The impact of ethical climate and the LMX relationship on nurses' burnout in hospitals in Serbia*

*Katarina Zorić, Milan Nikolić, Nemanja Berber, Edit Terek Stojanović, Dobrivoje Martinov, Branislava Brestovački Svitlica***

Abstract

Burnout contributes to the emergence of numerous negative organisational phenomena. Nurses are exposed to high stress working conditions every day, making it important to study burnout among nurses in health care systems. The aim of the paper is to investigate the impact of ethical climate and the LMX relationship on burnout among nurses, as well as to examine the effects of the three moderators (gender, self-awareness and social skills among nurses) on the observed relationships. The sample consists of 326 nurses from 23 hospitals in Serbia. Standardised questionnaires were used, while correlation analysis and hierarchical regression analysis were employed for statistical processing. The dimensions of the ethical climate and LMX relationship have statistically significant impacts and predictive effects on the burnout dimensions. Raising the level of the ethical climate and LMX relationship positively affects burnout: it reduces emotional exhaustion and depersonalisation, and increases personal accomplishment and involvement. An adverse ethical climate and unfavourable LMX relationships among men cause greater emotional exhaustion. For nurses with high self-awareness and high social skills, a favourable ethical climate and positive LMX relationships reduce emotional exhaustion, and increase personal accomplishment. For nurses with low self-awareness and low social skills, a favourable ethical climate and positive LMX relationships reduce depersonalisation. Recommendations are made for improving the ethical climate and LMX relationships in hospitals in Serbia.

Keywords: Ethical Climate, LMX Relations, Burnout, Nurses, Hospitals in Serbia.
JEL Codes:J24, J81, M54

* Received: 23.03.2020, accepted: 08.02.2022, 5 revisions.

** *Katarina Zorić*, MSc, PhD Student , University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia. Email: katarina.zoric@tfzr.rs. Main research interests: Organizational behavior, Leadership.
Milan Nikolić, PhD, Full Professor, University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia. Email: mikaczr@sbb.rs. Main research interests: Organizational behavior, Entrepreneurship and Leadership.
Nemanja Berber, PhD, Associate Professor, University of Novi Sad, Faculty of Economics in Subotica, Serbia. Email: nemanja.berber@ef.uns.ac.rs. Main research interests: Human resource management, Organizational behavior.
Edit Terek Stojanović, PhD, Assistant Professor, University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia. Email: edit.terek@tfzr.rs. Main research interests: Organizational behavior, Public relations.
Dobrivoje Martinov, PhD, General Hospital "Đorđe Joanović", Zrenjanin, Serbia. Email: martinovd@yahoo.com. Main research interests: Nursing management, Orthopedy.
Branislava Brestovački Svitlica (Corresponding author), PhD, Associate Professor, University of Novi Sad, Medical Faculty, Novi Sad, Serbia. Email: branislava.brestovacki@mf.uns.ac.rs. Main research interests: Nursing management, Patient safety.

1 Introduction

New challenges in business and society and different experiences in many aspects of our lives have directed the attention of many managers and researchers to themes such as ethical behaviour, leadership, employee wellbeing, etc. With the onset of the COVID-19 pandemic, as one more challenge, even hospital management is gaining more attention and many business ideas have been implemented in healthcare organisations. The relationship between the ethical climate in hospitals and different organisational behaviours and outcomes has been investigated in previous research (Shirey 2005; Cummings/MacGregor/Davey/Lee/Wong/Lo/Muise/Stafford 2010; Wong/ Cummings/Ducharme 2013; Aly Abou Hashish 2017). The results indicated the positive effects of the ethical climate on organisational outcomes. At the same time, according to Shin (2012), the majority of these studies investigated the predictors of ethical climate rather than its impact on organisational outcomes. Importantly, Elçi, Karabay and Akyüz (2015) noted that research on the impact of ethical climate on organisational outcomes is scarce. In addition to ethical climate, a large number of studies show that the LMX approach also affects organisational behaviour (Chen/Wang/Chang/Hu 2008; Han/Jekel 2011; Davies/Wong/Laschinger 2011). Previous studies have shown that LMX reduces employee burnout (Cordes/ Dougherty/Blum 1997; Zopiatis/Constanti 2010; Lee/Ji 2018).

Although the aforementioned two constructs, LMX and ethical climate, have been found to be very important for organisational behaviour and outcomes (burnout), there is an evident lack of studies which observe these relations in healthcare institutions. Although some studies focus on similar relations, they do not cover this influence. For example, Yoshida and Sandall (2013) point out that a high level of occupational autonomy is a key protective factor of burnout. For workers in the automotive industry, the ethical climate is positively related with work engagement (Yener/ Yaldiran/ Ergun 2012). Changes in work climate are negatively associated with variations in burnout among mental health care workers (Fong/Ho/Au-Yeung/Sing/Law/Lee/Ng 2016). Burnout positively predicted counterproductive work behaviour among nurses in Nigeria (Ugwu/Enwereuzor/Fimber/Ugwu 2017). According to Elçi, Karabay, and Akyüz (2015), the ethical climate mediates the relationship between distributive justice and depersonalisation behaviour (burnout dimension) in the financial sector, and there is a correlation between the ethical climate and two burnout dimensions: emotional exhaustion and depersonalisation. The need for similar research is discussed in the existing literature (Yener et al. 2012; Elçi et al. 2015).

Since these constructs have been shown to be highly interrelated, with a significant effect of LMX and ethical climate on burnout (Sajfert/Nikolić/ Ćoćkalo/Đorđević/Lazić 2016; Sajfert/Nikolić/Vukonjanski/Terek/Vulović 2017; Mali/Kuzmanović/Nikolić/Mitić/Terek 2019; Nikolić/Vukonjanski/Nedeljković/

Hadžić/Terek 2013; Mitić/Nikolić/Jankov/Vukonjanski/Terek 2017), it is reasonable to assume that the ethical climate and LMX could also affect burnout in Serbian hospitals and its consequences. The main reasons why the authors used healthcare institutions as a sample base is the emergence of the COVID-19 pandemic in Serbia in March 2020, and the great pressure employees at all levels in such organisations experienced in the short term. The majority of employees needed to work longer hours, were at high risk of COVID-19 infection, and suffered various psychological and physical problems. Based on previous studies, the authors of the paper propose that ethical and support-related managerial behaviour can help in such a situation. In addition to the COVID-19 pandemic, the health care system in Serbia also faces numerous other challenges, such as high dimensionality, inefficiency, the lack of strategic planning (Tošić 2002; Matović Miljanović/Janković 2006), excess physical capacity, cumbersome service delivery systems, a lack of management education and management knowledge (Terzić Supić/Bjegović/Marinković/Santric Milićević/Vasić 2010), and increasing nurse turnover (Damnjanović/Janičić/Jovanović 2018; Grujičić/ Jovičić-Bata/Novaković 2018).

The main aim of the paper is to investigate the relationship between ethical climate, the LMX relationship, and nursing burnout in hospitals in Serbia. The authors propose that it is possible to reduce the numerous negative consequences of burnout (also including nurse turnover) by strengthening the ethical climate and LMX relation. The methodological framework used in the research consists of three main constructs, ethical climate, LMX, and burnout, with the addition of three moderators: the gender, self-awareness and social skills of nurses. These increase the scientific importance and originality of the paper. Gender is a very important and influential moderator in some research studies in the sphere of organizational behaviour both in Serbian companies (Mali/Kuzmanović/Nikolić/ Mitić/Terek Stojanović 2020), and Serbian educational organizations (Terek/ Nikolić/Gligorović/Glušac/Tasić 2015). The remaining two moderators are the dimensions of emotional intelligence. It is useful to consider the observed relationships from this aspect, since nurses' work requires high emotional interactions with patients (Diefendorff/ Richard 2003; Chou/Hecker/Martin 2012), and emotional intelligence thus helps them in their work (McQueen 2004; Morrison 2008). Also, according to (Ugwu et al. 2017), emotional intelligence is often used as a moderator of the relationships between different work and psychological variables, such as communication satisfaction (Nikolić et al. 2014), and the organizational culture preferences of middle managers (Hadžić/Nedeljković/ Nikolić 2014), etc.

2 Theory and hypothesis

2.1 Ethical climate

The theoretical framework of ethics provides us with the system of rules and principles to evaluate whether something is good or bad, or right or wrong, in any given situation (Northouse 2008). Employees in health care organizations face the ethical aspects of everyday decisions and their consequences on both the organizational and individual level. This phenomenon is known as an organization's ethical climate, the shared perception of acceptable work behaviour and work ethics, which motivates individuals to make certain decisions (Victor/Cullen 1988). The ethical climate in an organization provides the context within which employees shape their attitudes, values, and behaviours (Olson 1998). By creating an adequate work environment, management can encourage acceptable behaviour among employees, and therefore, they bear most of the responsibility for the ethical behaviour of employees (Victor/Cullen 1988). Thus, managers have both a direct and indirect (through the ethical climate in the organization) influence on different work outcomes, such as job satisfaction, organizational commitment (Olson 1998), turnover intentions, and trust (Mayer/Kuenzi/Greenbaum 2009). Besides the significant role of leaders in shaping ethical climate, Mayer et al. (2009) also emphasize the importance of followers' individual characteristics in this process.

