

Is empathy associated with lower burnout among nursing professionals? Evidence from a Greek general hospital

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Abstract: Empathic engagement is central to high-quality care, yet healthcare professionals often work under emotional and organisational pressures that may reduce their psychological availability to patients. This exploratory cross-sectional study examined associations between empathy and burnout among 115 nursing professionals working in a single regional general hospital in Greece. Participants completed an anonymous self-report questionnaire assessing sociodemographic and work-related characteristics, healthcare-specific and dispositional empathy, and multiple dimensions of burnout. Internal consistency across the study measures ranged from acceptable to excellent (Cronbach's $\alpha = 0.71\text{--}0.91$). Pearson correlations and exploratory multiple linear regression analyses were conducted. Higher empathy scores, particularly on the Jefferson Scale of Physician Empathy, were associated with lower emotional exhaustion, lower depersonalisation, lower client/patient-related burnout, and higher personal accomplishment. Both empathy measures were negatively associated with client/patient-related burnout, suggesting that empathy may be particularly relevant to the relational aspects of professional exhaustion. Participation in Balint-type reflective groups was also associated with lower emotional exhaustion and client/patient-related burnout; however, this finding was based on only six participants and should be considered preliminary. Overall, healthcare-specific empathy showed a more consistent pattern of associations across burnout dimensions than broader dispositional empathy. Given the cross-sectional, single-site design, modest sample size, self-report measures, and exploratory use of stepwise regression, the results should be interpreted as sample-specific associations rather than causal effects. Nevertheless, they suggest that relational and reflective competencies merit further investigation within broader strategies to support staff wellbeing and quality improvement.

Keywords: nursing care; depersonalisation; personal accomplishment; patient-centred care; occupational wellbeing; healthcare professionals; relational competence; emotional exhaustion

1. Introduction

Nursing is a clinically demanding and relationally intensive profession. It is not limited to the performance of technical tasks, but is grounded in a continuous therapeutic encounter between nurses, patients, and families (Granados Gámez, 2009; Peplau, 1991). Nurses are expected to combine clinical competence, rapid decision-making, ethical responsibility, emotional availability, and sustained interpersonal communication. This work is frequently performed under conditions of high workload, shift work, time pressure, staff shortages, and organisational constraints

(Martins et al., 2025), and involves repeated exposure to patients' deterioration (Poncet et al., 2007), grief, trauma, and death (Phillips et al., 2025). These conditions make nursing a form of emotionally demanding care work in which professionals must remain clinically effective while also managing the emotional impact of human suffering.

The emotional dimension of nursing can be understood through the concept of emotional labour. Hochschild (1983) originally described emotional labour as the management of feelings in order to produce appropriate observable emotional expressions within work contexts. In nursing, emotional labour refers to the regulation of feelings and emotional displays during patient encounters and is closely linked to therapeutic communication, patient-centred care, and professional role expectations (Feng et al., 2024). Emotional dissonance, particularly when professionals engage in sustained surface acting, has been associated with stress, burnout, reduced occupational wellbeing, and poorer quality of care (Delgado et al., 2017; Feng et al., 2024). Emotional labour is therefore not peripheral to nursing practice, but an integral part of how care is delivered and sustained.

These emotional demands are intensified by wider workforce pressures. Nursing shortages are often not simply shortages of individuals with nursing qualifications, but shortages of nurses willing or able to work under existing conditions (Buchan and Aiken, 2008). Despite overall workforce growth, substantial regional inequalities and persistent nursing shortages remain a global concern (World Health Organization, 2025). High patient-to-nurse ratios, demanding workloads, and inadequate organisational support have been associated with nurse burnout, job dissatisfaction, reduced retention, and adverse patient outcomes (Aiken et al., 2002; Jun et al., 2021; Pressley and Garside, 2023). Burnout should therefore be understood not only as an individual psychological difficulty, but also as an organisational and workforce issue that may affect the sustainability and quality of care.

Professional burnout is commonly conceptualised as a response to chronic occupational stress and includes emotional exhaustion, depersonalisation, and reduced personal accomplishment (Maslach, 1982; Maslach and Jackson, 1986; Maslach et al., 2001). In nursing, burnout is particularly important because it may affect not only the wellbeing of professionals, but also the quality and safety of patient care. A systematic review and meta-analysis by Li et al. (2024) found that nurse burnout was associated with compromised patient safety, including increased rates of infections, falls, medication errors, and adverse events, as well as lower patient satisfaction and poorer nurse-assessed quality of care. Emotional exhaustion may limit professionals' psychological availability, while depersonalisation may involve emotional distancing or cynical attitudes towards patients. Reduced personal accomplishment may further weaken professionals' sense of efficacy and meaning (Maslach and Leiter, 2007; Poncet et al., 2007). Depersonalisation, in particular, has been described as a coping response to emotional exhaustion, whereby emotional detachment may initially protect depleted resources but over time can foster cynicism and a shift from striving to provide the best possible care towards merely meeting minimum requirements (Parola et al., 2022). Similar patterns have been documented qualitatively among Greek mental

health nurses, who reported deliberately adopting emotional distance to cope with the frustration of caring for clinically demanding patients, while acknowledging that such desensitisation could compromise the therapeutic relationship and the quality of care provided (Papathanasiou and Stylianidis, 2022). Burnout therefore threatens precisely those relational conditions on which high-quality nursing care and person-centred practice depend.

