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Exploring the associations of perceived stress and psychological resilience with job satisfaction dimensions across professional groups in greek emergency healthcare services

Analiza powiązań między odczuwanym stresem i odpornością psychiczną a wymiarami satysfakcji z pracy w różnych grupach zawodowych w greckich służbach ratownictwa medycznego

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STRESZCZENIE

ANALIZA POWIĄZAŃ MIĘDZY ODCZUWANYM STRESEM I ODPORNOŚCIĄ PSYCHICZNĄ A WYMIARAMI SATYSFAKCJI Z PRACY W RÓŻNYCH GRUPACH ZAWODOWYCH W GRECKICH SŁUŻBACH RATOWNICTWA MEDYCZNEGO

Cel pracy. Celem niniejszego badania było zbadanie związku między odczuwanym stresem i odpornością psychiczną a niektórymi kluczowymi aspektami satysfakcji z pracy wśród personelu oddziałów ratunkowych w Grecji oraz ocena, w jaki sposób te czynniki psychologiczne kształtują postrzeganie środowiska pracy przez pracowników.

Materiał i metody. Przeprowadzono badanie przekrojowe wśród lekarzy, pielęgniarek i personelu laboratoriów klinicznych pracujących na oddziałach ratunkowych dwunastu szpitali publicznych w Attyce w Grecji. Wykorzystano trzy sprawdzone narzędzia: Skalę Postrzeganego Stresu (Perceived Stress Scale-10), Skalę Odporności Psychicznej Connora-Davidsona (Connor-Davidson Resilience Scale-10) oraz Kwestionariusz Satysfakcji z Pracy. Przeprowadzono analizy korelacji Pearsona oraz wielokrotnej regresji liniowej (SPSS v.30). Zgodę etyczną wydały rady naukowe/komisje etyczne uczestniczących w badaniu szpitali.

Wyniki. Podwyższony poziom stresu wiązał się z niższą satysfakcją z pracy we wszystkich grupach zawodowych, przy czym „charakter pracy" miał większy wpływ na satysfakcję niż wszystkie inne jej aspekty, zwłaszcza w przypadku pielęgniarek. Z kolei odporność psychiczna wiązała się pozytywnie z satysfakcją z pracy, szczególnie w kwestiach związanych z charakterem pracy i nadzorem.

Wnioski. Wyniki badań wskazują na potrzebę wprowadzenia strategii ograniczających stres oraz działań zwiększających odporność psychiczną na oddziałach ratunkowych, mających na celu wspieranie dobrego samopoczucia personelu i zwiększanie satysfakcji z pracy.

Słowa kluczowe: **oddziały ratunkowe, środowisko pracy w służbie zdrowia, stres zawodowy, satysfakcja zawodowa, dobre samopoczucie psychiczne**

ABSTRACT

EXPLORING THE ASSOCIATIONS OF PERCEIVED STRESS AND PSYCHOLOGICAL RESILIENCE WITH JOB SATISFACTION DIMENSIONS ACROSS PROFESSIONAL GROUPS IN GREEK EMERGENCY HEALTHCARE SERVICES

Aim. The aim of this study was to explore the association of perceived stress, psychological resilience with some key facets of job satisfaction among Emergency Department personnel in Greece and evaluated how these psychological factors shape employees' perceptions of their work environment.

Material and methods. A cross-sectional study was performed among physicians, nurses and clinical laboratory personnel working in EDs of twelve public hospitals in Attica, Greece. Three validated tools were used: the Perceived Stress Scale-10, the Connor–Davidson Resilience Scale-10 and the Job Satisfaction Survey. Pearson correlations and multiple linear regression analyses were conducted (SPSS v.30). Ethical approval was granted by Scientific Councils/Ethical Committees of the participating hospitals.

Results. Increased stress was associated with lower job satisfaction across all professional groups, with the "nature of work" being more influential than all other aspects of satisfaction, especially for nurses. Conversely, resilience was positively associated with job satisfaction, particularly in issues related to nature of work and supervision.

Conclusions. The findings highlight the need for stress-reduction policies and resilience-enhancing interventions in EDs to support personnel well-being and strengthen job satisfaction.

Key words: Emergency Departments, healthcare work environment, occupational stress, professional satisfaction, psychological well-being

INTRODUCTION

Emergency healthcare professionals operate in complex and time-sensitive environments characterized by intense workload demands, uncertainty and continuous exposure to critical incidents [1]. Such demanding work conditions have been shown to significantly increase the vulnerability of professionals to high levels of occupational stress, while contributing to the occurrence of burnout and reduced job satisfaction, with negative consequences for both their quality of life and their performance in the clinical environment [2]. The concept of job satisfaction in healthcare is a critical factor in human resource retention, as it is associated with reduced turnover intentions, increased staff retention, increased productivity and improved interpersonal relationships in the work environment. Furthermore, it positively contributes to the quality of care and patient safety [3,4]. In this context, psychological resilience may serve as a protective factor, enabling employees to cope with adversity and sustain professional performance and well-being [5]. In Greece, despite the crucial importance of ED settings, empirical evidence investigating the interaction between stress, resilience and job satisfaction among ED professionals remains scarce. Therefore, investigating the interaction between stress, job satisfaction and resilience is essential for the development of targeted wellness interventions in the healthcare sector.