Due to the nature of their work, medical institutions are subjected to immense attention and scrutiny from the public. This creates additional pressure on health care professionals to manage the ethical climate within their organizations (Goldman/Tabak 2010). The responsibility for ethical behaviour lies with every employee in the hospital, and yet, the additional burden is carried by nurses. Nurses are the ones who maintain daily, close and continuous communication with all of the stakeholders within hospital processes: the patients they take care of, other colleagues, physicians, the external public and society as a whole (Özden/Arslan/Ertuğrul/Karakaya 2017). Olson (1998) considers that the ethical climate in hospitals may be defined through the communication within the organization between nurses and peers, patients, managers, the hospital and physicians. Accordingly, the same author developed a special instrument for measuring the ethical climate in health organizations (Olson 1998). The ethical aspects of organizational behaviour in hospitals are often observed through the influence they exert on the following outcomes: job attitudes, ethical behaviour and miscellaneous ethical outcomes (Mayer/ Kuenzi/Greenbaum 2009), and a favourable ethical climate has been found to increase nurses' job satisfaction and reduce turnover intentions (Shirey 2005; Cummings et al. 2010; Aly Abou Hashish 2017).

When it comes to the ethical aspects in the Serbian context, it has been shown that ethical leader behaviour has an influence in Serbian organizations (Sajfert

et al. 2016), as well as that the ethical behaviour of leaders impacts on job satisfaction, organizational commitment, and financial performance, and may compensate for the lack of leadership expertise (Sajfert et al. 2017). At the same time, the unethical behaviour of a leader could influence employees' dissatisfaction, who in turn form entrepreneurial intentions (Mali et al. 2019).

2.2 LMX theory

LMX theory represents the relationship of interpersonal exchange between the subordinate and his/her leader (Graen 1976). In LMX theory, attention is focused on leaders and followers, as well as the relationship between them (Tasić/Merdović/Jankov/Nikolić/Terek/Jovanović 2020). According to Rodić and Marić (2021), improvement occurs if a manager applies a leadership style that is best aligned with the readiness of followers. A high quality LMX relationship implies mutual support between leaders and followers, and the exchange of formal and informal rewards (Dienesch/Liden, 1986). In the case of a low quality LMX relationship, the opposite occurs: the relationship between the leader and followers is formal, depersonalised, and framed by the legal boundaries of the employment contract (Sparrowe/Liden 1997).

A favourable LMX relationship within the organization implies strong organisational culture, or in other words, widespread acceptance of organisational values, beliefs and behaviours (González-Romá 2016). Özden et al. (2017) and Qin et al. (2017) suggest that a high quality LMX relationship indicates a high-level ethical climate in the organization and has a positive effect on organizational performance (Ferris et al.1991; Pellegrini/Scandura 2006; Erdogan/ Enders 2007; Vukonjanski et al. 2012). Similar results exist in healthcare organizations (Chen et al. 2008; Han/Jekel 2011; Davies/Wong/ Laschinger 2011). A study carried out among employees at Ankara University Hospital determined that paternalistic leadership has a direct influence on job performance and turnover intentions (Ugurluoglu et al. 2018). For nurses in Switzerland (Gaudenz et al. 2019), turnover intentions are closely linked to supportive leadership, while the research conducted in healthcare in the US proved that perceived organizational support and leader support decrease the turnover intentions of employees (Cho/ Johanson/Guchait 2009). A study among nurses in the UK (Robson/ Robson 2016) confirmed that LMX and perceived organizational support have a direct influence on turnover intentions. Considering the aforementioned, it is quite reasonable to state that the most important characteristics of nurse leaders are support, visibility and responsiveness, as concluded by Schick Makaroff et al. (2014).

The research of LMX in Serbian companies shows that a high level of LMX positively affects job satisfaction and communication satisfaction (Nikolić et al. 2013; Mitić et al. 2017). Furthermore, in Serbian educational organizations,

leadership has a strong and positive impact on communication satisfaction among teachers (Terek et al. 2015), while favourable LMX creates a school culture which positively influences the teaching process and students' personal development.

2.3 Burnout

Burnout is defined as a psychological syndrome which arises as a result of chronic stress at work (Maslach/Jackson 1981). Six main domains within organisations determine work-related stress: workload, reward, control, fairness, community, and values; with an emphasis on workload as the most important when it comes to burnout (Broom/ Buruck/Horváth/Richter/Leiter 2015). Most commonly, burnout is recognised as a feeling of emotional exhaustion, depersonalisation, and reduced personal accomplishment (Maslach/Leiter/Schaufeli 2009). Emotional exhaustion is explained as a basic response to depleted emotional resources, loss of feeling and concern. Depersonalisation then follows as a developed negative attitude towards one's work or clients. Finally, this reduced sense of personal achievement results in a loss of self-esteem.

Research has linked burnout to a number of negative organizational phenomena: heavy workload (Laschinger/Finegan/Wilk 2011), lower ratings for reported quality of patient care (Van Bogaert et al. 2013), job dissatisfaction (Lu et al. 2012), absenteeism (Michie/Williams 2003), turnover intentions (Fochsen/Sjögren/Josephson/Lagerström 2005; Leiter/Maslach 2009' Chan/Tam/Lung/Wong/Chau 2013) and intention to leave the organization and/or profession (Becker/Milad/Klock 2006, Heinen et al. 2013, Arslan/Kocaman 2016).

Burnout is often associated with social professions, among which nursing stands out as a particularly risky category because nurses are exposed to high-stress working conditions (exposure to pain and death, role-related stress, lack of support from supervisors, unrealistic expectations, inadequate physical conditions, interpersonal conflicts, communication problems, lack of knowledge and decision latitude) (Schaefer/Moos 1993; Decker 1997; Greenglass/Burke/Fiksenbaum 2001; Gelsema/van der Doef/Maes/Janssen/Akerboom/Verhoeven 2006).

2.4 Emotional intelligence

Emotional intelligence (EI) includes the capacity to effectively perceive, understand, express, and manage one's own emotional state as well as that of others (Mayer/Caruso/Salovey 2000; Matthews/Zeidner/Roberts 2005). According to Weisinger (1998), emotional intelligence (EI) involves the intelligent use of emotions: you intentionally make your emotions work for you by using them to help guide your behaviour and thinking in ways that enhance your results. People with a high level of EI are better at communicating their goals, ideas and

intentions in more interesting and assertive ways (Zeidner/Matthews/Roberts 2004). The dimensions of EI can be divided into two main groups: intrapersonal (self-awareness, self-regulation and self-motivation) and interpersonal (empathy and social skills – perceiving others' emotions) (Weisinger 1998).

Emotional intelligence plays a major role in business and management. This is particularly important for leaders: leaders with high emotional intelligence have a greater chance of gaining trust from their followers, of motivating their employees, and therefore of achieving better work results (Goleman/Boyatzis/McKee 2002). Likewise, EI has an important role in achieving effective teamwork and high job performance (Van Rooy/Viswesvaran 2004), developing teams, managing change and stressful situations (Bar-On 1997), increasing communication satisfaction dimensions (Nikolić et al. 2014), and raising employee performance levels (Van Rooy/Viswesvaran 2004).

Recognizing the importance of emotional intelligence is of particular relevance as a prerequisite for effective nursing. An analysis of the literature highlights the importance of emotional intelligence skills for everyday nursing communication activities (McQueen 2004), especially in situations of stress and conflict (Morrison 2008). Researchers go so far as to recommend emotional intelligence as an entrance criterion for student nurses (Rankin 2013). Everyday communication with patients carries additional weight in nurses' working conditions, requiring them to develop emotional intelligence skills in order to be able to deal with the expected burden of emotional labour (Diefendorff/ Richard 2003; Chou et al. 2012).

2.5 Hypothesis

The following five hypotheses are proposed:

H1: There are statistically significant correlations between the ethical climate and LMX relationship dimensions, and the dimensions of burnout in hospitals in Serbia.

H2: There is a statistically significant predictive effect of the dimensions of ethical climate and the LMX relationship on the dimensions of burnout in hospitals in Serbia.

H3: There are moderating effects of gender on the relations between some of the ethical climate and LMX relationship dimensions, and some of the dimensions of burnout.

H4: There are moderating effects of the self-awareness dimension on the relations between some of the ethical climate and LMX relationship dimensions, and some of the dimensions of burnout.

H5: There are moderating effects of the social skills dimension on the relations between some of the ethical climate and LMX relationship dimensions, and some of the dimensions of burnout.

3 Methodology

3.1 The Serbian context

The health care system in Serbia is faced with numerous challenges, such as: high dimensionality, inefficiency, lack of strategic planning (Tošić 2002; Matović Miljanović/Janković 2006), excess physical capacity, and cumbersome service delivery systems (Terzić Supić et al. 2010). Serious problems also exist in the sphere of human resource management, as well as in the top management, which usually consists of physicians of long-standing practice, without any formal hospital management education or management knowledge (Terzić Supić et al. 2010). In addition to all of the above, hospitals in Serbia also face increasing nurse turnover (Damnjanović/Janičić/Jovanović 2018; Grujičić/ Jovičić-Bata/Novaković 2018). The low standard of living of the population in Serbia, as well as the increasing number of medical personnel migrating to other countries all serve to exert strong pressure on healthcare institutions, thus placing patients in an unfavourable position. Since employee compensation cannot be increased in the short term, due to limited financial and legal options, the retention of medical personnel can be achieved through appropriate organisational changes in healthcare institutions. According to Tošić (2002) and Matović Miljanović and Janković (2006), the changes in the health care system in Serbia should include institutional, management, and HR management improvements. This paper contributes to these aims by investigating the proposed relations.