Person-centred care requires professionals to encounter patients not merely as diagnoses, clinical cases, or tasks, but as persons with emotions, histories, fears, expectations, and lived experiences. Such care depends on communication, trust, respect, relational sensitivity, and the capacity to understand the patient's perspective (DiMatteo and Martin, 2011). Within this framework, empathy is not simply an individual virtue or desirable personality trait, but a professional competence that supports therapeutic communication and patient-centred practice. It is generally understood as a multidimensional capacity involving the recognition, understanding, and appropriate response to another person's emotional and experiential world (Hojat, 2016; Hojat et al., 2002). Empathy is also shaped by provider characteristics, patient factors, and organisational context and has been associated with more positive care experiences and outcomes (Nembhard et al., 2023).

At the same time, empathy should not be romanticised. Repeated exposure to suffering, loss, and trauma may make empathic engagement emotionally demanding, particularly when it is not supported by appropriate professional boundaries, reflective spaces, emotional regulation skills, and organisational resources (Beck, 2011; Feng et al., 2024; Xu et al., 2024; Zhang et al., 2018). The relationship between empathy and burnout is therefore theoretically and practically complex. One view is that empathy may heighten emotional vulnerability by bringing professionals closer to patients' suffering. Another is that empathy may be associated with lower burnout by preserving relational meaning, professional identity, and a sense of accomplishment. Previous studies have often reported negative associations between empathy and emotional exhaustion or depersonalisation and positive associations between empathy and personal accomplishment (Raižienė and Endriulaitienė, 2007; Taleghani et al., 2017; Tei et al., 2014; Trevizan et al., 2015; Vévodová et al., 2016). More recent systematic evidence supports a generally negative association between empathy and burnout, while also showing that this relationship varies according to the specific dimensions and instruments used and the mediating factors examined (Zhou, 2025). A longitudinal study further suggests that the relationship may be bidirectional: emotional exhaustion may predict a subsequent decline in empathy, whereas empathy may be more closely related to later depersonalisation and personal accomplishment than to later emotional exhaustion (Dong et al., 2025). However, it remains unclear whether healthcare-specific empathy and broader dispositional empathy show comparable patterns of association with distinct burnout dimensions. Evidence from nursing professionals working in regional Greek hospital settings also remains limited.

The present exploratory cross-sectional study examines the associations between empathy and burnout among nursing professionals working in a single regional general hospital in Greece. By using both a healthcare-specific measure of empathy

and a broader measure of dispositional empathy, alongside multidimensional measures of burnout, the study investigates whether different forms of empathy are associated with emotional exhaustion, depersonalisation, personal accomplishment, and client/patient-related burnout. The study is intended to provide context-specific, hypothesis-generating evidence rather than causal or broadly generalisable conclusions.

1.1. Aim of the study

The aim of this exploratory study was to examine the associations between empathy and burnout among nursing professionals working in a single regional general hospital in Greece.

1.2. Research questions

1. What are the observed levels of empathy and burnout among nursing professionals in the sample?
2. Is empathy associated with the different dimensions of burnout assessed in the study, including emotional exhaustion, depersonalisation, personal accomplishment, personal burnout, work-related burnout, and client/patient-related burnout?
3. Which sociodemographic, work-related, lifestyle, and empathy-related variables are retained as independently associated with burnout dimensions in exploratory multivariable models?

2. Materials and methods

2.1. Study design and setting

This was an exploratory cross-sectional quantitative study examining associations between empathy and dimensions of professional burnout among nursing personnel working in a single regional general hospital in Greece. The study was based on anonymous self-report questionnaires.

2.2. Participants

The study sample consisted of 115 nursing professionals. A total of 130 questionnaires were distributed, of which 115 were completed and returned, corresponding to a response rate of 88.46%. The sample included both nurses and nursing assistants. Most participants were women (88.7%), while 11.3% were men. Regarding age, 9.6% were younger than 30 years, 32.2% were 31–40 years old, 40.0% were 41–50 years old, 17.4% were 51–60 years old, and 0.9% were older than 60 years. All participants were Greek. Most were married (67.8%) and had children (71.3%). With regard to nursing education, 6.1% were university-educated nurses, 64.3% were technological education nurses, and 29.6% were nursing assistants.

2.3. Data collection procedure

Data were collected using a structured self-report questionnaire distributed to nursing personnel. Eligible participants were nursing personnel employed at the

hospital during the data-collection period who consented to complete the questionnaire. Questionnaires were distributed during participants' working hours and collected in person by one member of the research team, who was also a staff member at the hospital. To minimise any perceived pressure to participate, participants were informed that participation was voluntary and anonymous, and that the completed questionnaires would be used exclusively for research purposes.

2.4. Measures

For the purposes of the study, a composite self-report questionnaire was used. The questionnaire consisted of five sections. The first two sections included measures of empathy: the Jefferson Scale of Physician Empathy (Hojat et al., 2001) and the Toronto Empathy Questionnaire (Spreng et al., 2009). The third and fourth sections included measures of burnout: the Maslach Burnout Inventory (Maslach and Jackson, 1986) and the Copenhagen Burnout Inventory (Kristensen et al., 2005). The fifth section collected sociodemographic and work-related information.

