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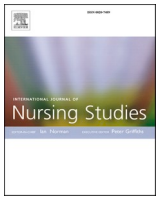

Which individual and organizational factors shape nurses' attitudes toward family involvement in nursing care? A multicenter cross-sectional study

Jessica Longhini [a,b,c,*], Federica Canzan [a,c], Erika Bassi [c,d,e], Alberto Dal Molin [c,d,e], Beatrice Albanesi [c,f], Tatiana Bolgeo [g], Anna Brugnolli [h], Sara Campagna [c,f], Valerio Dimonte [c,f], Alvisa Palese [c,i], Elisa Ambrosi [a,c], Workgroup

[a] Department of Diagnostics and Public Health, University of Verona, Verona, Italy
[b] Laboratory of Studies & Evidence-Based Nursing, Department of Cardiac, Thoracic, Vascular Sciences and Public Health, University of Padova, Padova, Italy
[c] Rete Interuniversitaria di Ricerca Infermieristica Clinica per l'Innovazione organizzativa e formativa (RICI), Italy
[d] Department of Translational Medicine, University of Piemonte Orientale, Novara, Italy
[e] Health Professions' Direction, Maggiore della Carità Hospital, Italy
[f] Department of Public Health and Pediatrics, University of Torino, Torino, Italy
[g] Research Training Innovation Infrastructure - Department of Research and Innovation, Azienda Universitaria Ospedaliera SS Antonio e Biagio e Cesare Arrigo, Alessandria, Italy
[h] Interdepartmental Medical Science Centre, University of Trento, Trento, Italy
[i] Department of Medicine, University of Udine, Udine, Italy

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ABSTRACT

Background: Family involvement in care has been shown to improve patient outcomes and reduce family caregiver burden. However, nurses' attitudes toward family participation vary widely and are influenced by multiple individual and contextual factors. Despite international evidence, there is a lack of data in relation to individual psycho-emotional and organizational predictors across settings.

Aim: To assess nurses' attitudes toward involving families in care and individual and organizational factors associated with these attitudes.

Methods: A multicenter cross-sectional study between April 2024 and April 2025 across 16 local health authorities in Northern Italy. A total of 1288 registered nurses completed an anonymous online survey. Data included sociodemographic, professional, psychological (burnout, family functioning, caregiver support), and organizational variables, along with the Families' Importance in Nursing Care – Nurses' Attitudes (FINC-NA) scale. Hierarchical linear regression models were used to explore the role of individual and organizational predictors of attitudes across four FINC-NA subscales.

Results: Overall, nurses reported positive attitudes toward family involvement (FINC-NA mean = 100.5). Attitudes were most favorable in pediatric and primary care settings and less so in intensive care. Key individual predictors of positive attitudes included lower depersonalization, higher personal accomplishment, and greater perceived support from caregivers. Burnout, particularly depersonalization and emotional exhaustion, significantly predicted negative perceptions of families as burdens. Shift profile (day–night rotation) and lower private family functioning were also linked to more negative attitudes. Organizational factors, such as the presence of institutional caregiver procedures and unrestricted family access, were associated with more favorable attitudes but did not reduce perception of family as a burden. Notably, traditional variables such as age, gender, education, and work experience showed no influence.

Conclusion: Nurses' attitudes toward family involvement are shaped by a dynamic interplay of psychological, relational, and organizational factors. Structural policies, while necessary, are insufficient on their own. Promoting family-centered care requires addressing nurses' emotional well-being and supporting relational competencies, particularly in high-stress settings. These findings call for integrated interventions and further longitudinal research to explore how attitudes evolve over time and respond to systemic changes.

* Corresponding author at: Laboratory of Studies & Evidence-Based Nursing, Department of Cardiac, Thoracic, Vascular Sciences and Public Health, University of Padova, Via Loredan 18, Padova, Italy.
E-mail address: jessica.longhini@univr.it (J. Longhini).

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What is already known

- Family involvement in nursing care improves patient and caregiver outcomes but is inconsistently integrated into practice.
- Previous studies mostly examined demographic and occupational predictors of nurses' attitudes, with inconclusive results.
- The role of psycho-emotional and organizational factors has been underexplored across different care settings.

What this paper adds

- Burnout dimensions, particularly depersonalization and low personal accomplishment, are associated with negative attitudes toward family involvement.
- Perceived caregiver support and institutional policies facilitate more positive nurse–family collaboration.
- Extended family visiting hours are associated with more favorable attitudes toward family involvement.

1. Introduction

The increasing prevalence of chronic conditions and disabilities among populations has intensified the importance of family involvement in healthcare (Eurocarers, 2023; Gilliss et al., 2019).

Family members frequently play a dual role, acting as both informal caregivers and active advocates within care pathways. Their contribution extends beyond emotional support to include monitoring symptoms, aiding decision-making, and serving as intermediaries with healthcare professionals (Eurocarers, 2023; Moral-Fernández et al., 2018). A growing body of evidence has demonstrated that such involvement has a positive influence on patients' and informal caregivers' outcomes. These include reductions in anxiety, agitation, and delirium, improvements in orientation and treatment adherence, shorter hospital stays, and enhanced overall quality of life for both patients and their families (Brown et al., 2022; Danielis et al., 2022; Rodakowski et al., 2017; Zeh et al., 2020).

Despite the established benefits of family caregivers' contributions, assuming the caregiver role often requires adaptation and support, as individuals face emotional stress, uncertainty, and a lack of preparation. These demands can lead to caregiver burden, including depressive symptoms, self-neglect, social withdrawal, economic strain, and physical health issues (Barello et al., 2019; Liu et al., 2020; Moral-Fernández et al., 2018). Moreover, illness impacts not only the primary caregiver but also the family system, often requiring redistribution of responsibilities (Shajani and Snell, 2023; Zhang, 2018). Therefore, there is a need to consider the needs of family caregivers and to care for the family as a whole, ensuring them adequate support to cope with the challenges related to caring for an ill person.

Nurses, who are at the frontline of patient care, are uniquely positioned to care for families in a meaningful way (Cranley et al., 2022). However, the integration of families into nursing care processes remains inconsistent across healthcare systems, as reported by both nurses and family caregivers (Duhamel, 2017; Eggenberger and Sanders, 2016; Gwaza and Msiska, 2022).

Over the last two decades, considerable research has explored nurses' attitudes toward the involvement of families in nursing care (Barreto et al., 2022; Shamali et al., 2023; Sharma et al., 2024; Wong et al., 2023). According to the most recent literature, findings generally reported favorable attitudes among nurses, while also revealing marked variability influenced by individual and organizational factors (Barreto et al., 2022; Shamali et al., 2023; Sharma et al., 2024; Wong et al., 2023).