3.2 Survey instruments (measures)

Ethical climate was measured by means of the Hospital Ethical Climate Survey (Olson 1998). The questionnaire includes 26 items (5 dimensions). The respondents evaluated the items on a five-point Likert scale. The dimensions are focused on the nurses' perceptions of the ethical climate related to the relationships they have with the actors within the hospital. The dimensions are: 1. Peers (perceptions of the ethical climate in the relationships with their peers); 2. Patients (perceptions of the ethical climate in the relationships with their patients); 3. Managers (perceptions of the ethical climate in the relationships with their managers); 4. Hospitals (perceptions of the ethical climate in the relationships with the hospital in which they work) and 5. Physicians (perceptions of the ethical climate in the relationships with physicians).

A12-item multidimensional LMX scale (Liden/ Maslyn 1998) was used to measure the LMX relationship. The questionnaire consists of 12 items (4 dimen-

sions). The respondents evaluated the items on a five-point Likert scale. The dimensions are: 1. Affect (to what extent the employees like their leader as a person); 2. Loyalty (to what extent the leader stands up for his/her employees); 3. Contribution (willingness to do more than what is expected because of the leader) and 4 Professional Respect (the existence, recognition and respect for the knowledge and competencies of the leaders by the employees).

Burnout at work is explored through the Maslach Burnout Inventory (Maslash/ Jackson 1981). The questionnaire consists of two parts: one part which measures the frequency of burnout and the other which measures the intensity of burnout. Each section includes 25 items, which make up 4 dimensions (a total of 50 items and 8 dimensions). The respondents evaluated the items on a seven-point Likert scale. The dimensions are: 1. Emotional Exhaustion (F) (the frequency of feelings of being emotionally overextended and exhausted by one's work); 2. Personal Accomplishment (F) (the frequency of feelings of competence and achievement at work); 3. Depersonalisation (F) (the frequency of impersonal responses towards the recipients of one's care or service); 4. Involvement (F) (the frequency of involvement with people); 5. Emotional Exhaustion (I) (the intensity of feelings of being emotionally overextended and exhausted by one's work); 6. Personal Accomplishment (I) (the intensity of feelings of competence and achievement at work); 7. Depersonalisation (I) (the intensity of impersonal responses towards the recipients of one's care or service) and 8. Involvement (I) (the intensity of involvement with people).

Weisinger's (1998) EI model was used to measure the employees' emotional intelligence. The questionnaire consists of 25 items (5 dimensions). The respondents made their evaluations on a five-point Likert scale. The dimensions are: 1. Self-awareness (includes high emotional awareness, self-confidence and self-understanding, accurate self-assessment and self-monitoring); 2. Self-regulation (includes self-control, trustworthiness, conscientiousness, adaptability and innovation); 3. Self-motivation (involves achievement drive, commitment, initiative, and optimism); 4. Empathy (the ability to understand and be sensitive to the feelings of others, social orientation) and 5. Social skills (the ability to communicate easily, read social situations, and interact with others, conflict management, cooperation and team capabilities). Two dimensions of emotional intelligence were used as the moderators: self-awareness and social skills. In this way, it was ensured that one moderator was from the group of intrapersonal dimensions of EI (self-awareness), and the other from the group of interpersonal dimensions of EI (social skills) (Weisinger, 1998). In essence, these two dimensions well represent knowledge and understanding of oneself, that is, knowledge and understanding of social relations. On the other hand, ethical climate and LMX represent the work environment and interaction with others, while burnout is tied to the individual. Here it is both useful and significant to identify what the influences of the work environment (ethical climate and LMX) on burnout are,

in cases where an individual has high or low self-knowledge (self-awareness), that is, when an individual has high or low knowledge of interpersonal relationships (social skills).

Validity. The questionnaires were translated from English into Serbian by a professional translator and were also linguistically and culturally adapted. Back translation was employed in order to check the translation equivalence by another independent professional. The internal consistency of the questionnaires from the sample was estimated by Cronbach's coefficient alpha, which yielded a reliability coefficient of >.70.

Ethical consideration. The present study was approved by the Institutions' directors. Due to the methods related to the research carried out, the specific approval of the Ethics Committee within the institutions where the research was conducted was not required. The anonymity of the respondents was ensured by the fact that the questionnaires did not contain any information which identifies the respondents, such as their first and last names, department or hospital.

3.3 Participants and data collection

The research was carried out by means of a survey in hospitals in Serbia, where the respondents (nurses) completed the questionnaires. A total of 920 questionnaires were distributed, out of which 348 questionnaires were completed. The questionnaires were distributed personally by the researcher with the help of the Institution's Head Nurse. At each hospital, 40 questionnaires were distributed to the nurses directly involved in patient care, who were present at the hospital during the morning shift. Due to incomplete responses, 22 questionnaires were not taken into account. Thus, the final sample consists of 326 respondents, and the percentage of successfully completed questionnaires is 35.4 %. The final sample included 23 hospitals.

4 Results

4.1 Descriptive statistics

The results of the descriptive statistics (Table 1) show the names of the dimensions, and the short names, mean values, standard deviation, and Cronbach's alpha for each dimension. The values of Cronbach's alpha range from α=0.712 to α=0.951.

Table 1 Descriptive statistics

Dimensions	Short name	Min	Max	**Mean**	Std. Dev.	Cron-bach's alpha
Peers	EC1	2.25	5.00	**3.96**	.58	0.727
Patients	EC2	2.00	5.00	**3.78**	.57	0.712
Managers	EC3	2.16	5.00	**4.02**	.66	0.860
Hospitals	EC4	1.50	5.00	**3.58**	.62	0.755
Physicians	EC5	1.00	5.00	**3.11**	.69	0.809
Affect	LMX1	1.00	5.00	**4.04**	.88	0.852
Loyalty	LMX2	1.00	5.00	**3.61**	.99	0.887
Contribution	LMX3	1.00	5.00	**3.86**	.88	0.792
Professional Respect	LMX4	1.00	5.00	**3.93**	1.01	0.951
Emotional Exhaustion (F)	BOF1	1.22	7.00	**3.97**	1.52	0.941
Personal Accomplishment (F)	BOF2	1.37	7.00	**5.41**	1.18	0.901
Depersonalisation (F)	BOF3	1.00	7.00	**2.19**	1.28	0.864
Involvement (F)	BOF4	1.00	7.00	**4.33**	1.26	0.716
Emotional Exhaustion (I)	BOI1	.00	7.00	**3.50**	1.75	0.938
Personal Accomplishment (I)	BOI2	1.00	7.00	**5.07**	1.18	0.893
Depersonalisation (I)	BOI3	.00	7.00	**1.75**	1.60	0.874
Involvement (I)	BOI4	.00	7.00	**4.18**	1.35	0.739
Self-awareness	EI1	1.80	5.00	**4.11**	.63	0.778
Social skills	EI5	1.80	5.00	**4.02**	.65	0.783

4.2 Correlation analysis

The Pearson correlation coefficients between the dimensions of ethical climate and the LMX relationship and the burnout dimensions are given in Table 2.

Table 2 Correlation analysis

	BOF1	BOF2	BOF3	BOF4	BOI1	BOI2	BOI3	BOI4
EC1	-.207**	.276**	-.240**	.051	-.217**	.199**	-.260**	.109*
EC2	-.175**	.280**	-.246**	.048	-.189**	.178**	-.245**	.044
EC3	-.206**	.280**	-.259**	.087	-.221**	.201**	-.274**	.109*
EC4	-.339**	.325**	-.282**	.149**	-.320**	.234**	-.287**	.233**
EC5	-.405**	.139*	-.205**	.041	-.388**	.083	-.223**	.146**
LMX1	-.269**	.252**	-.379**	.091	-.269**	.286**	-.394**	.100
LMX2	-.230**	.173**	-.260**	.027	-.190**	.266**	-.288**	.178**
LMX3	-.143**	.261**	-.290**	.142*	-.093	.334**	-.248**	.197**
LMX4	-.239**	.245**	-.359**	.115*	-.220**	.274**	-.356**	.168**

*p<0.05; **p<0.01

4.3 Regression analysis

The predictive effect of the ethical climate and LMX relationship dimensions (independent variables) on the burnout dimensions (dependent variables) was investigated using multiple regression (Table 3).

Table 3 Regression analysis

	EC1	EC2	EC3	EC4	EC5	LMX1	LMX2	LMX3	LMX4	R^2	F	Sig.
BOF1	0.014	0.098	0.075	-0.154	**-0.328**	**-0.234**	-0.033	0.143	-0.041	**0.209**	9.291	.000
BOF2	0.042	0.082	0.004	**0.300**	**-0.172**	0.059	-0.097	0.148	0.041	**0.156**	6.486	.000
BOF3	0.052	-0.119	0.048	-0.074	-0.034	**-0.251**	0.097	-0.032	**-0.190**	**0.180**	7.682	.000
BOF4	-0.062	-0.074	-0.012	**0.296**	-0.115	0.008	**-0.169**	0.156	0.083	0.060	2.229	.020
BOI1	-0.006	0.077	0.033	-0.097	**-0.328**	**-0.307**	0.020	**0.216**	-0.038	**0.205**	9.066	.000
BOI2	0.005	0.045	-0.060	**0.226**	**-0.167**	0.052	0.047	**0.224**	0.018	**0.143**	5.869	.000
BOI3	0.018	-0.085	0.030	-0.063	-0.053	**-0.302**	0.017	0.086	-0.153	**0.185**	7.980	.000
BOI4	0.012	**-0.185**	-0.069	**0.394**	-0.058	-0.163	0.099	0.145	0.050	**0.107**	4.220	.000

The results of the regression analysis are presented in Table 3. The statistically significant predictive effects are shown in bold, while the effects which are not statistically significant are shown as regular text.