The selected instruments have been used in healthcare and nursing-related research. The Jefferson Scale and the two burnout instruments have a strong tradition of use in health professional and nursing samples, while the Toronto Empathy Questionnaire provides a broader measure of empathic responsiveness and has also been applied in nursing-related populations.

The use of more than one instrument for empathy and burnout was a deliberate methodological choice based on the multidimensional nature of both constructs. The instruments were not used to duplicate measurements, but to capture complementary dimensions of the phenomena under investigation. The combined use of the Jefferson Scale and the Toronto Empathy Questionnaire allowed empathy to be examined both as a healthcare-related professional competence and as a broader dispositional empathic capacity. Similarly, the use of both the Maslach Burnout Inventory and the Copenhagen Burnout Inventory allowed burnout to be examined both as a psychological syndrome and as exhaustion associated with different domains of professional experience. This multi-measure approach allowed the study to examine whether specific dimensions of empathy were associated with specific dimensions of burnout.

2.4.1. Jefferson Scale of Physician Empathy

The Jefferson Scale of Physician Empathy, Health Professionals version, was used to assess empathy as a professional and healthcare-related capacity within the clinical relationship. The instrument includes 20 items assessing empathic orientation in healthcare practice. In its original form, items are rated on a 7-point Likert-type scale, yielding a possible total score range of 20–140 (Hojat et al., 2001). In the present study, a modified 5-point response format was used, ranging from 1 = strongly disagree to 5 = strongly agree, resulting in a possible total score range of 20–100 rather than the standard 20–140 range. This modification should be considered when comparing the present findings with studies using the standard 7-point format. Higher scores indicate higher levels of empathy after appropriate reverse scoring of negatively worded items. In the present sample, the scale demonstrated acceptable internal consistency (Cronbach's $\alpha = 0.71$).

2.4.2. Toronto Empathy Questionnaire

The Toronto Empathy Questionnaire was used to assess empathy as a broader interpersonal and emotional tendency. The scale consists of 16 items rated on a 5-point Likert-type scale ranging from 0 = never to 4 = always. Several items are reverse scored, and a total score is calculated by summing responses across all items. Total scores range from 0 to 64, with higher scores indicating higher levels of empathic responsiveness. In the present sample, the scale demonstrated good internal consistency (Cronbach's $\alpha = 0.82$).

2.4.3. Maslach Burnout Inventory

The Maslach Burnout Inventory was used to assess the classic three-dimensional model of burnout. The instrument consists of 22 items rated on a 7-point frequency scale, ranging from 0 = never to 6 = every day. It includes three subscales: emotional exhaustion, depersonalisation, and personal accomplishment. Emotional exhaustion consists of 9 items and assesses the feeling of being emotionally depleted by one's work. Depersonalisation consists of 5 items and assesses distancing, cynicism, or impersonal responses towards patients. Personal accomplishment consists of 8 items and assesses the sense of professional effectiveness and meaningful achievement. Higher scores on emotional exhaustion and depersonalisation indicate higher burnout, whereas lower scores on personal accomplishment indicate higher burnout. For descriptive purposes, high emotional exhaustion was defined as a score of ≥ 31 , high depersonalisation as a score of ≥ 13 , and low personal accomplishment as a score of ≤ 35 , based on the cut-offs reported for the Greek version of the instrument (Anagnostopoulos and Papadatou, 1992). In the present sample, internal consistency was acceptable for all three subscales: emotional exhaustion (Cronbach's $\alpha = 0.79$), personal accomplishment (Cronbach's $\alpha = 0.75$), and depersonalisation (Cronbach's $\alpha = 0.73$).

2.4.4. Copenhagen Burnout Inventory

The Copenhagen Burnout Inventory was used to assess burnout according to the source or domain to which exhaustion is attributed. The instrument consists of 19 items and includes three subscales: personal burnout, work-related burnout, and client/patient-related burnout. Personal burnout consists of 6 items and refers to general physical and psychological exhaustion. Work-related burnout consists of 7 items and refers to exhaustion attributed specifically to work. Client/patient-related burnout consists of 6 items and refers to exhaustion attributed specifically to interactions with patients. Items are typically rated using 5-point response options and transformed to a 0–100 metric, with higher scores indicating higher levels of burnout. In the present sample, internal consistency was excellent: personal burnout (Cronbach's $\alpha = 0.91$), work-related burnout (Cronbach's $\alpha = 0.90$), and client/patient-related burnout (Cronbach's $\alpha = 0.89$).

2.4.5. Sociodemographic and work-related variables

The questionnaire also collected sociodemographic and work-related information, including gender, age, nationality, marital status, parenthood, number of children, educational level, professional category, work experience, and other variables relevant to the descriptive and regression analyses.

2.5. Ethical considerations

Ethical approval for the study was granted by the Administrative Board of the “Achillopouleio” General Hospital of Volos at its 18th regular meeting (item 6, 31 May 2018), following the unanimous favourable opinion of the Hospital’s Scientific Council (meeting no. 6, item 3, 27 April 2018). Participation was voluntary and anonymous. Participants were informed about the purpose of the study, the confidential handling of the data, and the exclusive use of the questionnaires for research purposes. No personally identifiable information was collected. Completion and return of the questionnaire was considered to indicate consent to participate.

2.6. Statistical analysis

Data were analysed using IBM SPSS Statistics version 22.0. Descriptive statistics were used to summarise participants’ sociodemographic, work-related, empathy, and burnout variables. Means and standard deviations were calculated for continuous variables, while absolute and relative frequencies were calculated for categorical variables.