Regarding individual factors, age consistently emerges as a positive predictor in several studies (Barreto et al., 2022). However, some other studies reported uncertain or no statistically significant results (Luttik et al., 2017; Sharma et al., 2024). Similarly, female gender is frequently associated with more positive attitudes (Cranley et al., 2022; Shamali et al., 2023; Verkaik et al., 2025), whereas other studies found no significant gender differences (Hoplock et al., 2019; Luttik et al., 2017). Higher educational attainment and specific training in family care are linked to more favorable views in some contexts (Halperin et al., 2022; Ostergaard et al., 2020; Shamali et al., 2023; Sharma et al., 2024), but not universally (Cranley et al., 2022; Luttik et al., 2017). Similarly, professional experience is generally correlated with positive attitudes (Hagedoorn et al., 2021; Shamali et al., 2023; Wong et al., 2023), though not always significantly (Cranley et al., 2022; Luttik et al., 2017). The role of personal caregiving experience also shows inconsistent effects (Cranley et al., 2022; Hagedoorn et al., 2021; Ostergaard et al., 2020; Shamali et al., 2023). Finally, the psychological dimension, explored only by Smits et al. in terms of work-role conflict, suggests a negative impact on nurse–family interactions (Smits et al., 2022), highlighting an underexplored area in the broader literature.

As for organizational variables, work setting also influences attitudes, with more positive views commonly found in community or non-acute settings (Cranley et al., 2022; Hagedoorn et al., 2021; Shamali et al., 2023; Wong et al., 2023), though this is not supported by some studies (Hoplock et al., 2019; Ostergaard et al., 2020). The clinical area of practice is another relevant factor, with settings such as geriatric, psychiatric, and pediatric often associated with more positive attitudes, although findings vary (Barreto et al., 2022). Institutional support, such as the presence of family-centered care policies and perceived approach toward families in the ward, was explored by a few studies (Hagedoorn et al., 2021; Hoplock et al., 2019) and emerged as a correlate with better attitudes.

In summary, most existing studies have focused narrowly on demographic and occupational predictors (Barreto et al., 2022; Shamali et al., 2023; Sharma et al., 2024; Wong et al., 2023), often neglecting psycho-emotional factors such as burnout and perceived adequacy of organizational support, which are known to possibly influence clinical engagement and patient-centered behaviors, including missed nursing care (Chiappinotto et al., 2022). Overall, these variations highlight still current gaps in the literature and underscore the importance of further investigating the roles of individual and organizational factors.

In addition, only a few studies among those recent have explored potential predictors across the different dimensions of family involvement (Shamali et al., 2023; Sharma et al., 2024; Verkaik et al., 2025), such as perceiving the family as a burden, as conversational partners, or as a resource, as conceptualized in the *Families' Importance in Nursing Care – Nurses' Attitudes* (FINC-NA) framework (Benzein et al., 2008; Saveman et al., 2011). This gap limits the interpretability of findings and constrains the development of targeted policy and educational recommendations based on specific intervention areas.

Moreover, many studies have focused on single care environments, such as intensive, psychiatric, oncology, or surgical care (Mason et al., 2021; Smits et al., 2022; Verkaik et al., 2025; Wong et al., 2023), or hospital settings (Halperin et al., 2022; Mason et al., 2021; Sharma et al., 2024; Smits et al., 2022; Verkaik et al., 2025), with limited attention given to primary care (Cranley et al., 2022; Hoplock et al., 2019; Shamali et al., 2023), despite it being a key context for family involvement.

Therefore, this study aims to assess nurses' attitudes toward involving families in patient care and to examine the relationships between these attitudes and individual and organizational variables, focusing on those that have been less investigated in the literature. Examples include private family functioning, burnout, perceived staff adequacy, and the time allowed for caregiver access. By addressing these dimensions, this study contributes to the evidence base needed to support targeted educational and organizational strategies that enhance nurse-family collaboration in healthcare delivery.

2. Methods

2.1. Study design

This study employed a cross-sectional multicenter design conducted in 16 local health authorities across four regions of Northern Italy between April 2024 and April 2025. The study was reported here according to the STROBE checklist (Strengthening the Reporting of Observational Studies in Epidemiology, Appendix 1) (Elm et al., 2007).

2.2. Participants

Data were collected from a convenience sample of registered nurses. Nurses were eligible to participate if they provided direct patient care and had at least six months of experience in their current role.

Participants were invited through institutional email managed by designated local coordinators.

Sample size estimation was informed by methodological recommendations indicating that approximately 300 participants are required to detect small-to-moderate effects in regression models with 10–15 predictors at 80% power ($\alpha = 0.05$), and that for regression equations with six or more predictors, a minimum of 10 cases per predictor is advisable, with up to 30 cases per predictor recommended when aiming to detect small effects (Adam Bujang et al., 2022; Voorhis and Morgan, 2007). Based on these guidelines, an a priori power rationale was established, setting a target of at least 570 complete responses for 19 predictors included in the univariate regression analysis.

2.3. Variables and data collection

The primary outcome was the attitudes of nurses toward the involvement of families in nursing care. It was measured with the Italian version of the *Families' Importance in Nursing Care – Nurses' Attitudes* (FINC-NA) scale (Longhini et al., 2024; Saveman et al., 2011), consisting of 26 items divided into four subscales rated on a 1 to 5-point Likert scale, with higher scores indicating more positive attitudes toward family involvement (Appendix 2, 3). The subscales are: 1) *Family as a resource in nursing care*: with 10 items (scores range 10 to 50), it reflects nurses' perceptions of families as facilitators of care, contributing to workload reduction, emotional support, and professional satisfaction. Family involvement in care delivery and decision-making is seen as mutually beneficial; 2) *Family as a conversational partner*: with eight items (score range 8 to 40), it captures nurses' engagement in structured communication with families from the outset of care. Emphasizes early involvement, information exchange, and collaborative planning to enhance care continuity; 3) *Family as a burden*: with four items (score range 4 to 20), it represents the perception of family presence as a source of stress or interference. High scores suggest feelings of being observed, delayed, or constrained by family involvement during care tasks; 4) *Family as its own resource*: with four items (score range 4 to 20), it describes a nurse's support for family autonomy and coping. Nurses view families as active agents in care, encouraging their resilience and participation through a partnership-based approach.

To investigate influencing factors, two domains of independent variables were collected according to the relationship hypothesis between FINC-NA and potential individual and organizational influencing factors (Fig. 1). The selection of variables examined in this study was guided by theoretical relevance and previous evidence (Barreto et al., 2022; Cranley et al., 2022; Hagedoorn et al., 2021; Halperin et al., 2022; Hoplock et al., 2019; Luttik et al., 2017; Mason et al., 2021; Ostergaard et al., 2020; Shamali et al., 2023; Sharma et al., 2024; Smits et al., 2022; Verkaik et al., 2025), as well as the clinical and research expertise of authors on this topic.

The first domain consisted of individual variables related to nurses, including sociodemographic and occupational variables.