AIM

The present study aimed to investigate the associations of perceived stress, psychological resilience with various dimensions of job satisfaction among physicians, nurses and clinical laboratory personnel working in Emergency Departments in Athens, Greece. Additionally, it sought to evaluate the extent to which stress and resilience can predict key aspects of job satisfaction, specifically focusing on the Nature of Work and Supervision components.

MATERIALS AND METHODS

Study design and setting

A quantitative, cross-sectional study design was implemented in EDs of twelve public hospitals located in Athens, Greece. Data collection was carried out in collaboration with Emergency Departments and clinical laboratory units to ensure the participation of healthcare professionals directly or indirectly involved in emergency management.

Participants and sampling

The study involved healthcare professionals from three categories: physicians, nurses and clinical laboratory staff. The sampling was designed to ensure representation of different hospitals and specialties, considering the diversity of working conditions in EDs. This approach allowed for the collection of data from a wide range of professional experiences, enhancing the reliability and generalizability of the results. In total, 543 individuals consented to participate voluntarily.

Instruments

Three self-report questionnaires were selected to evaluate the main psychological constructs of the study. The consent procedures for their use were completed in advance and administrated to the study participants in Greek version. The perception of stress was measured with the 10-item Perceived Stress Scale (PSS-10)[6,7]. Authorization to use the Greek adaptation of the PSS-10 was secured in advance, both from the organization responsible for managing its rights (Mapi Research Trust) and from the researcher who conducted the Greek translation for scientific purposes [8]. Participants rated how frequently they experienced lack of control or overwhelming situations on a five-point scale ranging from "never" to "very often." The total score represented the overall stress load, with higher values indicating more pronounced stress responses. Adaptive and recovery capabilities were assessed via the Connor-Davidson Resilience Scale (CD-RISC-10) [9,10]. The instrument was administered in its Greek validated version, as per the validation study by Galanis et al. [11]. It includes 10 statements related to psychological coping and endurance under adversity. Responses are given from the scale of 0 to 4, where higher results reflect more effective personal resilience. Lastly, workplace satisfaction was evaluated using the Job Satisfaction Survey (JSS) [12]. This instrument comprises of 36 items concerning different aspects of the working environment, such as remuneration, supervision, communication and nature of duties, and produces an overall satisfaction index. The validated Greek version, which maintains robust psychometric characteristics, was implemented in the present study [13].

Procedure and ethics

Data collection was carried out in the hospitals participating in the study from November 2024 to March 2025. Each participant received an information sheet and an anonymous questionnaire in a sealed envelope to ensure confidentiality. The time required to complete the questionnaire did not exceed ten minutes, which contributed

to the minimum possible burden on the professional duties of the participants. Participation was voluntary and informed consent was indicated upon completion. Before the beginning of the research, the necessary approval was obtained from the Scientific Councils/Ethics Committees of the participating hospitals, in accordance with applicable national and international authorities for the protection of research participants in accordance with the ethical principles of the Declaration of Helsinki. Finally, data were processed using IBM SPSS Statistics v30.

RESULTS

Descriptive characteristics of the sample

Women represented the majority of the study population, accounting for approximately two-thirds of the participants (67.8%), while men constituted 31.9% of the sample. In terms of age, almost one-third of participants (29.5%) were between 45 and 54 years old, closely followed by younger professionals aged 25–34 years (27.8%). Regarding educational attainment, half of the respondents (50.6%) reported holding a Bachelor's degree, whereas a significant proportion (29.8%) had completed postgraduate studies (Master's degree). According to professional specialization, clinical laboratory personnel represented the largest occupational subgroup (36.1%), followed by physicians (33.0%) and nurses (30.9%). This distribution captures a broad professional spectrum within emergency healthcare services. The average length of professional experience was 16.57 years, suggesting a predominantly experienced sample with substantial clinical exposure.