Pearson correlation coefficients (r) were calculated to examine associations between empathy scores and burnout dimensions. The strength of correlations was interpreted as low when r ranged from 0.10 to 0.30, moderate when r ranged from 0.31 to 0.50, and high when r was greater than 0.50. Exploratory multiple linear regression analyses using the stepwise method were conducted to examine which variables were retained as independently associated with each burnout dimension within the present sample. Given the modest sample size and the data-driven nature of stepwise variable selection, the resulting models were interpreted as exploratory rather than confirmatory or strongly predictive. Unstandardized regression coefficients (B) and standard errors (SE) were reported. All tests were two-tailed, and statistical significance was set at $p < 0.05$.

3. Results

3.1. Participant characteristics

The final sample consisted of 115 nursing professionals working in a single regional general hospital in Greece. Of the 130 questionnaires distributed, 115 were completed and returned, corresponding to a response rate of 88.46%. The sample included both nurses and nursing assistants. Most participants were women (88.7%), were aged between 41 and 50 years (40.0%), were married (67.8%), and had children (71.3%). Detailed sociodemographic and work-related characteristics are presented in Table 1.

Table 1. Sociodemographic, work-related, and lifestyle characteristics of participants.

Characteristic	Category	<i>N</i>	%
Sex	Male	13	11.3
	Female	102	88.7
Age group	<30 years	11	9.6
	31–40 years	37	32.2

Table 1. *Cont.*

Characteristic	Category	<i>N</i>	%
Nationality	41–50 years	46	40.0
	51–60 years	20	17.4
	>60 years	1	0.9
Marital status	Greek	115	100.0
	Single	24	20.9
	Married	78	67.8
	Divorced	11	9.6
	Widowed	1	0.9
	Other	1	0.9
Children	No	33	28.7
	Yes	82	71.3
Number of children ^a	1 child	23	28.0
	2 children	48	58.5
	3 children	11	13.4
Nursing education level	University-educated nurse (PE)	7	6.1
	Technological education nurse (TE)	74	64.3
	Nursing assistant (DE)	34	29.6
Additional education beyond basic degree	None	86	74.8
	Master's degree	19	16.5
	Doctorate	1	0.9
	Other	9	7.8
Years of nursing work experience	1–5 years	19	16.5
	6–10 years	15	13.0
	11–20 years	45	39.1
	21–30 years	26	22.6
	>30 years	10	8.7
Nursing sector	Pathological sector	71	61.7
	Surgical sector	16	13.9
	Interdepartmental sector	28	24.3
Work schedule	Fixed schedule	23	20.0
	Rotating schedule	92	80.0
Physical activity	None	48	41.7
	At least once per week	67	58.3
Health psychology seminars	No	65	56.5
	Yes	50	43.5
Participation in Balint-type groups	No	109	94.8
	Yes	6	5.2

Note: *N* = 115 unless otherwise indicated. ^a: Percentages for number of children were calculated among participants who had children (*n* = 82).

3.2. Descriptive statistics and internal consistency of the study measures

Descriptive statistics for the empathy and burnout measures are presented in **Table 2**. Participants reported mean empathy scores of 45.3 (*SD* = 5.4) on the Toronto Empathy Questionnaire and 73.7 (*SD* = 8.5) on the Jefferson Scale of Physician Empathy. Scores on the Toronto Empathy Questionnaire ranged from 29 to 57, while scores on the Jefferson Scale of Physician Empathy ranged from 54 to 96.

The burnout measures indicated substantial levels across several burnout dimensions. According to the Maslach Burnout Inventory classification, 61.7% of participants scored in the high range for emotional exhaustion, 50.4% in the high

range for depersonalisation, and 52.2% in the high burnout range for reduced personal accomplishment. Internal consistency was acceptable to excellent across all measures. Cronbach's α was 0.82 for the Toronto Empathy Questionnaire, 0.71 for the Jefferson Scale, 0.79 for emotional exhaustion, 0.75 for personal accomplishment, 0.73 for depersonalisation, 0.91 for personal burnout, 0.90 for work-related burnout, and 0.89 for client/patient-related burnout.

Table 2. Descriptive statistics and internal consistency of empathy and burnout measures.

Measure	Scale	Subscale	Theoretical score range	Observed range	<i>M</i>	<i>SD</i>	Cronbach's α
Empathy	Toronto Empathy Questionnaire	Total score	0–64	29.0–57.0	45.3	5.4	0.82
	Jefferson Scale of Physician Empathy	Total score	20–100	54.0–96.0	73.7	8.5	0.71
Burnout	Maslach Burnout Inventory	Emotional exhaustion	0–54	11.0–52.0	32.4	9.5	0.79
		Personal accomplishment	0–48	21.0–47.0	34.5	6.4	0.75
		Depersonalisation	0–30	0.0–26.0	10.1	6.6	0.73
Burnout	Copenhagen Burnout Inventory	Personal burnout	0–100	12.5–100.0	58.7	22.1	0.91
		Work-related burnout	0–100	0.0–100.0	56.7	21.3	0.90
		Client/patient-related burnout	0–100	0.0–100.0	41.2	23.6	0.89

Note: *M* = mean; *SD* = standard deviation; Maslach Burnout Inventory = MBI; Copenhagen Burnout Inventory = CBI. Higher scores indicate higher empathy for the empathy measures. For the MBI, higher emotional exhaustion and depersonalisation scores indicate higher burnout, whereas lower personal accomplishment scores indicate higher burnout. For the CBI, higher scores indicate higher burnout. According to the MBI classification, 61.7% of participants scored in the high range for emotional exhaustion, 50.4% in the high range for depersonalisation, and 52.2% in the high burnout range for reduced personal accomplishment.