Socio-demographic variables were age, gender, and personal

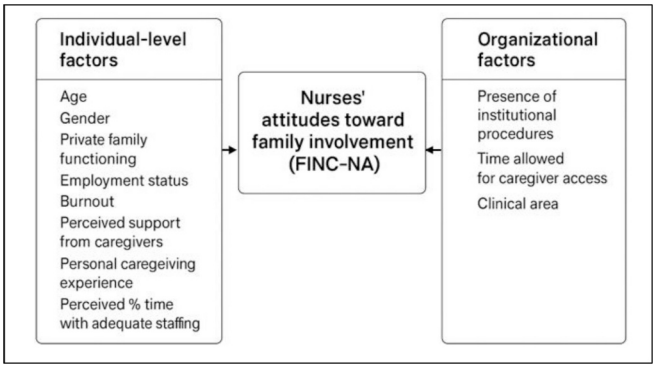

Fig. 1. Relationship hypothesis between FINC-NA and individual and organizational influencing factors.

experience as an informal caregiver. In addition, the private family functioning of nurses was included based on family systems theory, which posits that individuals internalize relational models that influence how they interpret and engage in interpersonal interactions (Shajani and Snell, 2023). It was assessed using the Brief Assessment of Family Functioning Scale (BAFFS, Appendix 2) (Mansfield et al., 2019), a three-item version of the McMaster Family Assessment Device (Epstein et al., 1983), which evaluates emotional expressiveness, cohesion, and communication. Responses are provided on a 1 to 5-point Likert scale.

Occupational variables included the highest educational title, years of experience in the current setting, years as a nurse, employment status (full-time or part-time), shift profile (day-night, 24 h/7 days, or daily – Monday to Friday), the average number of patients cared for during a shift, and psychological variables. These included the perceived support by informal caregivers, the perceived % of time with adequate nurses and nurses' aides (0–50%; 75–100%), and burnout. All these variables were included because they represent key conditions that can influence how nurses perceive and involve families in care. Occupational characteristics (experience, shift profile, workload) affect the time and competency nurses can use to families, while psychological variables (burnout, perceived support, staffing adequacy) capture their emotional and relational capacity to engage with them. Specifically, perceived staffing adequacy was selected because insufficient staffing contributes to stress, reduced time availability, and unmet relational aspects of care. Several studies have found that low staffing levels are associated with reduced patient and family communication, increased missed care, and lower quality of relational engagement (Chiappinotto et al., 2022; Dall'Ora et al., 2022). Burnout was included because recent work has shown that emotional exhaustion, depersonalization, and diminished professional accomplishment negatively influence nurses' relational availability, communication, and attitudes toward patients and families (Mabunda, 2024; Sanabria-Delgado et al., 2025). The perceived support by informal caregivers was measured using the Italian adaptation of the Customers-Initiated Support scale (Converso et al., 2015) (Appendix 2), which includes five items rated on a 1 to 5-point Likert scale. It assesses nurses' perceptions of recognition, trust, and alignment expressed by patients' family members. Items capture perceived approval of professional conduct, acknowledgment of effort, facilitation of communication, and mutual understanding. Higher scores reflect a supportive relational climate between nurses and families. The burnout level was assessed using the Italian version of the Maslach Burnout Inventory (Sirigatti and Stefanile, 1992) (Appendix 2), consists of 22 items scored on a 1 to 7-point scale grouped into three subscales: Emotional exhaustion (9 items), captures feelings of being emotionally overextended and exhausted by work (e.g., "I feel emotionally drained by my work"); Depersonalization (5 items), which reflects an impersonal or detached response toward recipients of one's care or service (e.g., "I feel

I treat some patients as if they were objects"); and Personal accomplishment (8 items), that measures perceived competence and success in one's work with people (e.g., "I deal effectively with the problems of my patients"). Higher scores on emotional exhaustion and depersonalization, combined with lower scores on Personal Accomplishment, indicate a higher level of burnout. The level of burnout was classified as low, moderate, and high for each subscale (Maslach et al., 1986).

The second domain of independent variables was composed of organizational workplace-related variables: current clinical area (medical, pediatric, surgical, primary care, intensive care), presence of institutional procedures in the ward for caregiver/family involvement, and time of allowed family access to the ward (none or selected cases, hour slots, always). These variables were included because organizational structures shape the conditions under which nurses can meaningfully involve families. Evidence from prior studies suggests that supportive policies and broader access are associated with more positive attitudes toward family involvement (Hagedoorn et al., 2021; Hoplock et al., 2019); however, the findings remain mixed.

2.4. Data collection

Data were collected via an anonymous online survey administered through the EU Survey platform, a secure and GDPR-compliant tool developed by the European Commission. The study was coordinated by the University of Verona, with local contact persons in each participating healthcare institution responsible for distributing the survey to nursing staff. These individuals received detailed instructions, along with standardized communication materials that outlined the study's purpose and its ethical aspects. The survey link was disseminated through institutional mailing lists and internal communication channels. Participation was voluntary, with no incentives offered.

No missing data were present, as all fields in the survey were mandatory and had to be completed in order to submit the questionnaire.

2.5. Data analysis

Descriptive statistics were used to summarize the characteristics of the sample and the distribution of variables. Normality of continuous variables was assessed through visual inspection of histograms and Q-Q plots, as well as the Kolmogorov–Smirnov and Shapiro–Wilk tests.

To explore how individual and workplace-related factors were associated with attitudes toward family involvement, we first ran univariate linear regressions for each predictor on each FINC-NA subscale. This preliminary step allowed us to identify which variables showed meaningful associations with each FINC-NA subscale. Based on these results, we then developed multivariable models using hierarchical linear regression, entering predictors in two sequential blocks according to their statistical significance in the univariate analyses.

In the first block, individual-level variables were included, defined as those influenced by personal characteristics or subjective perceptions and experiences. These variables comprised: age, gender, private family functioning, employment status, shift profile, emotional exhaustion, depersonalization, and personal accomplishment (as indicators of burnout), perceived support from caregivers, personal caregiving experience, and the perceived percentage of time with adequate staffing (both nurses and nursing assistants) in the ward.

The second block introduced organizational variables, reflecting structural or contextual characteristics that are not shaped by individual judgment or experience. These included the presence of institutional procedures for family involvement, the time allowed for caregiver access to the ward, and the clinical area.

This hierarchical modeling approach represented our adjustment strategy: individual characteristics and psychological variables (Block 1) were used to control for potential confounding before adding organizational factors (Block 2).

To ensure model parsimony and minimize the risk of overadjustment or multicollinearity, we refined the initial multivariate model by conducting a second hierarchical regression that retained only predictors explaining at least 1% of the variance (Partial Eta$^2 \geq 0.01$), following Cohen's (1988) criterion for small effect sizes. The only exception was the clinical area, which was maintained due to its strong theoretical relevance to the study objectives.