4.4 Gender as a moderator

The sample included 69 male and 257 female nurses. The results of the correlation analysis, for male and female nurses separately, are shown in Table 4.

For all three moderators Pearson's correlation was used in the correlation analysis, the examination of the moderating effects was performed using hierarchical regression analysis, and the correlations for pairs with moderating effects are shown in the shaded fields in Tables 4, 6 and 8. Tables 5, 7 and 9 provide the results of the hierarchical regression analysis (for all three moderators respectively). These tables show only the results for those pairs where there is a moderating effect, namely: the values of R square change and F-change in these cases, as well as the corresponding correlations.

Table 4 Correlation analysis for male nurses (Male) and female nurses (Female)

Male	BOF1	BOF2	BOF3	BOF4	BOI1	BOI2	BOI3	BOI4
EC1	-.359**	.257*	-.134	-.137	-.254*	.328**	-.202	-.075
EC2	-.307*	.346**	-.199	.000	-.203	.286*	-.203	.028
EC3	-.395**	.219	-.124	-.009	-.257*	.230	-.215	-.006
EC4	-.500**	.339**	-.076	.187	-.331**	.202	-.219	.146
EC5	-.567**	.142	-.118	.108	-.418**	.135	-.297*	.135
LMX1	-.483**	.138	-.400**	-.075	-.332**	.223	-.486**	-.074
LMX2	-.411**	.046	-.238*	-.147	-.295*	.193	-.356**	-.050
LMX3	-.323**	.276*	-.333**	.183	-.152	.349**	-.417**	.132
LMX4	-.396**	.230	-.346**	.026	-.323**	.244*	-.431**	-.033

Female	BOF1	BOF2	BOF3	BOF4	BOI1	BOI2	BOI3	BOI4
EC1	-.173**	.280**	-.266**	.104	-.210**	.170**	-.274**	.158*
EC2	-.142*	.265**	-.258**	.063	-.186**	.151*	-.256**	.049
EC3	-.166**	.291**	-.291**	.111	-.216**	.192**	-.286**	.141*
EC4	-.300**	.323**	-.335**	.142*	-.317**	.243**	-.304**	.258**
EC5	-.365**	.145*	-.231**	.033	-.378**	.077	-.212**	.151*
LMX1	-.214**	.279**	-.373**	.142*	-.257**	.301**	-.366**	.157*
LMX2	-.182**	.206**	-.267**	.087	-.159*	.288**	-.272**	.246**
LMX3	-.095	.258**	-.277**	.128*	-.077	.330**	-.201**	.218**
LMX4	-.200**	.248**	-.363**	.141*	-.195**	.281**	-.333**	.234**

*p<0.05; **p<0.01

Table 5 Hierarchical regression analysis with gender as a moderator (only those pairs where moderating effects were confirmed)

Ordinal number	Independent	Dependent	R square change	F-change	Correlations	
					Male $N_M = 69$	Female $N_F = 257$
1	EC1	BOF4	0.010	3.439	-.137	.104
2	EC3	BOF1	0.010	3.297	-.395**	-.166**
3	EC5	BOF1	0.009	3.431	-.567**	-.365**
4	LMX1	BOF1	0.009	3.241	-.483**	-.214**
5		BOI4	0.010	3.180	-.074	.157*
6	LMX2	BOF4	0.011	3.489	-.147	.087
7		BOI4	0.014	4.841	-.050	.246**
8	LMX4	BOI4	0.013	4.268	-.033	.234**

4.5 Self-awareness as a moderator

The sample of 326 respondents was divided by the median (4.20), into those for whom the average values of EI1 – Self-awareness were 4.00 and below (nurses with low self-awareness – Low EI1) and those where the average scores for this dimension were 4.20 and above (nurses with high self-awareness – High EI1).

There were 157 nurses in the first group (Low EI1), while in the second group (High EI1) there were 169 nurses. The results of the correlation analysis for nurses with low self-awareness and nurses with high self-awareness are shown in Table 6.

Table 6 Correlation analysis for nurses with low self-awareness (Low EI1) and nurses with high self-awareness (High EI1)

Low EI1	BOF1	BOF2	BOF3	BOF4	BOI1	BOI2	BOI3	BOI4
EC1	-.083	.135	-.139	.037	-.197*	.104	-.184*	.073
EC2	-.036	.209**	-.231**	.061	-.109	.147	-.221**	.039
EC3	-.166*	.168*	-.231**	.092	-.249**	.109	-.234**	.071
EC4	-.233**	.128	-.181*	.157*	-.235**	.095	-.209**	.212**
EC5	-.265**	-.054	-.116	.061	-.273**	.046	-.137	.136
LMX1	-.275**	.117	-.386**	.036	-.289**	.250**	-.426**	.100
LMX2	-.315**	.024	-.240**	-.068	-.281**	.204*	-.274**	.081
LMX3	-.218**	.124	-.331**	.051	-.193*	.252**	-.357**	.164*
LMX4	-.276**	.064	-.317**	.014	-.317**	.175*	-.300**	.081

High EI1	BOF1	BOF2	BOF3	BOF4	BOI1	BOI2	BOI3	BOI4
EC1	-.312**	.223**	-.268**	-.046	-.260**	.079	-.246**	.067
EC2	-.276**	.210**	-.201**	-.046	-.258**	.050	-.202**	-.011
EC3	-.249**	.255**	-.226**	-.001	-.221**	.134	-.248**	.086
EC4	-.421**	.395**	-.328**	.077	-.394**	.224**	-.294**	.207**
EC5	-.505**	.283**	-.273**	-.007	-.475**	.060	-.273**	.136
LMX1	-.297**	.195*	-.308**	.042	-.296**	.130	-.301**	.026
LMX2	-.183*	.180*	-.229**	.043	-.141	.208**	-.248**	.207**
LMX3	-.101	.202**	-.178*	.137	-.038	.240**	-.075	.165*
LMX4	-.234**	.239**	-.345**	.120	-.178*	.189*	-.342**	.178*

*p<0.05; **p<0.01

Table 7 Hierarchical regression analysis with EI1 – Self-awareness as a moderator (only those pairs where moderating effects were confirmed)

Ordinal number	Indepen-dent	Dependent	R square change	F-change	Correlations	
					Low EI1	High EI1
					$N_{L1} = 157$	$N_{H1} = 169$
1	EC5	BOF1	0.012	4.569	-.265**	-.505**
2		BOF2	0.008	3.027	-.054	.283**
3		BOI1	0.009	3.483	-.273**	-.475**
4	LMX1	BOF2	0.012	4.524	.117	.195*
5		BOI2	0.008	3.312	.250**	.130
6	LMX2	BOF2	0.010	3.845	.024	.180*
7		BOI2	0.010	4.168	.204*	.208**
8	LMX3	BOF2	0.009	3.495	.124	.202**
9		BOI2	0.019	7.665	.252**	.240**
10		BOI3	0.016	5.868	-.357**	-.075
11	LMX4	BOF2	0.010	4.052	.064	.239**
12		BOI2	0.010	3.851	.175*	.189*

4.6 Social skills as a moderator

The sample of 326 respondents was divided by the median (4.00), into those where the average values of EI5 – Social skills were 4.00 and below (nurses with low social skills – Low EI5) and those whose average scores for this dimension were 4.20 and above (nurses with high social skills – High EI5). There were 175 nurses in the first group (Low EI5), while in the second group (High EI5) there were 151 nurses. The results of the correlation analysis for nurses with low social skills and nurses with high social skills are shown in Table 8.

Table 8 Correlation analysis for nurses with low social skills (Low EI5) and nurses with high social skills (High EI5)

Low EI5	BOF1	BOF2	BOF3	BOF4	BOI1	BOI2	BOI3	BOI4
EC1	-.111	.163*	-.166*	-.022	-.196**	.150*	-.219**	.140
EC2	-.083	.192*	-.243**	.009	-.137	.174*	-.233**	.059
EC3	-.244**	.169*	-.281**	.027	-.299**	.161*	-.308**	.111
EC4	-.316**	.141	-.231**	.063	-.312**	.095	-.258**	.246**
EC5	-.331**	-.045	-.106	.010	-.352**	.013	-.149*	.163*
LMX1	-.236**	.126	-.341**	.021	-.277**	.167*	-.389**	.050
LMX2	-.254**	.064	-.252**	-.079	-.258**	.154*	-.300**	.078
LMX3	-.117	.150*	-.271**	.058	-.133	.191*	-.260**	.098
LMX4	-.255**	.127	-.361**	.010	-.313**	.138	-.352**	.101

High EI5	BOF1	BOF2	BOF3	BOF4	BOI1	BOI2	BOI3	BOI4
EC1	-.282**	.222**	-.213**	.022	-.219**	.050	-.173*	-.041
EC2	-.236**	.243**	-.140	-.002	-.216**	.022	-.153	-.063
EC3	-.147	.269**	-.101	.068	-.121	.084	-.114	.017
EC4	-.345**	.329**	-.207*	.130	-.313**	.172*	-.173*	.118
EC5	-.466**	.192*	-.247**	-.017	-.414**	-.012	-.209*	.048
LMX1	-.288**	.116	-.277**	.022	-.246**	.184*	-.241**	.012
LMX2	-.185*	.030	-.114	.009	-.101	.184*	-.125	.173*
LMX3	-.130	.116	-.143	.104	-.014	.281**	-.052	.187*
LMX4	-.201*	.109	-.195*	.103	-.103	.199*	-.204*	.118