3.3. Associations between empathy and Maslach Burnout Inventory dimensions

Pearson correlation analyses were conducted to examine the associations between empathy and the three dimensions of burnout assessed by the Maslach Burnout Inventory. As shown in **Table 3**, higher scores on the Jefferson Scale of Physician Empathy were significantly associated with lower emotional exhaustion and lower depersonalisation, and with higher personal accomplishment. This pattern suggests that, within the present sample, higher healthcare-related empathy was associated with lower emotional depletion and distancing, as well as with a stronger sense of professional efficacy.

Table 3. Correlations between empathy measures and Maslach Burnout Inventory dimensions.

Empathy measure	Maslach Burnout Inventory dimensions		
	Emotional exhaustion	Personal accomplishment	Depersonalisation
Toronto Empathy Questionnaire	$r = -0.06$ $p = 0.523$	$r = 0.20^*$ $p = 0.033$	$r = -0.17$ $p = 0.076$
Jefferson Scale of Physician Empathy	$r = -0.26^{**}$ $p = 0.005$	$r = 0.26^{**}$ $p = 0.004$	$r = -0.27^{**}$ $p = 0.003$

Note: Values are Pearson correlation coefficients (r) with corresponding p -values. Higher scores on emotional exhaustion and depersonalisation indicate higher burnout, whereas higher scores on personal accomplishment indicate lower burnout. $^*p < 0.05$. $^{**}p < 0.01$.

The Toronto Empathy Questionnaire showed a more limited pattern of associations with the Maslach Burnout Inventory dimensions. Overall, the findings suggest that the healthcare-related empathy captured by the Jefferson Scale was more consistently associated with the classic burnout dimensions than the broader dispositional empathic

responsiveness captured by the Toronto Empathy Questionnaire.

3.4. Associations between empathy and Copenhagen Burnout Inventory dimensions

Pearson correlation analyses were also conducted between empathy scores and the three Copenhagen Burnout Inventory dimensions. As presented in **Table 4**, both empathy measures were significantly and negatively associated with client/patient-related burnout. Specifically, higher Toronto Empathy Questionnaire scores were associated with lower client/patient-related burnout ($r = -0.23$, $p = 0.015$), and higher Jefferson Scale scores were also associated with lower client/patient-related burnout ($r = -0.25$, $p = 0.007$). Associations with personal burnout and work-related burnout were not statistically significant.

Table 4. Correlations between empathy measures and Copenhagen Burnout Inventory dimensions.

Empathy measure	Copenhagen Burnout Inventory dimensions		
	Personal burnout	Work-related burnout	Client/patient-related burnout
Toronto Empathy Questionnaire	$r = 0.03$ $p = 0.765$	$r = -0.05$ $p = 0.594$	$r = -0.23^*$ $p = 0.015$
Jefferson Scale of Physician Empathy	$r = -0.16$ $p = 0.090$	$r = -0.13$ $p = 0.168$	$r = -0.25^{**}$ $p = 0.007$

Note: Values are Pearson correlation coefficients (r) with corresponding p -values. Higher scores on all CBI dimensions indicate higher burnout. $^*p < 0.05$. $^{**}p < 0.01$.

This pattern suggests that, within the present sample, empathy was not consistently associated with all burnout domains. Rather, both measures of empathy were associated specifically with client/patient-related burnout, which refers to exhaustion attributed to interactions with patients.

3.5. Exploratory regression analyses of variables associated with burnout dimensions

Exploratory multiple linear regression analyses using stepwise variable selection were conducted to examine which variables were retained as independently associated with each burnout dimension within the present sample. The results are summarised in **Table 5**.

For emotional exhaustion, participation in Balint-type groups and Jefferson Scale scores were independently associated with the outcome. Participation in Balint-type groups was associated with an estimated 10.81-point lower emotional exhaustion score compared with non-participation ($B = -10.81$, $SE = 3.78$, $p = 0.005$). Higher Jefferson Scale scores were also associated with lower emotional exhaustion ($B = -0.32$, $SE = 0.10$, $p = 0.001$).

For client/patient-related burnout, participation in Balint-type groups and Jefferson Scale scores were again independently associated with lower burnout. Participation in Balint-type groups was associated with an estimated 23.23-point lower client/patient-related burnout score compared with non-participation ($B = -23.23$, SE

= 9.47, $p = 0.016$). Higher Jefferson Scale scores were also associated with lower client/patient-related burnout ($B = -0.76$, $SE = 0.25$, $p = 0.003$). However, only six participants reported participation in Balint-type groups. The coefficients associated with this variable should therefore be interpreted with considerable caution and regarded as preliminary and potentially unstable.

Table 5. Exploratory multiple linear regression models of variables associated with burnout dimensions.