Multicollinearity was assessed using the Variance Inflation Factor (VIF), with a threshold of <10 considered acceptable. Homoscedasticity, linearity, and normality of residuals were evaluated graphically and statistically. Statistical significance was set at $p < .05$ for all analyses.

For each model, unstandardized regression coefficients (B), 95% confidence intervals, *p*-values, and partial eta squared (η^2) values were reported. Model fit indices included the coefficient of determination (R^2), the change in R^2 between blocks (ΔR^2), Akaike Information Criterion (AIC), and the significance of model comparisons based on F-tests. All analyses were performed using R (version 4.4.2).

2.6. Ethical considerations

This study was conducted in accordance with the principles of the Declaration of Helsinki. The research protocol was approved by the Ethics Committee of the University of Verona, Italy (Prot. n. 0505277, 20/12/2023).

Participation in the study was voluntary, and participants received comprehensive information about the objectives, procedures, potential risks, and benefits of the research through an electronic information sheet included at the beginning of the survey. Nurses were required to provide informed consent before accessing the questionnaire by checking a mandatory consent box online.

3. Results

3.1. Characteristics of the population

A total of 1288 nurses participated in the study out of 22′683 invited participants (17.61%). Most were female (1090; 84.6%), and the mean age was 40.59 years (SD = 10.84) (Table 1, Appendix 4). A personal experience as an informal caregiver was reported by 751 participants (58.3%).

Regarding the highest educational title, 629 (48.8%) of nurses held a Bachelor's degree, and 277 (21.5%) a First-level Master's degree. Participants reported a mean of 16.98 years (SD = 11.43) of professional experience, and most participants worked full-time (n = 1106; 85.9%) and on day-night shifts (n = 796; 61.8%).

Perceived adequacy of nurse staffing 75–100% of the time was reported by 691 nurses (53.6%), and for nurses' aides, 559 nurses (47.3%) reported adequate staffing 75–100% of the time.

In relation to burnout, 329 nurses (25.5%) reported a high level of emotional exhaustion, 177 (13.7%) a high level of depersonalization. High levels of burnout, associated with reduced personal accomplishment, were reported by 490 nurses (38.0%).

Procedures for caregiver access to the wards were reported by 727 nurses (56.4%).

The mean number of patients per nurse was 13.59 (SD = 13.36).

Regarding time for caregiver access, most participants reported access in hour slots (n = 796; 61.8%).

In the FINC-NA, the total score was 100.5 (SD = 14.7), indicating a generally positive attitude toward the importance of families in nursing care. Among the subscales, the mean score was 38.58 (SD = 6.39) for "Family as a resource in nursing care", 32.20 (SD = 4.99) for "Family as a conversational partner", 15.71 (SD = 2.73) for "Family as own resource". Regarding the "Family as a burden" dimension, the mean of original scores was 5.95 (SD = 3.66), and of the reverse-scored items 13.97 (SD = 3.59) (Table 1).

Table 1
Characteristics of participants.

Factor	Group	Overall (1288) Number (%)
Age (years) *mean, SD*		40.59 (10.84)
Gender, *female*		1090 (84.6)
Personal experience as an informal caregiver, *yes*		751 (58.3)
Private Family Functioning, *mean, SD*		3.17 (0.79)
Years as a nurse, *mean, SD*		16.98 (11.43)
Years in the current ward, *mean, SD*		8.18 (8.38)
N. of patients cared for, *mean, SD*		13.59 (13.36)
Perceived support by caregivers, *mean, SD*		2.30 (0.84)
Procedure in the ward for family involvement, yes		727 (56.4)
Employment status	Full time	1106 (85.9)
	Part-time	182 (14.1)
Shift profile	Day-night shift (7 day/7)	796 (61.8)
	Daily shift (Monday–Friday)	492 (38.2)
Highest educational title	Regional diploma (Before 2001)	294 (22.8)
	Bachelor's degree in nursing (after 2001)	629 (48.8)
	Master's education I level (1 year)	277 (21.5)
	Master of science (2 years)	83 (6.4)
	Master's education II level (1 year)	5 (0.4)
Clinical area	Intensive care	233 (18.1)
	Medical area	536 (41.6)
	Pediatric area	99 (7.7)
	Primary care	210 (16.3)
	Surgical area	210 (16.3)
Time of allowed family access to the ward	None or selected cases	87 (6.8)
	Hour slots	796 (61.8)
	Always	405 (31.4)
Perceived % of time with adequate N. of nurses' aids in the service/ward	0–50%	622 (52.7)
	75–100%	559 (47.3)
Perceived % of time with adequate N. of nurses in the service/ward	0–50%	597 (46.4)
	75–100%	691 (53.6)
Burnout, depersonalization	Low	963 (74.8)
	Moderate	148 (11.5)
	High	177 (13.7)
Burnout, reduced personal accomplishment	Low	465 (36.1)
	Moderate	333 (25.9)
	High	490 (38.0)
Burnout, burnout, emotional exhaustion	Low	719 (55.8)
	Moderate	240 (18.6)
	High	329 (25.5)
Families' Importance in Nursing Care–Nurses' Attitudes (FINC-NA)		
Total score (min 26–max 130), *mean, SD*		100.5 (14.7)
Family as a conversational partner (min 8–max 40), *mean, SD*		32.20 (4.99)
Family as a resource in nursing care (min 10–max 50), *mean, SD*		38.58 (6.39)
Family as own resource (min 4–max 20), *mean, SD*		15.71 (2.73)
Family as a burden (min 4–max 20), *mean, SD*		5.95 (3.66)
Reverse scores, mean, SD		13.97 (3.59)

Legend: N, number; SD, standard deviation.

3.2. Individual and organizational factors influencing attitudes toward family involvement

3.2.1. Family as a conversational partner

No statistically significant associations emerged at the univariate level for age, years as a nurse, years in the ward, perceived adequacy of nurses' aides, number of patients cared for, employment status, gender, personal caregiving experience, or educational title (Appendix 5).

In the hierarchical regression (Table 2), predictors explaining at least 1% of variance (Appendix 6) and included in the final model were private family functioning, shift profile, burnout dimensions, perceived support by caregivers, procedure in the ward for family involvement, time of allowed caregiver access to the ward, and clinical area.

Model 1, which included individual factors, accounted for 14.3% of the variance ($R^2 = 0.143$), while Model 2, with the addition of organizational factors, increased the explained variance to 21.1% ($\Delta R^2 = 0.068$; $p < .001$).

In model 2, at the individual level, higher perceived support by caregivers ($\beta = 1.051$, CI 0.743–1.360; $p = .001$) and better private family functioning ($\beta = 0.346$, CI 0.029–0.663; $p = .032$) were associated with more positive attitudes. In contrast, lower personal accomplishment remained a significant negative predictor, both at moderate ($\beta = -1.183$, CI $-1.846 - -0.520$; $p = .001$) and high levels ($\beta = -1.747$, CI $-2.387 - -1.106$; $p = .001$).