*p<0.05; **p<0.01

Table 9 Hierarchical regression analysis with EI5 – Social skills as a moderator (only those pairs where moderating effects were confirmed)

Ordinal number	Independent	Dependent	R square change	F-change	Correlations	
					Low EI5	High EI5
					N_{L5} = 175	N_{H5} = 151
1	EC3	BOF3	0.011	4.007	-.281**	-.101
2		BOI3	0.010	3.712	-.308**	-.114
3	EC5	BOF1	0.016	6.134	-.331**	-.466**
4		BOI1	0.010	3.974	-.352**	-.414**
5	LMX2	BOF3	0.013	4.669	-.252**	-.114
6		BOI3	0.017	6.356	-.300**	-.125
7	LMX3	BOF3	0.010	3.492	-.271**	-.143
8		BOI3	0.014	5.113	-.260**	-.052
9	LMX4	BOF3	0.017	6.505	-.361**	-.195*
10		BOI3	0.014	5.214	-.352**	-.204*

5 Discussion

5.1 Discussion of the results of the descriptive statistics

In hospitals in Serbia, the ethical climate and LMX relationship dimensions have relatively high average scores. The relations with the immediate superior are good, which means that nurses respect their superiors and their expertise. The relationships between colleagues are also good. The weakest relationship exists between nurses and doctors. The loyalty of superiors toward their subordinates is also weaker. This result corresponds to other studies of organisational and national culture in Serbia, which is primarily characterised by higher power distance and higher collectivism (in-group) (Vukonjanski et al. 2012; Rajković et al. 2020; Maliet al. 2020). From the burnout dimensions, BOF2 – Personal Accomplishment (frequency) and BOI2 – Personal Accomplishment (intensity) have the highest average scores, while dimensions BOF3 – Depersonalisation (frequency) and BOI3 – Depersonalisation (intensity) have the lowest average scores. The potential for improvement lies in reducing emotional exhaustion and increasing involvement through adequate HR approaches, and with the greater involvement of leaders, who will recognize these conditions and implement family-friendly policies to empower their subordinates and boost their engagement with the job and organization.

5.2 Discussion of the results of the correlation analysis

The results of the correlation analysis (Table 2) show that, for the most part, there are statistically significant correlations between the dimensions of ethical climate, the LMX relationship, and the burnout dimensions. Hence, hypothesis H1 is confirmed. As regards the burnout dimensions, there are negative correlations for two of the dimensions (BO1 – Emotional Exhaustion and BO3 – Depersonalisation), and positive ones for the other two (BO2 – Personal Accomplishment and BO4 – Involvement). Thus, higher levels of ethical climate and LMX relationships are positively related to burnout: reducing two undesirable, and increasing two desirable dimensions of burnout. These results are consistent with previous research related to LMX relationships (Hetland/Sandal/Johnsen 2007; Zopiatis/Constanti 2010) and to ethical climate (Yoshida/ Sandall 2013; Fong et al. 2016; Ugwu et al. 2017).

For the ethical climate and LMX relationship dimensions, the most significant correlations are found for the dimensions EC4 – Hospitals, followed by LMX1 – Affect and LMX4 – Professional Respect. Burnout among nurses is influenced by the organisation's system settings: mission and hospital policies, procedures, values and attitudes, the presence of research and learning, the methods used to resolve conflicts, and the existence of conditions for quality work. Some aspects of the LMX relationship, especially respect for the immediate superior and respect for the professional competencies of the immediate superior, have

a considerable influence. Therefore, good system and organisational solutions, as well as the appropriate choice of superiors with the constant improvement of their expertise, may have a positive effect on burnout. This finding is related to research in Serbia (Rajković et al. 2020; Sajfert et al. 2017; Mali et al. 2020), as the exemplification of the affective component of the LMX relationship, and leader's expertise (Sajfert et al. 2017; Mitić et al. 2017).

Dimensions BOF3 – Depersonalisation (frequency) and BOI3 – Depersonalisation (intensity) show negative and statistically significant correlations with the independent variables. A poor ethical climate and weak LMX relationships in a hospital will mostly contribute to an increase in depersonalisation among nurses. In this part, two of the LMX relationship dimensions are particularly strong: LMX1 – Affect and LMX4 – Professional Respect. Thus, high depersonalisation is more likely to occur in conditions where there is a lack of respect for the superior both as a person and an expert. In such cases the nurses become dissatisfied and disappointed, and all this leads to distancing from their patients. BOF4 – Involvement (frequency) and BOI4 – Involvement (intensity) have weak positive relations to the independent variable. Sympathy for patients and involvement in their problems are issues which are less dependent on the interpersonal relationships in the hospital, and more dependent on the human characteristics of a particular nurse. Poor relationships in the hospital and with the superior, leading to certain disagreements, may result in nurses feeling less engagement at work, i.e. reduced patient care. In terms of strength, the most prominent correlations are achieved between dimensions BOF1 – Emotional Exhaustion (frequency), BOI1 – Emotional Exhaustion (intensity), and EC5 – Physicians. This result indicates that emotional exhaustion among nurses is particularly present in conditions of reduced respect and trust on the part of doctors. Such circumstances have a negative effect on nurses, making them feel insignificant, leading in turn to psychological and emotional exhaustion after working hours.

5.3 Discussion of the results of the regression analysis

The results of the regression analysis (Table 3) show that all the values of the corrected determination coefficient R^2 (except one) are statistically significant. Thus, the ethical climate and LMX relationship dimensions have a statistically significant predictive effect on the dimensions of burnout. This confirms hypothesis H2. From the dimensions of the independent variables, the strongest predictive effect on the burnout dimensions is achieved by EC4 – Hospitals, followed by LMX1 – Affect and EC5 – Physicians. Relationships with doctors are a significant predictor of burnout. The highest values of the corrected R^2 occur for the dimensions BOF1 – Emotional Exhaustion (frequency) and BOI1 – Emotional Exhaustion (intensity), followed by BOF3 – Depersonalisation

(frequency) and BOI3 – Depersonalisation (intensity). The dimensions EC5 – Physicians and LMX1 – Affect have a statistically significant and negative predictive effect on the dimensions of emotional exhaustion (BOF1 and BOI1), while the dimension LMX3 – Contribution has a statistically significant and positive predictive effect on the dimension BOI1 – Emotional Exhaustion (intensity). The lack of trust and respect between nurses and doctors, as well as that between nurses and superiors, are the main causes of emotional exhaustion. As previously stated, the causes of these phenomena are related to higher power distance in Serbian organisations and Serbian society. The increased intensity of emotional exhaustion is also due to the over-engagement of nurses. Although the LMX3-Contribution dimension implies the willingness of an employee to work for his superior and exceed expectations, this work certainly involves significant effort, which, despite being voluntary, is highly likely to result in emotional exhaustion. Some previous research studies in Serbia show that transformational leadership dimension High Performance Expectations is frequently not well accepted, both by employees in companies (Mali et al. 2019), and in schools (Terek et al. 2015), and that performance beyond expectations often results in emotional exhaustion.

In terms of the dimensions of personal accomplishment (BOF2 and BOI2), the dimension EC4 – Hospitals has a statistically significant and positive predictive effect, while the dimension EC5 – Physicians has a statistically significant and negative predictive effect. The dimension LMX3 – Contribution also has a statistically significant and positive predictive effect on the dimension BOI2 – Personal Accomplishment (intensity). What is interesting here are the statistically significant and negative predictive effects of the EC5 dimension – Physicians: good relationships with doctors reduce the personal achievements of nurses. It is possible that in such conditions there is some kind of relaxation among nurses, who, feeling satisfied because of the trust and respect shown to them by doctors, have a tendency to focus on their patients' problems to a lesser extent and to invest less effort in their work. Conversely, poor relationships with doctors lead to nurses seeking job satisfaction at work from their patients to whom they pay extra attention in the hope that they will be satisfied and appreciate their efforts and knowledge, since the doctors fail to do so. In such conditions, a sense of their own importance and achievement grows among nurses. To understand this result, it should be taken into account that, in Serbian organisations, in the case of favourable (desirable) organisational conditions, a boost in the satisfaction of employees is noted along with a tendency to maintain the status quo. This is shown in the example of the lack of entrepreneurial intentions among employees in the case of desirable leadership (Mali et al. 2019) and favourable organisational culture (Mali et al. 2020).

With regard to the dimensions of depersonalisation (BOF3 and BOI3), dimension LMX1 – Affect has a statistically significant and negative predictive effect,

while the dimension LMX4 – Professional Respect has a statistically significant and negative predictive effect on the dimension BOF3 – Depersonalisation (frequency). Dimension EC4 – Hospitals has a statistically significant and positive predictive effect on the dimensions of involvement (BOF4 and BOI4). However, there are two interesting influences here. Firstly, this refers to the statistically significant negative predictive effect of the dimension LMX2 – Loyalty on BOF4 – Involvement (frequency). The loyalty of the superior can lead to relaxation among nurses, which in turn reduces the frequency of their involvement in patient problems. There is an analogy here with the previously discussed phenomenon that poor relationships with doctors lead to an increase in personal accomplishment. Another interesting influence is the statistically significant negative predictive effect of EC2 – Patients on BOI4 – Involvement (intensity). Poor relationships with patients include circumstances in which patients are not sufficiently informed and their wishes poorly respected. In such circumstances nurses often try to compensate for organisational failures in patient care: they provide their patients with the necessary information, and meet their wishes and needs. This in fact implies a high degree of involvement.