Outcome	Predictor retained in final model	Reference category	<i>B</i>	<i>SE</i>	<i>p</i>
Emotional exhaustion (MBI)	Participation in Balint-type groups	No	-10.81	3.78	0.005
	Jefferson Scale of Physician Empathy	Not applicable	-0.32	0.10	0.001
Personal accomplishment (MBI)	Children	No	3.20	1.34	0.018
	Total nursing work experience: 1–10 years	>20 years	-2.74	1.57	0.084
	Total nursing work experience: 11–20 years	>20 years	-3.30	1.34	0.016
	Jefferson Scale of Physician Empathy	Not applicable	0.15	0.07	0.029
Depersonalisation (MBI)	Physical activity: at least once per week	None	-2.70	1.19	0.025
	Jefferson Scale of Physician Empathy	Not applicable	-0.22	0.07	0.002
Personal burnout (CBI)	Children	No	10.22	4.34	0.020
	Education beyond basic qualification	No	-12.76	4.52	0.006
Work-related burnout (CBI)	Children	No	9.41	4.31	0.031
Client/patient-related burnout (CBI)	Participation in Balint-type groups	No	-23.23	9.47	0.016
	Jefferson Scale of Physician Empathy	Not applicable	-0.76	0.25	0.003

Note: The models were exploratory and based on stepwise variable selection. Estimates concerning participation in Balint-type groups should be interpreted with particular caution because only six participants reported such participation.

For the remaining burnout dimensions, Jefferson Scale scores were also independently associated with higher personal accomplishment and lower depersonalisation. Having children was associated with higher personal accomplishment, personal burnout, and work-related burnout, while 11–20 years of nursing work experience was associated with lower personal accomplishment compared with more than 20 years of experience. Physical activity at least once per week was associated with lower depersonalisation, and education beyond the basic qualification was associated with lower personal burnout. Given the modest sample size and the data-driven nature of stepwise variable selection, these models should be interpreted as exploratory and sample-specific rather than as confirmatory predictive models.

Overall, within the exploratory regression models, Jefferson Scale scores were retained in association with a greater number of burnout dimensions than Toronto Empathy Questionnaire scores. Participation in Balint-type groups was also associated with lower emotional exhaustion and client/patient-related burnout, but this finding should be considered hypothesis-generating and not evidence that reflective group participation reduces burnout.

4. Discussion

The present exploratory cross-sectional study examined associations between empathy and burnout among nursing professionals using multiple measures of both constructs. The findings do not suggest a simple or uniform association between

empathy and burnout. Rather, they indicate that this relationship depends on which dimension of empathy and which dimension of burnout is examined. Overall, clinical/professional empathy appeared to be most clearly linked to the relational dimensions of burnout, particularly depersonalisation and client/patient-related burnout. Given the single-site design, modest sample size, and exploratory regression strategy, these findings should be interpreted as sample-specific associations rather than as evidence of causal or broadly generalisable relationships. This pattern is consistent with the view that empathy in nursing should be understood within the broader context of emotional labour, patient-centred care, and the organisational conditions under which relational care is delivered.

A first important finding is that nursing professionals may remain empathically oriented while simultaneously experiencing substantial levels of professional burnout. Although empathy scores varied across the sample, a considerable proportion of participants scored in the high range for emotional exhaustion, depersonalisation, and reduced personal accomplishment. This suggests that empathy should not be understood as the opposite of burnout. Instead, empathy may be more accurately conceptualised as a relational professional capacity that is associated with specific burnout dimensions, rather than as a general protective factor against all forms of professional exhaustion.

This interpretation is consistent with previous literature suggesting that the relationship between empathy and burnout is complex rather than linear. Earlier studies have reported negative associations between empathy and burnout-related dimensions, particularly emotional exhaustion and depersonalisation, and positive associations between empathy and personal accomplishment (Raižienė and Endriulaitienė, 2007; Taleghani et al., 2017; Tei et al., 2014; Trevizan et al., 2015; Vévodová et al., 2016). More recent evidence similarly supports a generally negative association between empathy and burnout, while also indicating that this association varies according to the specific dimensions examined and the mechanisms involved (Zhou, 2025). The present findings are in line with this more nuanced interpretation: empathy was not uniformly associated with all burnout indicators, but was more clearly related to dimensions that directly concern the care relationship.

The pattern of findings also supports the methodological decision to use two empathy instruments. The Jefferson Scale of Physician Empathy showed broader associations with burnout dimensions than the Toronto Empathy Questionnaire. One possible interpretation is that the Jefferson Scale, which assesses empathy within healthcare practice, may be more closely aligned with the relational dimensions of occupational burnout than a broader measure of dispositional empathic responsiveness. In this sense, clinical or professional empathy may be more directly connected to burnout processes in nursing care than general empathic tendency. This finding is consistent with the view that empathy in healthcare is not only a personality characteristic, but also a professional competence embedded in the therapeutic relationship and in patient-centred practice (Hojat, 2016; Nembhard et al., 2023). However, this interpretation remains tentative and requires replication in larger and more diverse samples.

The use of the Copenhagen Burnout Inventory also added an important layer to the findings. While the Maslach Burnout Inventory captures burnout as a psychological syndrome through emotional exhaustion, depersonalisation, and personal accomplishment, the Copenhagen Burnout Inventory allows exhaustion to be attributed to specific domains. In the present study, both empathy measures were negatively associated with client/patient-related burnout, whereas associations with personal burnout and work-related burnout were not statistically significant. This pattern suggests that, within the present sample, empathy was more consistently associated with exhaustion arising from patient interactions than with broader personal or work-related exhaustion. This is theoretically relevant because client/patient-related burnout directly concerns the emotional and relational demands of caring for patients.