Correlational analysis

Correlation analyses were conducted for the five examined subdimensions of job satisfaction (payment, promotion, supervision, coworker, and nature of work), showing that higher level of perceived stress was associated with lower satisfaction, across these facets, while psychological resilience was positively related to them. The nature of work was the dimension that was most affected across all occupational groups. It presented the strongest negative relationships with stress and, at the same time, the strongest positive relationships with resilience. Among physicians, stress was significantly negatively associated with supervision, relationships with colleagues and the nature of the work (r = -0.42), while resilience was positively associated with the nature of the work and supervision. The greatest effect was noted among nurses, with whom stress was significantly associated with decreases in all areas of job satisfaction and mainly the nature of the work (r = -0.47), while resilience showed its strongest correlation with the nature of the work (r = 0.38). A similar effect was observed among Clinical laboratory staff, with stress being more strongly correlated with the nature of the work (r = -0.44) and resilience with supervision and the nature of the work. The significant correlations between psychological variables and job satisfaction dimensions are presented in Table 1.

Tab. 1. Significant correlations among psychological variables and job satisfaction dimensions

Group	Strongest negative links with Stress	Strongest positive links with Resilience
Physicians	Nature of work (r = –.42)	Nature of work (r = .33)
Nurses	Nature of work (r = –.47)	Nature of work (r = .38)
Clinical lab staff	Nature of work (r = –.44)	Nature of work (r = .35)

Regression models: predictors of job satisfaction

In order to further explore the predictive effects, regression models were run on the two dimensions of job satisfaction that showed the strongest correlations: supervision and nature of work. Across all occupational groups, perceived stress consistently emerged as a significant negative predictor, while resilience showed a smaller but positive contribution. Models related to the "Nature of Work" explained the majority of the variability in satisfaction levels, reaching up to 27% in nurses. Physicians and clinical laboratory staff also showed significant, but lower, proportions. The summary of significant regression effects for stress and resilience are presented in Table 2.

Tab. 2. Summary of significant regression effects for stress and resilience

Outcome	Group	Stress β	Resilience β	R^2	p
Supervision	Physicians	–.19*	.08 (ns)	.05	.018
	Nurses	–.25**	.12*	.10	<.001
	Clinical lab staff	–.21**	.14*	.07	.002
Nature of Work	Physicians	–.27***	.18**	.23	<.001
	Nurses	–.31***	.21**	.27	<.001
	Clinical lab staff	–.29***	.19**	.25	<.001

(ns = non-significant, *p<.05, **p<.01, ***p<.001)

DISCUSSION

The findings of the research clearly show that when healthcare professionals experience intense stress, they feel less satisfied with their work. On the contrary, workers who have more personal resilience resources maintain a better image of their work, even in difficult conditions. Particularly important is the fact that the Nature of Work emerged as the most critical dimension of job satisfaction. The demanding, unpredictable and stressful environment of the EDs, combined with the limited autonomy and high workload, contribute decisively to the creation of stress. This shows that the issue does not concern exclusively the personal resilience of each employee, but is strongly linked to the structure and organization of the emergency work. In the Greek health system, where Emergency Medicine is still in its infancy and EDs face significant staffing shortages, these pressures are becoming more intense [14]. There were also evident differences across professional categories.. Nurses, as a category, appeared to be more affected by the stressful nature of emergency work compared with physicians and laboratory personnel, reported lower professional competence, which suggests that the work environment is eroding their well-being [15].

The literature further shows that factors, such as moral harassment and the stigma surrounding mental health issues further aggravate the situation, preventing many workers from seeking support [16,17]. At the same time, nurses experience high workload demands and emotional strain due to their close involvement in patient care, factors that have been consistently associated with increased occupational stress and burnout in emergency settings [18].

Limitations of the study

The present study, however, has some limitations. The use of self-reported measures may introduce subjective bias and the cross-sectional design limits conclusions to associations rather than causal relationships. Furthermore, the sample was drawn exclusively from public hospitals of Athens, Greece, which may limit the generalizability of the results. Finally, not all nine subfactors of job satisfaction were examined, but only five of them. In addition, organizational factors, such as leadership style, workload management, and institutional culture were not directly assessed, although they may play a crucial role in shaping both stress and job satisfaction. Future research would benefit from applying longitudinal designs and broader sampling in different healthcare settings. Future studies could, therefore, combine quantitative and qualitative methods to explore in greater depth how systemic and interpersonal variables influence professional well-being among emergency healthcare personnel.

CONCLUSIONS

Overall, the findings suggest that improving job satisfaction in Greek Emergency Departments requires not only strengthening individual resilience but also implementing organizational reforms that promote a more supportive and sustainable work environment. In order to achieve the above, hospital management should prioritize adequate staff levels, effective leadership and stronger teamwork among healthcare professionals. Clear communication, fair distribution of duties and access to ongoing training can help employees feel more supported and capable of managing the intense demands of emergency care [19]. These changes would not only enhance individual resilience but also build a healthier organizational culture, ultimately improving job satisfaction and reducing burnout among ED staff. [20].

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