5.4 Discussion of the results of the examination of the moderating effects

Tables 4 and 5 show that the moderating effect of gender exists between some of the ethical climate and LMX relationship dimensions, and some of the dimensions of burnout. Based on this, hypothesis H3 is confirmed. An adverse ethical climate and poor LMX relationships among men cause greater emotional exhaustion. Men feel the need to provide an adequate standard of living for their families much more keenly, and low incomes (such as in healthcare in Serbia) take a greater toll on men than on women. Consequently, men find it considerably more difficult to deal with a poor ethical climate and low-quality LMX relationships in the organisation, and disrespect and distrust from doctors and superiors is particularly hard for them. Nursing is generally regarded as a female profession, so male nurses have a more pronounced feeling that they could (and should) achieve more, for example, to become doctors. Favourable LMX relationships and relationships with colleagues increase involvement among female nurses. Unfavourable LMX relationships bother men more (as explained above), but it is also harder for them to be satisfied with favourable LMX relationships. In some cases, favourable LMX relationships may cause slightly negative effects on involvement among men. Previous research in Serbia shows that men become more discouraged in cases of high power distance (Mali et al. 2020), and more dissatisfied when it comes to punishment (as part of transactional leadership) than women (Terek et al. 2015).

Tables 6 and 7 show that the moderating effect of the dimension EI1 – Self-awareness, as a moderator on the observed relationships, exists between some

of the ethical climate and LMX relationship dimensions, and some of the dimensions of burnout. Based on this, hypothesis H4 is confirmed. In the case of a favourable ethical climate, a reduction in emotional exhaustion occurs among nurses with high self-awareness. Nurses with high self-awareness are able to recognise a favourable ethical climate, cope better in such circumstances, and, ultimately have greater respect for good interpersonal relationships as such relationships mean more to them. In addition, it is also possible that nurses with high self-awareness achieve better interpersonal relationships, especially with doctors. In the case of a favourable ethical climate and LMX relationship, nurses with high self-awareness experience a greater increase in personal accomplishment. Similar to the previous case, nurses with high self-awareness are better able to recognise and value good LMX relationships, and are more likely to have the necessary skills to achieve better interpersonal relationships with their superiors. In the case of greater willingness to work for the superior (dimension LMX3 – Contribution), nurses with low self-awareness achieve a lesser degree of depersonalisation. This does not mean that nurses with high self-awareness have a greater degree of depersonalisation, but rather that the motives for depersonalisation are found in many other aspects of the job, and not just because of the immediate superior. They have a better understanding of their role in patient care and the importance of their emotional engagement in the process, primarily because of the patients themselves and their conscience.

Tables 8 and 9 show that the moderating effect of the dimension EI5 – Social Skills, as a moderator, exists between some of the ethical climate and LMX relationship dimensions, and some of the dimensions of burnout. Based on this, hypothesis H5 is confirmed. In the case of favourable relations with doctors (dimension EC5 – Physicians), a reduction in emotional exhaustion occurs among nurses with high social skills. Nurses with high social skills find it easier to establish good relationships with doctors. Therefore, such nurses handle the difficulties of work with greater ease, which in turn reduces mental and emotional exhaustion, frustration and stress. In the case of favourable relations with the superior, nurses with low social skills experience a reduction in depersonalisation. Nurses with low social skills find it more difficult to form quality interpersonal relationships, and they have a greater need for good relationships with their superiors. Through a good LMX relationship, they compensate for their weaknesses in social skills, thus reducing depersonalisation. Nurses with high social skills do not rely to such an extent on good relationships with their superiors in order to reduce depersonalisation: it is enough for them to direct their high social skills towards their patients and to gain a better understanding of their problems, to express their compassion and care more easily, to respond to emotional reactions and thus provide the necessary support.

6 Conclusion

The dimensions of the ethical climate and LMX relationship have statistically significant predictive effects on the burnout dimensions. Raising the level of the ethical climate and LMX relationship positively affects burnout: it reduces two undesirable dimensions (emotional exhaustion and depersonalisation) and increases two desirable dimensions (personal accomplishment and involvement). From the ethical climate and LMX relationship dimensions, the most powerful impact on the dimensions of burnout is achieved by dimensions Hospitals, Physicians, Affect and Professional Respect. From the burnout dimensions, those of depersonalisation and emotional exhaustion are under the greatest influence of the ethical climate and LMX relationship dimensions. High depersonalisation most often emerges in conditions of a lack of respect for the superior as a person and as an expert, while emotional exhaustion among nurses is particularly present in conditions of reduced trust and respect in the relations between nurses and doctors, as well as those between nurses and their superiors. The regression analysis showed that, in some cases, good relationships with doctors reduce the personal achievements of nurses, and a high level of loyalty from superiors reduces their involvement. It is possible that good relations with doctors and support from the superior lead to feelings of relaxation and complacency among nurses. Sometimes poor relationships with patients result in the increased involvement of nurses: they thus compensate for certain systemic failures at work and in patient care.

An inadequate ethical climate and poor LMX relationships cause greater emotional exhaustion among men: men find it harder to deal with a poor ethical climate and low-quality LMX relationships in the organisation, especially the disrespect and mistrust of doctors and superiors. Improving LMX relationships and relationships with colleagues in particular increases involvement among women. For nurses with high self-awareness and high social skills, a favourable ethical climate and quality LMX relationships (primarily relationships with doctors and professional respect for the superior) reduce emotional exhaustion, and increase accomplishment. For nurses with low self-awareness and low social skills, a favourable ethical climate and good LMX relationships (above all relationships with superiors) reduce depersonalisation.

The scientific significance of the study lies in determining the relationships between the observed variables in the Serbian context. The basic results are shown to be in accordance with the results of similar studies in other countries. What is considered here is the general influence of ethical climate and LMX on burnout (high levels of ethical climate and LMX reduce burnout). At the same time, there are some results which are specific for organisational conditions in Serbia. Thus, burnout is particularly favourably affected by: an orderly and stable organisational system, ethical leader behaviour, low power

distance, high affective components of LMX, leaders' expertise, and the lack of high-performance expectations. What follows is the occurrence of certain characteristic phenomena: favourable conditions (good relationships with physicians and high levels of superiors' loyalty) often result in a relaxation and reduction of nurses' ambitions, while unfavourable organisational conditions increase nurses' involvement. These specificities may perhaps be explained by the fact that the nurses in Serbia are, to a significant extent, led by strong emotions, both in favourable as well as in unfavourable conditions. Also, the originality of the research is further reinforced by the introduction of three moderators (gender, self-awareness and social skills) in the analysis of the impact of the ethical climate and LMX relationship on burnout among nurses. These moderators play an important role in nursing practice, and have not been previously used as moderators of the observed relationships.

The basic practical recommendation for hospital management in Serbia is the need to work continuously on improving the ethical climate and LMX relationships in hospitals. The greatest attention should be paid to creating a clear and quality mission, fostering desirable values, implementing good system solutions, developing quality relationships between doctors and nurses, and improving the professional competencies of superiors. The relations between physicians and nurses are particularly important, not only because of the impact of this dimension on burnout, but also because this dimension has the lowest average score of all the ethical climate dimensions. Although developing relationships between doctors and nurses, as well as those between superiors and nurses is certainly desirable and useful, a degree of caution should be shown: if these relationships are "too good", this can lead to relaxation among nurses and a reduction in their personal accomplishment and involvement. The results present a solid basis for rethinking management in healthcare institutions in Serbia. Therefore, teambuilding, communication training, and other advanced group development approaches could enhance the relations between the two groups. The specific role of HR managers or consultants should be emphasised because healthcare institutions do not possess such expertise (even in terms of strategic management issues). The realisation of these proposals will have a beneficial effect on nursing burnout: it will reduce emotional exhaustion and depersonalisation, and will increase personal accomplishment and involvement, which could have a beneficial effect on the job satisfaction of nurses and reduced turnover. Precisely because of this, one of the proposals for further research may be to examine different impacts on nurse turnover intentions, for example, the effects of ethical climate, LMX and nurse burnout. It should be noted that these recommendations do not require special financial investments: what is important is that those involved in management become aware of the importance of the analysed relationships and their role in creating such relationships. The given proposals have a universal character and are applicable in general conditions.

Although this study was carefully designed and executed, several limitations exist. To avoid the influence of individual managers, the researchers opted for a sample from a greater number of hospitals; however, the nurses did not have much interest in the research and a significantly smaller sample size was obtained than that predicted. Another limitation is that for such surveys, respondents can provide socially desirable responses even when anonymity is assured. In particular, the nurses gave relatively high marks for those items which make up the emotional intelligence dimension. Therefore, the median split of the data in self-reported self-awareness and social skills (with relatively high median values within a 5-point scale), might be one of the limitations of this study. Also, the results obtained relate to Serbia, and as such reflect the specific conditions in the country and its public health: national culture, a transitional economy, a low standard of living, low salaries in healthcare, and a high rate of nurse turnover. Nevertheless, some of the results have a considerable degree of universality, so some relationships between the observed dimensions can be assumed to also be present in other countries, especially in those with a similar level of economic and social development.