Higher clinical/professional empathy was also associated with lower depersonalisation. Both depersonalisation and client/patient-related burnout concern the professional's relationship with patients: depersonalisation reflects emotional distancing, cynical attitudes, or impersonal responses, whereas client/patient-related burnout reflects exhaustion attributed specifically to patient interactions. These associations may indicate that healthcare-related empathy is linked to lower relational distancing; however, they do not establish that empathy protects professionals from burnout or preserves the quality of care over time.

The findings are also relevant to the understanding of depersonalisation as a possible response to emotional exhaustion. Depersonalisation may function as an attempt to create emotional distance when professionals feel depleted, but over time, this distancing can threaten the relational quality of care and weaken person-centred practice. The association between higher clinical/professional empathy and lower depersonalisation in the present study may therefore reflect a lower tendency towards detachment, cynicism, or impersonal responding among participants with higher empathy scores. However, because of the cross-sectional design, this association should not be interpreted causally. It is also possible that burnout, especially emotional exhaustion, gradually erodes empathic engagement over time, as suggested by longitudinal evidence (Dong et al., 2025). A bidirectional relationship between empathy and burnout therefore remains plausible.

At the same time, these findings should not be interpreted in an overly individualistic way. Empathy may support relational care, but it cannot compensate for structural pressures such as high workload, inadequate staffing, shift-related strain, time pressure, and limited organisational support. The absence of significant associations between empathy and some burnout dimensions suggests that forms of exhaustion driven by broader organisational or personal factors may require interventions beyond individual empathic capacity. This is consistent with the broader view of burnout as not only an individual psychological outcome, but also an organisational and workforce issue affecting the sustainability and quality of care.

From an applied health psychology perspective, the findings suggest that empathy may be understood as a relational professional capacity associated with selected dimensions of occupational wellbeing rather than as a universal safeguard against burnout. Its potential relevance appears to lie particularly in those dimensions that

concern professionals' engagement with patients. Nevertheless, the findings do not support the conclusion that strengthening empathy alone would reduce burnout, especially where exhaustion is rooted in staffing, workload, or wider organisational conditions.

The exploratory regression models provided a broadly similar pattern, with Jefferson Scale scores retained in association with several burnout dimensions. These models were based on stepwise variable selection and should be regarded as sample-specific and hypothesis-generating rather than confirmatory or strongly predictive. Participation in Balint-type reflective groups was also associated with lower emotional exhaustion and client/patient-related burnout; however, given the very small subgroup involved (see Section 4.2), this should be regarded as a preliminary observation rather than evidence that such groups reduce burnout.

These results should also be interpreted in light of the emotional labour of nursing work. Nursing requires professionals to manage their own emotions while responding to the suffering, fear, anger, vulnerability, and needs of patients and families. Previous reviews have shown that emotional labour is a central aspect of nursing work, and that emotional dissonance, particularly when arising from surface acting, may contribute to stress and burnout (Delgado et al., 2017; Feng et al., 2024). The present findings are compatible with the possibility that empathy is most sustainable when supported by reflective capacity, emotional regulation, appropriate professional boundaries, and organisational resources. Without such support, empathic engagement may risk becoming another source of emotional exposure, secondary traumatic stress, or compassion fatigue (Beck, 2011; Xu et al., 2024; Zhang et al., 2018).

4.1. Practical implications

The findings suggest that hospital administrations and nurse educators should not treat empathy merely as an individual trait or personal virtue. Empathic practice needs to be supported through training, supervision, reflective practice, and organisational conditions that make patient-centred care psychologically sustainable. However, the present findings do not support a specific intervention recommendation or the conclusion that strengthening empathy alone would reduce burnout.

Reflective approaches, including Balint-type groups, may nevertheless warrant further evaluation as part of broader staff-support strategies. Such groups can provide nursing professionals with a structured and protected space to reflect on difficult nurse–patient interactions, process emotional responses, explore relational dynamics, and develop shared professional understanding. In the present study, participation in Balint-type groups was associated with lower emotional exhaustion and client/patient-related burnout, although, as noted above, this finding rests on a very small subgroup and remains preliminary.

The potential relevance of reflective groups is supported by emerging intervention literature rather than established by the present study. A systematic review and meta-analysis of randomised controlled trials found that Balint groups were associated with improvements in empathy in medical and nursing education, with stronger effects in nurse-specific subgroup analyses (Gong et al., 2024). A randomised controlled trial

involving head nurses also reported improvements in aspects of burnout, particularly personal accomplishment (Shan et al., 2024). These findings suggest that facilitated reflective groups merit investigation in larger, adequately powered nursing samples and in different hospital contexts.

Previous qualitative evidence from the Greek mental health system has shown that nurses may experience difficult clinical encounters through uncertainty, frustration, and futility, particularly when training, supervision, emotional support, and clinical guidance are limited (Papathanasiou and Stylianidis, 2022). Accordingly, staff-support initiatives should address not only individual emotional competencies but also the organisational conditions under which emotionally demanding care is delivered. These may include access to clinical supervision, confidential reflective spaces, peer support, manageable workloads, and clear pathways for professional support. Recent systematic evidence suggests that structured peer-support strategies may facilitate newly qualified nurses' transition into practice and strengthen professional and workplace support, although evidence regarding their effects on burnout remains limited (Raqueno et al., 2025).