At the organizational level, working in pediatric ($\beta = 2.596$, CI 1.467–3.726; $p < .001$), primary care ($\beta = 2.303$, CI 1.301–3.305; $p < .001$), and medical areas ($\beta = 0.775$, CI 0.047–1.503; $p = .037$) was positively associated with attitudes compared to working in intensive care. The presence of caregiver procedures ($\beta = 0.794$, CI 0.272–1.316; $p = .003$), fixed visiting hours ($\beta = 1.412$, CI 0.358–2.465; $p = .009$), and full-time access for family caregivers ($\beta = 2.361$, CI 1.252–3.469; $p < .001$) also emerged as significant predictors compared to no access.

3.2.2. Family as own resource

Univariate analyses showed no statistically significant associations for age, years as in the ward, employment status, gender, perceived adequacy of nurses' aides, personal caregiving experience, or education (Appendix 5).

In the hierarchical regression (Table 3), predictors explaining at least 1% of variance (Appendix 7) and included in the final model were shift profile, burnout dimensions, perceived support by caregivers, procedure in the ward for caregiver/family involvement, time of allowed family access to the ward, and clinical area.

Individual factors (Model 1) accounted for 16.5% of the variance in the perception of family as a personal resource ($R^2 = 0.165$; AIC = 6030.584). When organizational variables were added (Model 2), the explained variance increased to 19.9% ($\Delta R^2 = 0.035$; $p < .001$).

In Model 2, among the significant predictors, perceived caregiver support was positively associated with the outcome ($\beta = 0.627$; 95% CI 0.459–0.795; $p < .001$). Regarding burnout dimensions, moderate levels of depersonalization were negatively associated ($\beta = -0.557$; 95% CI $-1.010 - -0.105$; $p = .016$), while high levels did not reach significance. Both moderate ($\beta = -0.692$; 95% CI $-1.052 - -0.331$; $p < .001$) and high levels ($\beta = -0.990$; 95% CI $-1.337 - -0.642$; $p < .001$) of reduced personal accomplishment were significantly associated with lower scores on this dimension.

Working shifts that included day-night rotation, compared to regular daytime schedules, was significantly associated with lower scores ($\beta = -0.548$; 95% CI $-0.899 - -0.197$; $p = .002$).

Among those organizational, the presence of formal procedures for caregiver access was a significant positive predictor ($\beta = 0.361$; 95% CI 0.077–0.646; $p = .013$), as was full-time caregiver access ($\beta = 0.659$; 95% CI 0.055–1.263; $p = .033$) compared to no access.

In addition, nurses working in pediatric ($\beta = 1.124$; 95% CI 0.508–1.740; $p < .001$) and primary care settings ($\beta = 0.975$; 95% CI 0.429–1.521; $p < .001$) reported significantly higher scores on this dimension compared to those in intensive care units.

3.2.3. Family as a burden

At the univariate level, no sociodemographic or employment-related variables, including age, gender, years as a nurse, employment status, years in the current ward, and education, showed statistically significant associations (Appendix 5).

In the regression models (Table 4), predictors explaining at least 1% of variance (Appendix 8) and included in the final model were private family functioning, shift profile, burnout dimensions, perceived support by caregivers, time of allowed family access to the ward, and clinical

Table 2
Hierarchical regression on *Family as a conversational partner*.

	B	CI low	CI high	*p*-Value	Partial Eta2	B	CI low	CI high	*p*-Value	Partial Eta2
Model 1: individual factors										
Private family functioning	0.342	0.013	0.671	.042	0.003					
Shift profile, day-night vs daily	−1.341	−1.889	−0.793	.001	0.042					
Burnout, emotional exhaustion, moderate vs low	−0.469	−1.173	0.235	.191	0.019					
Burnout, emotional exhaustion, high vs low	−0.399	−1.098	0.299	.262						
Burnout, depersonalization, moderate vs low	−0.517	−1.376	0.343	.239	0.013					
Burnout, depersonalization, high vs low	−0.652	−1.514	0.210	.138						
Burnout, personal accomplishment, moderate vs low	−1.466	−2.152	−0.780	.001	0.044					
Burnout, personal accomplishment, high vs low	−1.968	−2.629	−1.307	.001						
Perceived support by caregivers	1.134	0.814	1.453	.001	0.039					
						$R^2 = 0.143$, AIC = 7645.354				
Model 2: Individual and contextual factors										
Private family functioning						0.346	0.029	0.663	.032	0.004
Shift profile, day-night vs daily						−0.637	−1.281	0.008	.053	0.046
Burnout, emotional exhaustion, moderate vs low						−0.426	−1.105	0.253	.218	0.020
Burnout, emotional exhaustion, high vs low						−0.474	−1.149	0.202	.169	
Burnout, depersonalization, moderate vs low						−0.345	−1.175	0.484	.415	0.014
Burnout, depersonalization, high vs low						−0.284	−1.124	0.556	.507	
Burnout, personal accomplishment, moderate vs low						−1.183	−1.846	−0.520	.001	0.048
Burnout, personal accomplishment, high vs low						−1.747	−2.387	−1.106	.001	
Perceived support by caregivers						1.051	0.743	1.360	.001	0.042
Procedure in the ward for caregiver access or involvement, yes vs no						0.794	0.272	1.316	.003	0.019
Time of allowed family access to the ward, hour slots vs none or selected cases						1.412	0.358	2.465	.009	0.036
Time of allowed family access to the ward, always vs none or selected cases						2.361	1.252	3.469	.001	
Medical area vs intensive care						0.775	0.047	1.503	.037	0.029
Pediatric area vs intensive care						2.596	1.467	3.726	.001	0.029
Primary care vs intensive care						2.303	1.301	3.305	.001	0.029
Surgical area vs intensive care						0.084	−0.782	0.950	.849	0.029
						$R^2 = 0.211$, $\Delta R^2 = 0.068$, AIC = 7552.128, Model 1 vs Model 2, p = <.001				

Table 3
Hierarchical regression on *Family as own resource*.