Acknowledgement

This paper has been supported by the Provincial Secretariat for Higher Education and Scientific Research of the Autonomous Province of Vojvodina, number: 142-451-2963/2022-03.

7 References

Aly Abou Hashish, E. (2017): Relationship between ethical work climate and nurses' perception of organizational support, commitment, job satisfaction and turnover intent, in: Nursing Ethics, 24, 2, 151–166.

Bar-On, R. (1997): The Bar-On Emotional Quotient Inventory (EQ-i): Technical manual. Toronto, Canada: Multi-Health Systems.

Becker, J.L./Milad, M.P./Klock, S.C. (2006): Burnout, depression, and career satisfaction: Cross-sectional study of obstetrics and gynecology residents, in: American Journal of Obstetrics and Gynecology, 195, 5, 1444–1449.

Broom, S.S./ Buruck, G./Horváth, I./Richter, P./Leiter, M.P. (2015): Areas of worklife as predictors of occupational health – A validation study in two German samples, in: Burnout Research, 2, 2, 60–70.

Chan, Z.C./Tam, W.S./Lung, M.K./Wong, W.Y./Chau, C.W. (2013): A systematic literature review of nurse shortage and the intention to leave, in: Journal of Nursing Management, 2, 4, 605–613.

Chen, C./Wang, S./Chang, W./Hu, C. (2008): The effect of leader–member exchange, trust, supervisor support on organizational citizenship behaviour in nurses, in: Journal of Nursing Research, 16, 4, 321–328.

Cho, S./ Johanson, M.M./ Guchait, P. (2009): Employees intent to leave: A comparison of determinants of intent to leave versus intent to stay, in: International Journal of Hospitality Management, 28, 3, 374–381.

Chou, H. Y./Hecker, R./Martin, A. (2012): Predicting nurses well-being from job demands and resources: a cross sectional study of emotional labour, in: Journal of Nursing Management, 20, 4, 502–511.

Cordes, C.L./ Dougherty, T.W./Blum, M. (1997): Patterns of burnout among managers as professionals: A comparison of models; in: Journal of Organizational Behavior, 18, 6, 685–701.

Corrigan, P.W./Diwan, S./Campion, J./Rashid F. (2002): Transformational leadership and the mental health team, in: Administration and Policy in Mental Health, 30, 2, 97–108.

Cummings, G.C./MacGregor, T./Davey, M./Lee,H./Wong, C.A./Lo, E./ Muise, M./Stafford E. (2010): Leadership styles and outcome patterns for the nursing workforce and work environment: a systematic review, in: International Journal of Nursing Studies, 47, 3, 363–385.

Damnjanović, V. / Janičić, R./Jovanović, V. (2018): Factors affecting patient satisfaction in the health care sector in Serbia, in: Serbian Archives of Medicine, 146, 9–10, 506–511.

Davies, A. /Wong, C. A./Laschinger, H. (2011): Nurses' participation in personal knowledge transfer: the role of leader–member exchange (LMX) and structural empowerment, in: Journal of Nursing Management, 19, 5, 632–643.

Decker, F.H. (1997): Occupational and nonoccupational factors in job satisfaction and psychological distress among nurses, in: Research in Nursing and Health, 20, 5, 453–464.

Diefendorff, J.M./Richard, E.M. (2003): Antecedents and consequences of emotional display rule perceptions, in: Journal of Applied Psychology, 88, 2, 284–294.

Dienesch, R.M./Liden, R.C. (1986): Leader-member exchange model of leadership: A critique and further development, in: Academy of Management Review, 11, 3, 618–634.

Elçi, M./Karabay, M.E./Akyüz, B. (2015): Investigating the Mediating Effect of Ethical Climate on Organizational Justice and Burnout: A Study on Financial Sector, in: Procedia – Social and Behavioral Sciences, 207, 587–597.

Erdogan, B./Enders, J. (2007): Support from the top: supervisors' perceived organizational support as a moderator of leader-member exchange to satisfaction and performance relationships, in: Journal of Applied Psychology, 92, 2, 321–330.

Ferris, G.R./Judge, T.A./Chachere, J.G./Liden, R.C. (1991): The age context of performance evaluation decisions, in: Psychology and Aging, 6, 4, 616–622.

Fochsen, G./Sjögren, K./Josephson, M./ Lagerström, M. (2005): Factors contributing to the decision to leave nursing care: a study among Swedish nursing personnel, in: Journal of Nursing Management, 13, 4, 338–344.

Fong, T.C.T./Ho, R.T.H./Au-Yeung, F.S.W./Sing, C.Y./Law, K.Y./Lee, L.F./Ng, S.M. (2016): The relationships of change in work climate with changes in burnout and depression: a 2-year longitudinal study of Chinese mental health care workers, in: Psychology, Health & Medicine, 21, 4, 401–412.

Gaudenz, C./De Geest, S./Schwendimann, R./Zúñiga, F. (2019): Factors Associated With Care Workers' Intention to Leave Employment in Nursing Homes: A Secondary Data Analysis of the Swiss Nursing Homes Human Resources Project, in: Journal of Applied Gerontology, 38, 11, 1537–1563

Gelsema, T.I./ van der Doef, M./Maes, S./Janssen, M./Akerboom, S./Verhoeven, C. (2006): A longitudinal study of job stress in the nursing profession: causes and consequences, in: Journal of Nursing Management, 14, 4, 289–299.

Goldman, A./Tabak, N. (2010): Perception of ethical climate and its relationship to nurses' demographic characteristics and job satisfaction, in Nursing Ethics, 17, 2, 233–246.

Goleman, D./Boyatzis, R./McKee, A. (2002): Primal leadership: Learning to lead with emotional intelligence. Boston: Harvard Business School Press.

González-Romá, V. (2016): Leader-Member Exchange and Organizational Culture and Climate. In T.N. Bauer, & B. Erdogan (Eds.), *The Oxford Handbook of Leader-Member Exchange* (pp. 311–331). New York: Oxford University Press.

Graen, G.B. (1976): Role-making processes within complex organizations, in: Dunnette, M.D. (Ed.), Handbook of Industrial and Organizational Psychology (1201–1245). Chicago, IL: Rand McNally.

Greenglass, E. R./Burke, R. J./Fiksenbaum, L. (2001): Workload and burnout in nurses, in: Journal of Community and Applied Social Psychology, 11, 3, 211–215.

Grujičić, M./Jovičić-Bata, J./Novaković, B. (2018): Work motivation and job satisfaction of doctors and nurses in Vojvodina, Serbia, in: Serbian Archives of Medicine, 146, 1–2, 48–54.

Hadžić, O./Nedeljković, M./Nikolić, M. (2014): The relationship between GLOBE organizational culture values and the emotional intelligence of employees in Serbian organizations, in: Primenjena psihologija (Applied Psychology), 7, 2, 137–156.

Han, G./Jekel, M. (2011): The mediating role of job satisfaction between leader–member exchange and turnover, in: Journal of Nursing Management, 19, 1, 41–49.

Heinen, M.M./Van Achterberg, T./Schwendimann, R./Zander, B./Mattews, A./Kózka, M./Ensio, A./ Strømseng Sjetne, I./Moreno Casbas, T./Jane Ball, J./Schoonhoven, L. (2013): Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries, in: International Journal of Nursing Studies, 50, 2, 174–184.

Hetland, H./Sandal, G.M./Johnsen, T.B. (2007): Burnout in the information technology sector: Does leadership matter?, in: Europen Journal of Work and Organizational Psychology, 16, 1, 58–75.

Kanste, O./Kyngäs, H./Nikkilä, J. (2007): The relationship between multidimensional leadership and burnout among nursing staff, in: Journal of Nursing Management, 15, 7, 731–739.

Laschinger, H.K.S./Finegan, J./Wilk, P. (2011): Situational and dispositional influences on nurses' workplace well-being: The role of empowering unit leadership, in: Nursing Research, 60, 2, 124–131.

Lee, E.K./Ji, E.J. (2018): The Moderating Role of Leader-Member Exchange in the Relationships Between Emotional Labor and Burnout in Clinical Nurses, in: Asian Nursing Research, 12, 1, 56–61.

Leiter, M./Maslach, C. (2009): Nurse turnover: the mediating role of burnout, in: Journal of Nursing Management, 17, 3, 331–339.

Leithwood, K./Menzies, T./Jantzi, D./Leithwood, J. (1996): School restructuring, transformational leadership and the amelioration of teacher burnout, in: Anxiety, Stress & Coping: An International Journal, 9, 3, 199–215.

Liden, R.C./Maslyn, J. (1998): Multidimensionafity of Leader-Member Exchange: An Empirical Assessment through Scale Development, in: Journal of Management, 24, 1, 43–72.

Lu, H./Barriball, K.L./Zhang, X./While, A.E. (2012): Job satisfaction among hospital nurses revisited: A systematic review, in: International Journal of Nursing Studies, 49, 8, 1017–1038.

Mali, P./Kuzmanović, B./Nikolić, M./Mitić, S./Terek, E. (2019): Model of leadership and entrepreneurial intentions among employed persons, in: International Journal of Simulation Modeling, 18, 3, 385–396.

Mali, P./Kuzmanović, B./Nikolić, M./Mitić, S./Terek Stojanović, E. (2020): The influence of organizational culture on the entrepreneurial intentions of employed persons: the Serbian case, in: JEEMS Journal of East European Management Studies, 25, 4, 753–791.

