qin[18] confirmed mediating role of organizational identification; Imran et al[30] confirmed the importance of flourishing and thriving on the relationship between POS and WE; Musenze et al[31] confirmed self-efficacy mediating role in previously mentioned relationship.

We agree with Robinson et al,[69] that the organization must work to nurture, maintain and grow engagement, which requires a two-way relationship between employer and employee. This two-way relationship is based on effective and constructive feedback. Our goal was to determine, whether FBSB enters as a significant mediation variable in the relationship between POS and WE of first-line health-care managers. According to our knowledge, research on this relationship has not yet occurred in the literature. Therefore, we consider our findings to be important for managerial practice. We found that FBSB acts as an important mediation element in the relationship between POS and WE.

We agree with Luthans and Peterson,[82] who argue that managers must create an engaging environment for their employees, both emotionally and cognitively. Managers should show empathy and concern for their subordinates, while explaining and properly communicating the purpose of their work and focusing on their benefits to the business. The authors suggest that the healthier and stronger the relationship between employees and managers is, the more employees will be involved and the more likely they will provide positive results and support to their managers. Employee engagement is supported by providing feedback – either through FBSBI or FBSBM.

The obtained results confirm the importance of organizational support for increasing the work commitment of FLMs. If they feel that the employer respects their needs and is ready to help them in case of problems, they work with enthusiasm and the work inspires them. It is therefore important for the management of medical facilities to support their FLMs at work and to integrate a culture of feedback into the work environment. If managers have enough opportunities to obtain information about their own performance, whether through their active search or continuous monitoring, it leads to their higher work commitment. Therefore, it is useful for the employer to support them in this proactive strategy.

Conclusion

The relationship between Perceived Organizational Support (POS) and work engagement (WE) has been confirmed in several studies. However, some studies point out the fact that this relationship does not have to be only direct, but that there are variables that can amplify (strengthen) it – it is, eg, organizational identification, flourishing and thriving, self-efficacy, organizational climate, psychological capital, etc. However, to the best of our knowledge, the impact of the feedback seeking behaviour (FBSB) on the relationship between POS and WE has not yet been investigated – not only in hospital conditions, but also in business conditions. Therefore, our aim was to investigate the mediation effect of FBSB on the relationship between POS and WE in the case of medical FLMs. As the FBSB consists of two components – feedback seeking behaviour monitoring (FBSBM) and feedback seeking behaviour inquiring (FBSBI), we analysed their impact both individually and subsequently together.

The findings show that the work commitment of FLMs as key employees of health facilities is related to the level of support they receive from their organizations. They should therefore strive to create a supportive environment for their work, which in turn will increase their willingness to deliver high performance. However, the results of the study not only confirmed the existence of a direct relationship between WE and POS, but also showed that the involvement of the FBSB mediator increases its intensity. Thus, if a feedback culture is implemented in the work environment of health-care facilities, it has a positive effect on the involvement of FLMs. This finding is important, given the need to look for functional motivational means to support the performance of financially underappreciated FLMs in Slovak conditions. At the same time, the findings show that these tools respond better to younger, managerially qualified FLMs.

The research was carried out on a sample of first-line health-care managers from the environment of medical facilities in the Slovak Republic. Due to the universal nature of discourse in the researched area, it can be assumed that the results can also be applied also in other environments.

A limitation of the research may also be that we did not use the pilot survey as one of the best practices for verifying the validity and methodological soundness of the used constructs. However, we used other recommended practices that we considered sufficient.

Despite the procedural and statistical precautions, we adopted, we acknowledge potential common method bias risks as an additional limitation of this study. We obtained data only from the first-line managers themselves, taking note that collecting data from several sources, ie, asking not only managers but also employees could increase the objectivity of the research.

As a dependent variable, we examined work engagement. Although WE is often used as a dependent variable

in studies, we may not be able to generalize the results of this study to other work outcomes. In future research, it will be useful to examine the potential impact of POS and FBSB on other outcomes, such as job satisfaction and performance.

Judging directionality for the hypothesized mediated relationships is virtually impossible with cross-sectional data. However, the hypothesized mediated relationships were theory driven and consistent with findings from previous studies that examined portions of the proposed model.

Despite these limitations, we believe that our results contribute to the expansion of knowledge in several ways. Our findings broaden our understanding of how POS affects work engagement and explain the role of the FBSB in this relationship. The primary goal of the FBSB is to obtain information that individuals use to change work behaviour and achieve work goals. The need for such information is particularly important when individuals face uncertainty and ambiguity in the work environment,[83,84] which are highly present in the work of first-line health-care managers. FBSB is a personal proactive strategy for obtaining work-related information that would not otherwise be available.[85] With its support, health-care facilities as employers can increase the work commitment of their first-line managers. This strategy seems to be highly functional, especially in the case of younger managers with completed managerial education.

Engaged employees are not only dedicated and enthusiastic about their work, but also significantly affect the performance and economic results of the organization, especially by reducing operating losses. Hospitals that want to improve employee engagement should focus on how employees perceive the support they receive from their organization - POS. Our study has shown that the relationship between POS and WE is not only direct, but can be significantly strengthened by the action of FBSB. Promoting a culture of feedback can be a key factor in increasing hospital staff involvement. Our study also confirmed that up to 60% of the indirect effect is due to transmission through the FBSBI mediator and 40% to transmission through the FBSBM. It is therefore essential that hospitals promote direct, open communication between the hospital's management and its staff, as well as between staff, so they do not have the fear and shyness of asking for feedback directly.

Data Sharing Statement

The authors confirm that the data supporting the findings of this study are available within the article and its Supplementary Materials.

Ethical Approval and Consent to Participate

Ethical approval for the research was received from University of Economics in Bratislava, Slovakia. All ethical aspects of the research were fully respected. Respondents were informed of the purpose of the research; the data were obtained with respect to the anonymity of each respondent. By completing and submitting the questionnaire in writing, the participants agreed to participate in the study. Voluntary consent to participate in the study was fulfilled as a fundamental ethical principle. An essential part of the process of obtaining consent to participate in the study was to keep the participant fully informed about the objectives, proceedings, and risks of the study. The study was conducted in accordance with the Declaration of Helsinki.

Author Contributions

All authors contributed to data analysis, drafting, or revising the article, have agreed on the journal to which the article will be submitted, gave final approval of the version to be published, and agree to be accountable for all aspects of the work.

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Disclosure

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