	B	CI low	CI high	*p*-Value	Partial Eta2	B	CI LOW	CI high	*p*-Value	Partial Eta2
Model 1: individual factors										
Shift profile, day-night vs daily	−0.823	−1.116	−0.531	.001	0.055					
Burnout, emotional exhaustion, moderate vs low	−0.066	−0.442	0.310	.730	0.024					
Burnout, emotional exhaustion, high vs low	−0.250	−0.623	0.124	.190						
Burnout, depersonalization, moderate vs low	−0.610	−1.070	−0.151	.009	0.022					
Burnout, depersonalization, high vs low	−0.534	−0.992	−0.075	.023						
Burnout, personal accomplishment, moderate vs low	−0.794	−1.160	−0.428	.001	0.044					
Burnout, personal accomplishment, high vs low	−1.067	−1.419	−0.716	.001						
Perceived support by caregivers	0.665	0.495	0.835	.001	0.044					
						$R^2 = 0.165$, AIC = 6030.584				
Model 2: Individual and contextual factors										
Shift profile, day-night vs daily						−0.548	−0.899	−0.197	.002	0.057
Burnout, emotional exhaustion, moderate vs low						−0.060	−0.431	0.310	.750	0.025
Burnout, emotional exhaustion, high vs low						−0.275	−0.644	0.093	.143	
Burnout, depersonalization, moderate vs low						−0.557	−1.010	−0.105	.016	0.023
Burnout, depersonalization, high vs low						−0.383	−0.839	0.073	.100	
Burnout, personal accomplishment, moderate vs low						−0.692	−1.052	−0.331	.001	0.046
Burnout, personal accomplishment, high vs low						−0.990	−1.337	−0.642	.001	
Perceived support by caregivers						0.627	0.459	0.795	.001	0.046
Procedure in the ward for caregiver access or involvement, yes vs no						0.361	0.077	0.646	.013	0.012
Time of allowed family access to the ward, hour slots vs none or selected cases						0.369	−0.206	0.943	.208	0.014
Time of allowed family access to the ward, always vs none or selected cases						0.659	0.055	1.263	.033	
Medical area vs intensive care						0.206	−0.191	0.603	.309	0.018
Pediatric area vs intensive care						1.124	0.508	1.740	.001	
Primary care vs intensive care						0.975	0.429	1.521	.001	
Surgical area vs intensive care						0.241	−0.231	0.714	.316	
						$R^2 = 0.199$, $\Delta R^2 = 0.035$, AIC =5989.744, Model 1 vs Model 2, p = <.001				

Table 4
Hierarchical regression on *Family as a burden*.

	B	CI low	CI high	*p*-Value	Partial Eta2	B	CI low	CI high	*p*-Value	Partial Eta2
Model 1: individual factors										
Private family functioning	−0.252	−0.476	−0.027	.028	0.021					
Shift profile, day-night vs daily	1.047	0.673	1.421	.001	0.064					
Burnout, emotional exhaustion, moderate vs low	0.338	−0.142	0.818	.168	0.070					
Burnout, emotional exhaustion, high vs low	0.749	0.272	1.225	.002						
Burnout, depersonalization, moderate vs low	0.758	0.171	1.345	.011	0.069					
Burnout, depersonalization, high vs low	2.243	1.656	2.831	.001						
Burnout, personal accomplishment, moderate vs low	0.737	0.269	1.206	.002	0.049					
Burnout, personal accomplishment, high vs low	1.592	1.142	2.043	.001						
Perceived support by caregivers	−0.666	−0.884	−0.448	.001	0.027					
						$R^2 = 0.243$, AIC = 6660.059				
Model 2: Individual and contextual factors										
Private family functioning						−0.259	−0.481	−0.037	.022	0.022
Shift profile, day-night vs daily						0.627	0.176	1.079	.006	0.066
Burnout, emotional exhaustion, moderate vs low						0.313	−0.163	0.789	.198	0.072
Burnout, emotional exhaustion, high vs low						0.736	0.263	1.209	.002	
Burnout, depersonalization, moderate vs low						0.705	0.123	1.287	.018	0.071
Burnout, depersonalization, high vs low						2.254	1.666	2.843	.001	
Burnout, personal accomplishment, moderate vs low						0.653	0.189	1.118	.006	0.050
Burnout, personal accomplishment, high vs low						1.528	1.080	1.977	.001	
Perceived support by caregivers						−0.621	−0.837	−0.404	.001	0.028
Time of allowed family access to the ward, hour slots vs none or selected cases						0.126	−0.604	0.856	.734	0.021
Time of allowed family access to the ward, always vs none or selected cases						−0.757	−1.526	0.013	.054	
Medical area vs intensive care						0.140	−0.369	0.648	.590	0.006
Pediatric area vs intensive care						−0.203	−0.992	0.586	.613	
Primary care vs intensive care						−0.575	−1.265	0.116	.103	
Surgical area vs intensive care						0.281	−0.323	0.885	.361	
						$R^2 = 0.263$, $\Delta R^2 = 0.020$, AIC = 6636.895, Model 1 vs Model 2, p = <.001				

Table 5
Hierarchical regression on *Family as a resource in nursing care*.

	B	CI low	CI high	*p*-Value	Partial Eta2	B	CI low	CI high	*p*-Value	Partial Eta2
Model 1: individual factors										
Shift profile, day-night vs daily	−2.276	−2.961	−1.590	.001	0.064					
Burnout, emotional exhaustion, moderate vs low	−0.503	−1.385	0.378	.263	0.034					
Burnout, emotional exhaustion, high vs low	−1.047	−1.921	−0.173	.019						
Burnout, depersonalization, moderate vs low	−0.678	−1.755	0.399	.217	0.027					
Burnout, depersonalization, high vs low	−2.189	−3.264	−1.114	.001						
Burnout, personal accomplishment, moderate vs low	−1.224	−2.081	−0.367	.005	0.027					
Burnout, personal accomplishment, high vs low	−1.929	−2.753	−1.106	.001						
Perceived support by caregivers	1.368	0.970	1.767	.001	0.034					
						$R^2 = 0.163$, AIC = 8223.597				
Model 2: Individual and contextual factors										
Shift profile, day-night vs daily						−1.265	−2.076	−0.454	.002	0.069
Burnout, emotional exhaustion, moderate vs low						−0.374	−1.229	0.482	.392	0.037
Burnout, emotional exhaustion, high vs low						−1.112	−1.963	−0.262	.010	
Burnout, depersonalization, moderate vs low						−0.418	−1.463	0.628	.433	0.029
Burnout, depersonalization, high vs low						−1.880	−2.934	−0.826	.001	
Burnout, personal accomplishment, moderate vs low						−0.989	−1.822	−0.155	.020	0.029
Burnout, personal accomplishment, high vs low						−1.790	−2.592	−0.987	.001	
Perceived support by caregivers						1.265	0.877	1.652	.001	0.037
Procedure in the ward for caregiver access or involvement, yes vs no						0.716	0.058	1.373	.033	0.009
Time of allowed family access to the ward, hour slots vs none or selected cases						−0.376	−1.703	0.951	.578	0.030
Time of allowed family access to the ward, always vs none or selected cases						1.020	−0.376	2.416	.152	
Medical area vs intensive care						1.172	0.255	2.089	.012	0.033
Pediatric area vs intensive care						3.841	2.418	5.264	.001	
Primary care vs intensive care						2.693	1.431	3.955	.001	
Surgical area vs intensive care						0.033	−1.057	1.124	.952	
						$R^2 = 0.22.1$, $\Delta R^2 = 0.057$, AIC = 8146.194, Model 1 vs Model 2, p = <.001				

area.