Maslash, C./Jackson, S.J. (1981): The measurement of experienced burnout, in: Journal of Occupational Behaviour, 2, 2, 99–113.

Maslach, C./Leiter, M.P./Schaufeli, W. (2009): Measuring Burnout. In S. Cartwright & C.L. Cooper (eds.): The Oxford Handbook of Organizational Well Being (pp. 86–108). Oxford, England: Oxford University Press.

Matović Miljanović, S./Janković, S. (2006): The international community and the reconstruction of health care in South Eastern Europe, in: Journal of Public Health, 14(4), 246–56.

Matthews, G./Zeidner, M./Roberts, R.D. (2005): Emotional intelligence: An elusive ability, in: O. Wilhelm, & R. Engle (Eds.), Understanding and measuring intelligence (79–99). Thousand Oaks, CA7 Sage.

Mayer, J.D., Caruso, D.R., & Salovey, P. (2000). Selecting a measure of emotional intelligence: The case for ability scales. In R. Bar-On, & J. D. A. Parker (Eds.), Handbook of emotional intelligence (320–342). San Francisco, Jossey-Bass.

Mayer, D.M/Kuenzi, M./Greenbaum, R.L. (2009): Making ethical climate a mainstream management topic: A review, critique, and prescription for the empirical research on ethical climate. In D. De Cremer (Ed.), Psychological perspectives on ethical behavior and decision making (pp.181 – 213). Greenwich, CT: Information Age Publishing.

McQueen, A.C.H. (2004): Emotional intelligence in nursing work, in: Journal of Advanced Nursing, 47, 1, 101–108.

Michie, S./Williams, S. (2003): Reducing work related psychological ill health andsickness absence: a systematic literature review, in: Occupational Environmental Medicine, 60, 1, 3–9.

Mitić, S./Nikolić, M./Jankov, J./Vukonjanski, J./Terek, E. (2017): The impact of information technologies on communication satisfaction and organizational learning in companies in Serbia, in: Computers in Human Behavior, 76, 87–101.

Morrison, J. (2008): The relationship between emotional intelligence competencies and preferred conflict-handling styles, in: Journal of Nursing Management, 16, 8, 974–983.

Nikolić, M./Vukonjanski, J./Nedeljković, M./Hadžić, O./Terek, E. (2013): The impact of internal communication on job satisfaction dimensions and the moderating role of LMX, in: Public Relations Review, 39, 5, 563–565.

Nikolić, M./Vukonjanski, J./Nedeljković, M./Hadžić, O./Terek, E. (2014): The relationship between communication satisfaction, emotional intelligence and the GLOBE organizational culture dimensions of middle managers in Serbian organizations, in: Journal for East European Management Studies, 19, 4, 387–412.

Northouse, P.G. (2008): Leadership: theory and practice, Belgrade: Data Status. (in Serbian)

Olson, L.L. (1998): Hospital Nurses' Perceptions of the Ethical Climate of The Work Setting, in: Journal of Nursing Scholarship, 30, 4, 345–349.

Özden, D./Arslan, G. G./Ertuğrul, B./Karakaya, S. (2017): The effect of nurses' ethical leadership and ethical climate perceptions on job satisfaction, in: Nursing Ethics, 26, 4, 1211–1225.

Pellegrini, E.K./Scandura, T.A. (2006): Leader–member exchange (LMX), paternalism, and delegation in the Turkish business culture: An empirical investigation, in: Journal of International Business Studies, 37, 2, 264–279.

Qin, X./Huang, M./Hu, Q./Schminke, M./Ju, D. (2017): Ethical leadership, but toward whom? How moral identity congruence shapes the ethical treatment of employees, in: Human Relations, 71, 8, 1120–1149.

Rajković, J./Nikolić, M./Ćoćkalo, D./Terek, E./Božić, S. (2020): National culture and the entrepreneurial intentions of students in Serbia, in: Journal for East European Management Studies, 25, 1, 105–141.

Rankin, B. (2013): Emotional intelligence: enhancing values-based practice and compassionate care in nursing, in: Journal of Advanced Nursing, 69, 12, 2717–2725.

Robson, A./Robson, F. (2016): Investigation of nurses' intention to leave: a study of a sample of UK nurses, in: Journal of Health Organization and Management, 30, 1, 154–173.

Rodić, M./Marić, S. (2021): Leadership style and employee readiness: Basic factors of leadership efficiency, in: Strategic Management, 26, 1, 53–65.

Sajfert, D./Nikolić, M./Ćoćkalo, D./Đorđević, D./Lazić, J. (2016): The Leadership and Ethical Leadership in the Serbian Metal Industry, in: Industrija (Industry), 44, 1, 27–44.

Sajfert, D./Nikolić, M./Vukonjanski, J./Terek, E./Vulović, M. (2017): The impact of leaders' ethical behavior on certain individual and organizational effects: the Serbian case, in: Journal for East European Management Studies, 22, 4, 444–483.

Shin, Y. (2012): CEO Ethical Leadership, Ethical Climate, Climate Strength, and Collective Organizational Citizenship Behavior, in: Journal of Business Ethics, 108, 3, 299–312.

Schaefer, J.A./Moos, R.M. (1993): Work stressors in health care: contexts and outcomes, in: Journal of Community and Applied Social Psychology, 3, 4, 235–242.

Schick Makaroff, K./Storch, J./Pauly, B./ Newton, L. (2014): Searching for ethical leadership in nursing, in: Nursing Ethics, 21, 6, 642–658.

Seltzer, J./Numerof, R.E./Bass, B.M. (1989): Transformational leadership: is it a source of more burnout and stress?, in: Journal of Health and Human Resources Administration, 12, 2, 174–185.

Shirey, M.R. (2005): Ethical climate in nursing practice, the leader's role, in: JONA'S Healthcare Law, Ethics and Regulation, 7, 2, 59–67.

Sparrowe, R.T./Liden, R.C. (1997): Process and Structure in Leader-Member Exchange, in: Academy of Management Review, 22, 2, 522–552.

Tasić, I./Merdović, M./Jankov, J./Nikolić, M./Terek, E./Jovanović, Z. (2020): Leadership, LMX and teaching process quality in primary schools, in: Anali Ekonomskog fakulteta u Subotici, 56, 43, 31–48.

Terek, E./Nikolić, M./Gligorović, B./Glušac, D./Tasić, I. (2015): The impact of leadership on the Communication Satisfaction of Primary School Teachers in Serbia, in: Educational Sciences: Theory & Practice (Kuram ve Uygulamada Egitim Bilimleri), 15, 1, 73–84.

Terzić Supić, Z./Bjegović, V./Marinković, J./Santric Milićević, M./Vasić, V. (2010): Hospital management training and improvement in managerial skills: Serbian experience, in: Health Policy, 96(1), 80–89.

Tošić, O. (2002): New Serbian health minister appointed at least, in: The Lancet, 360(9327), 149.

Ugurluoglu, O./Ugurluoglu Aldogan, E./Turgut, M./Ozatkan, Y. (2018): The Effect of Paternalistic Leadership on Job Performance and Intention to Leave the Job, in: Journal of Health Management, 20, 1, 46–55.

Ugwu, L.I./Enwereuzor, I.K./Fimber, U.S./Ugwu, D.I. (2017): Nurses' burnout and counterproductive work behavior in a Nigerian sample: The moderating role of emotional intelligence, in: International Journal of Africa Nursing Sciences, 7, 106–113.

Van Bogaert, P./Kowalski, C./Weeks, S.M./van Heusden, D./Clarke, S.P. (2013): The relationship between nurse practice environment, nurse work characteristics, burnout and job outcome and quality of nursing care: A cross-sectional survey, in: International Journal of Nursing Studies, 50, 12, 1667–1677.

Van Rooy, D.L./Viswesvaran, C. (2004): Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net, in: Journal of Vocational Behavior, 65, 1, 71–95.

Victor, B./Cullen, J.B. (1988): The Organizational Bases Of Ethical Climate, in: Administrative Science Quarterly, 33, 1, 101–125.

Vukonjanski, J./Nikolić, M./Hadžić, O./Terek, E./Nedeljković, M. (2012): Relationship between GLOBE organizational culture dimensions, job satisfaction and leader-member exchange in Serbian organizations, in: Journal for East European Management Studies, 17, 3, 333–368.

Webster, L./Hackett R.K. (1999): Burnout and leadership in community mental health systems, in: Administration and Policy in Mental Health, 26, 6, 387–399.

Weisinger, H. (1998). Emotional Intelligence at Work: The untapped edge for success, San Francisco: Jossey-Bass.

Wong, C.A./Cummings, G.G./Ducharme, L. (2013): The relationship between nursing leadership and patient outcomes: a systematic review update, in Journal of Nursing Management, 21, 5, 709–724.

Zeidner, M./Matthews G./ Roberts, R. (2004): Emotional intelligence in the workplace: A critical review, in: Applied Psychology: An International Review, 53, 3, 371–399.

Zopiatis, A./Constanti, P. (2010): Leadership styles and burnout: is there an association?, in: International Journal of Contemporary Hospitality Management, 22, 3, 300–320.

Yener, M./Yaldiran, M./Ergun, S. (2012): The Effect Of Ethical Climate On Work Engagement. 8th International Strategic Management Conference, in: Procedia – Social and Behavioral Sciences, 58, 724- 733.

Yoshida, Y./Sandall, J. (2013): Occupational burnout and work factors in community and hospital midwives: A survey analysis, in Midwifery, 29, 8, 921–926.