Hospitals could therefore consider pilot reflective or peer-support programmes accompanied by systematic evaluation, rather than assume their effectiveness on the basis of the present findings. Such programmes should be facilitated, confidential, and integrated into wider organisational strategies addressing workload, staffing, supervision, and staff wellbeing. Future intervention studies are needed to determine whether Balint-type groups, peer-support approaches, or other reflective practices produce meaningful and sustained reductions in burnout among nursing professionals.

4.2. Limitations

Several limitations should be acknowledged. First, the study used a cross-sectional design, which precludes causal conclusions. Although higher empathy was associated with lower scores on specific burnout dimensions, it cannot be determined whether empathy reduces burnout, whether burnout erodes empathic capacity, or whether the relationship is bidirectional.

Second, the sample was drawn from a single regional general hospital in Greece, which limits the generalisability of the findings. The results may reflect the particular organisational culture, staffing conditions, patient population, and administrative pressures of this institution and should not be generalised to larger urban hospitals, private healthcare settings, other regions of Greece, or different national healthcare systems.

Third, all variables were assessed using self-report questionnaires, which may be affected by social desirability, common method bias, and participants' subjective interpretation of the items. Empathy scores, in particular, may have been susceptible to socially desirable responding, as participants may have been inclined to present themselves as more empathic or professionally responsive.

Fourth, the Jefferson Scale of Physician Empathy was administered using a modified 5-point response format rather than the standard 7-point format, resulting in a possible score range of 20–100 instead of 20–140. This modification limits direct

comparability with studies using the original response format and should be considered when interpreting the findings.

Fifth, the study included both nurses and nursing assistants. Although this reflects the composition of nursing personnel in real hospital settings, the two professional groups may differ in educational background, responsibilities, and clinical roles. Future studies should examine whether the relationship between empathy and burnout varies according to professional category, educational level, clinical department, or years of experience.

Sixth, only six participants reported participation in Balint-type groups. The regression coefficients involving this variable are therefore likely to be unstable and highly sensitive to the characteristics of this very small subgroup. These findings should be regarded as preliminary and hypothesis-generating rather than as reliable estimates of an intervention effect.

Finally, the study used stepwise regression analyses, which should be interpreted cautiously. Given the modest sample size, the number of candidate variables, and the data-driven nature of stepwise variable selection, the resulting models may be sample-specific, susceptible to overfitting, and unlikely to replicate consistently in other datasets. They should therefore not be interpreted as confirmatory predictive models. Future research should use larger, multi-centre samples, preregistered theory-driven regression models, longitudinal designs, or structural equation modelling to test more complex pathways linking empathy, emotional labour, reflective support, and burnout.

4.3. Future research

Future studies should examine the empathy–burnout relationship using longitudinal designs in order to clarify directionality. Multi-centre studies across different hospitals and clinical specialties would strengthen generalisability and allow comparisons between departments with different emotional demands, such as emergency, intensive care, oncology, psychiatric, and palliative care settings. Larger samples would also permit more stable multivariable analyses and adequately powered comparisons across professional and organisational subgroups.

Future research should also examine whether reflective practices, Balint-type groups, supervision, peer support groups, and emotion regulation training are associated with improvements in relational burnout and empathic engagement over time. Adequately powered intervention studies using comparison groups and repeated assessments are needed to determine the effectiveness of these approaches. In particular, intervention studies could evaluate the impact of structured peer support and facilitated reflective groups organised within hospital settings on nursing professionals' empathy, emotional exhaustion, client/patient-related burnout, resilience, job satisfaction, and intention to remain in the profession. Given the very small number of Balint-group participants in the present study, replication in larger nursing samples is particularly important before conclusions can be drawn regarding their potential effects.

Further work is also needed to explore the mechanisms through which empathy relates to burnout. The present findings suggest that clinical/professional empathy was

more consistently associated with relational burnout dimensions, but this association may be influenced by emotional labour strategies, emotional dissonance, organisational support, workload, staffing ratios, and team climate. Theory-driven and preregistered analyses could examine whether these variables mediate or moderate associations between empathy and burnout. Mixed-methods studies could be particularly useful in capturing both the measurable associations and the lived experience of nursing professionals who try to remain empathically engaged under demanding working conditions.

5. Conclusion

In this exploratory single-site study, empathy was associated with lower burnout-related indicators and higher personal accomplishment among nursing professionals in a Greek general hospital. The findings suggest that empathy was more consistently associated with relational dimensions of burnout, particularly depersonalisation and client/patient-related burnout. These associations should not be interpreted causally and require replication in larger, multi-centre, and longitudinal studies. Supporting nursing professionals through education, reflective practice, and organisational support may warrant further investigation as part of broader strategies for staff wellbeing and quality improvement, rather than being regarded on the basis of the present findings as an established approach to burnout prevention.

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Informed consent statement: Informed consent was obtained from all subjects involved in the study. Participants were informed about the purpose of the study, the voluntary and anonymous nature of participation, the confidential handling of the data, and the exclusive use of the questionnaires for research purposes. Completion and return of the questionnaire was considered to indicate consent to participate.

Data availability statement: The data are not publicly available due to confidentiality considerations and the anonymity commitments made to participants. Aggregated data may be made available from the corresponding author upon reasonable request.

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