Model 1 with individual-level factors explained 24.3% of the variance ($R^2 = 0.243$), while Model 2, adding organizational variables, slightly increased it to 26.3% ($\Delta R^2 = 0.020$; $p < .001$).

In model 2, emotional exhaustion (high vs low; $\beta = 0.736$, CI 0.263–1.209; $p = .002$), depersonalization (moderate: $\beta = 0.705$, CI 0.123–1.287; $p = .018$; high: $\beta = 2.254$, CI 1.666–2.843; $p < .001$), and lower personal accomplishment (moderate: $\beta = 0.653$, CI 0.189–1.118; $p = .006$; high: $\beta = 1.528$, CI 1.080–1.977; $p < .001$) were all positively associated with increased perception of family as burden.

In contrast, higher private family functioning ($\beta = -0.259$, CI -0.481– -0.037; $p = .022$) and perceived support by caregivers ($\beta = -0.621$, CI -0.837– -0.404; $p < .001$) were significant protective factors. Additionally, day-night shift profiles were associated with higher burden ($\beta = 0.627$, CI 0.176–1.079; $p = .006$) compared to the daily shift. No organizational variables reached significance.

3.2.4. Family as a resource in nursing care

Univariate analyses revealed no statistically significant associations between this dimension and individual variables such as age, gender, years as a nurse, years in the current ward, and education (Appendix 5).

In the hierarchical regression (Table 5), predictors explaining at least 1% of variance (Appendix 9) and included in the final model were shift profile, burnout dimensions, perceived support by caregivers, procedure in the ward for family involvement, time of allowed family access to the ward, and clinical area.

The first model, including only individual-level variables, accounted for 16.3% of the variance in nurses' perceptions of family as a resource in nursing care ($R^2 = 0.163$). When organizational characteristics were added in Model 2, the explained variance rose to 22.1% ($\Delta R^2 = 0.057$; $p < .001$), highlighting the contribution of contextual factors.

In model 2, among individual predictors, working rotating day-night shifts as opposed to daily shifts was negatively associated with attitudes ($\beta = -1.265$, IC 95% -2.076– -0.454; $p = .002$). Similarly, high levels of emotional exhaustion ($\beta = -1.112$, IC 95% -1.963– -0.262; $p = .010$) and depersonalization ($\beta = -1.880$, IC 95% -2.934 – -0.826; $p < .001$), and diminished personal accomplishment, at both moderate ($\beta = -0.989$, IC 95% -1.822 – -0.155; $p = .020$) and high levels ($\beta = -1.790$, IC 95% -2.592 – -0.987; $p < .001$), were significant negative predictors.

Conversely, stronger perceived support by caregivers showed a positive association ($\beta = 1.265$, IC 95% 0.877–1.652; $p < .001$), as did the presence of formal ward procedures for family involvement ($\beta = 0.716$, IC 95% 0.058–1.373; $p = .033$). As for care settings, nurses working in pediatric ($\beta = 3.841$, IC 95% 2.418–5.264; $p < .001$), primary care ($\beta = 2.693$, IC 95% 1.431–3.955; $p < .001$), and medical wards ($\beta = 1.172$, IC 95% 0.255–2.089; $p = .012$) reported significantly more favorable attitudes toward family involvement compared to those in intensive care units.

4. Discussion

4.1. Main results

The results of this study shed light on how individual and organizational factors play different roles in different dimensions of nursing attitudes toward family involvement.

Using the FINC-NA instrument, we observed an overall favorable orientation toward family involvement in our sample, with a total mean score of 100.5.

When comparing results to international studies, this result aligns closely with that reported by research conducted in mixed clinical settings ranging approximately from 90 to 108 (Cranley et al., 2022; Hoplock et al., 2019; Sharma et al., 2024), suggesting a generally positive attitude among nurses toward family involvement across diverse contexts.

The subscale "Family as a conversational partner" yielded a mean score of 32.2 in our study. This result closely aligns with the findings of Hoplock et al. (2019), who reported scores ranged from 30.9 to 32.3, and Cranley et al. (2022), with values between 32.8 and 33.1. It was slightly higher than the score reported by Hagedoorn et al. (2021) (26.9), and comparable to the upper range of scores found by Shamali et al. (26.7–34.2) (Shamali et al., 2023), indicating a general consistency across studies in recognizing the family as a communicative partner in care. For the "Family as a resource in nursing care" subscale, our mean score was 38.58, which falls well within the range reported by Cranley et al. (38.9–39.5) (Cranley et al., 2022), Hoplock et al. (38.7–39) (Hoplock et al., 2019), and Shamali et al. (38.3–41.1) (Shamali et al., 2023). In contrast, it was substantially higher than the 28.3 reported by Hagedoorn et al. (2021), possibly reflecting contextual or cultural differences in how the family's role in care is perceived. In Hagedoorn's (2021) study, Dutch nurses appeared to attribute comparatively limited importance to family involvement in nursing care, as only one-third of nurses reported that inviting family members for conversation at the start or end of care was important, and fewer than half indicated that they routinely asked families how to support them, findings the authors interpret as signaling an attitude that is not strongly oriented toward family involvement. In contrast, Mediterranean contexts, such as Italy, tend to operate within cultural norms and models in which families are seen as a central actor in care, carrying moral responsibility and providing emotional support. This cultural orientation can substantially amplify nurses' perception of the family as a valuable resource.

Similarly, the mean score for "Family as own resource" was 15.71, almost identical to that reported by Cranley et al. (15.6–15.8) (Cranley et al., 2022), and slightly above the values observed by Hagedoorn et al. (13.6) (Hagedoorn et al., 2021), Shamali et al. (14.6–16.5) (Shamali et al., 2023), and Hoplock et al. (14.8–15.5) (Hoplock et al., 2019). This suggests a shared view of the family as a source of personal strength and support for nursing staff.

In contrast, the "Family as a burden" subscale, which is reverse-scored, showed a mean value of 13.97. This is lower than scores reported by Cranley et al. (15.6–15.8) (Cranley et al., 2022), Hagedoorn et al. (15.8) (Hagedoorn et al., 2021), and Shamali et al. (14.1–16) (Shamali et al., 2023), and nearly identical to that of Hoplock et al. (13.9–14.6) (Hoplock et al., 2019). These findings may reflect a relatively higher perception of families as obstacles to care among nurses in our sample. A possible explanation is the structural context of Italian healthcare. Italy consistently reports one of the lowest nurse-to-patient ratios in the OECD (≈6.3 nurses per 1000 inhabitants), far below Northern European countries. These chronic understaffing increases workload, limits the time nurses can dedicate to families, and heightens stress, potentially amplifying the perception of families as demanding or burdensome. Moreover, the COVID-19 pandemic likely intensified these dynamics. Italian hospitals imposed some of the strictest and longest visitation bans in Europe, and for nearly two years, nurses acted as the sole intermediaries between patients and relatives, turning in more challenging interactions with families as visitation resumed, that was the period in which our data were collected.

In addition, our study extends the FINC-NA framework by integrating psycho-emotional and organizational factors that have been rarely examined in previous research, and it demonstrates the multilevel interplay between emotional, relational, and organizational contexts in shaping family-centered nursing practice. While the FINC-NA was developed to measure nurses' attitudes toward family involvement, prior studies have focused mainly on demographic or professional variables. By incorporating burnout dimensions, private family functioning, and organizational conditions such as institutional procedures and caregiver access policies, we have demonstrated that nurses' attitudes are influenced not only by personal beliefs but also by emotional well-being and workplace structures.

Specifically, regarding the influencing factors of nurses' attitudes toward involving families in care, a different role of individual and

workplace-related variables emerges.

Our results revealed no statistically significant associations between nurses' age, years of experience (overall or in the ward), employment status, educational level, or gender and their attitudes across the four FINC-NA dimensions. Compared to previous literature, the relevance of the impact of these predictors remains uncertain due to small or not statistically significant effects and contrasting results (Barreto et al., 2022). In addition, although the number of patients assigned was excluded from our analysis due to low reliability, it showed a modest negative effect on FINC-NA scores at univariate analysis, in line with findings by Verkaik et al. (2025) in intensive care settings, where higher patient loads were associated with more negative attitudes toward family involvement.

In the final explanatory models, with regard to individual factors, the impact of burnout components was mostly consistent across dimensions, adding new results to the available evidence. Depersonalization was identified as a negative predictor across all FINC-NA dimensions, with the exception of "Family as a conversational partner". This finding reinforces the idea that emotional detachment leads nurses to view families as demanding, stressful, or even obstructive—limiting the recognition of their value and reducing opportunities for meaningful collaboration, particularly in areas such as shared caregiving, emotional support, or clinical planning. However, the absence of a significant effect on the "conversational partner" dimension suggests that lowering emotional detachment alone may not be enough to promote genuine dialog and communicative involvement with families. This subscale includes behaviors like inviting families to discuss changes in the patient's condition, participating in care planning, or sharing their perspectives from the first point of contact. These actions require more than reduced stress. Indeed, they demand a proactive relational attitude, confidence in interpersonal communication, and a belief in the relevance of the family's voice.

Personal accomplishment emerged as a protective factor across "Family as a resource in nursing care", "Family as a conversational partner", and "Family as own resource", and mitigated negative perceptions in "Family as a burden", highlighting the role of perceived professional efficacy in fostering relational inclusion. This pattern suggests that nurses who perceive themselves as professionally effective and fulfilled are more inclined to engage families not only in care delivery (e.g., by inviting them to participate in planning and caregiving tasks) but also in relational and communicative exchanges.

The contribution of emotional exhaustion was more specific, since it significantly predicted "Family as a burden", especially at high levels, but did not meaningfully impact the more positive dimensions. This suggests that emotional fatigue may lead nurses to feel overwhelmed by the presence of families, perceiving them as an additional demand or source of stress, aligning with the empirical work by Smits et al. (2022), who linked psychological distress with deteriorated quality of family interaction. However, it does not necessarily diminish nurses' cognitive acknowledgment of families as partners or resources.

Regarding private family functioning, another new dimension investigated in our study, its influence was observed in "Family as burden" and "Family as a conversational partner", suggesting that nurses' internalized family scripts influence how they engage with families in care. This adds nuance to existing hypotheses about role transfer between private and professional spheres (Barreto et al., 2022). Surprisingly, private family functioning had no relevant impact on "Family as own resource" and "Family as a resource in nursing care", underscoring that personal family experiences may shape relational and conversational openness, but are less influential in professional or task-oriented evaluations of families.

Finally, shift profile, especially night-day rotation, negatively impacted all positive subscales, most notably "Family as own resource" and "Family as a resource in nursing care", according to a previous study (Sharma et al., 2024), probably due to the fact that families are less present during the night, limiting the exposure. Moreover, the rotating nature of shift work may lead to greater fatigue, disorientation, and emotional detachment, further compromising nurses' ability to recognize and engage with the family's potential as partners in care.

When organizational variables were included, explained variance significantly increased for all positive subscales, especially "Family as a conversational partner" ($\Delta R^2 = 0.068$) and "Family as a resource in nursing care" ($\Delta R^2 = 0.057$), indicating that the clinical environment is not a passive backdrop but an active determinant of family-centered attitudes, even if not impacting on "Family as a burden".

Regarding the clinical area, nurses working in pediatric and primary care units consistently reported more favorable attitudes, according to previous studies (Hagedoorn et al., 2021; Wong et al., 2023), showing that children care, community-based, and long-term care settings structurally foster family integration, likely due to longer patient trajectories and relational care philosophies.

Conversely, intensive care settings were associated with the lowest scores across positive dimensions and higher burden perceptions, in line with other evidence (Mason et al., 2021; Shamali et al., 2023), highlighting how high-acuity, protocol-driven units present relational and logistical barriers to family inclusion.

The presence and type of caregiver access policies were among the most influential contextual variables, particularly for "Family as a conversational partner", supporting the idea that policy legitimation enhances the conversational role of families, according to a previous study (Hagedoorn et al., 2021).

However, we also found that the time of allowed family access had no significant impact on "Family as a burden" and "Family as a resource in nursing care" results. This finding is consistent with Sharma et al., (Sharma et al., 2024) and reinforces the notion that organizational enablers can promote family inclusion but cannot compensate for emotional fatigue. In addition, it offers important insight that while access procedures may facilitate the presence of families, they are not sufficient to ensure their engagement as true partners in care. As reported by previous studies, the family-centered approach application is incoherent and problematic, where often families are involved to compensate for staff shortages rather than being engaged as collaborative partners in care (Gwaza and Msiska, 2022). This suggests that other factors are likely more influential in shaping nurses' willingness to involve families meaningfully, such as poor communication, lack of family role recognition, power imbalance between nurses and family caregivers, and lack of time beyond the variables investigated in this study (Barreto et al., 2022; Gwaza and Msiska, 2022). However, regarding available time, in our study, the perceived adequacy of staffing, including both nurses and nurse aides, did not emerge as a relevant determinant of FINC-NA scores. This points to an unresolved area of inquiry, as it might be expected that staff sufficiency would influence available time to involve families in care.

This study presents some methodological limitations. The cross-sectional design does not allow causal inferences, and data were collected through self-reported questionnaires, which may be influenced by personal perceptions or social desirability. Moreover, the use of a convenience sample from four regions in Northern Italy may limit the extent to which findings can be transferred to other contexts, where different nursing education and advanced practice can influence the perceptions and attitudes of nurses toward family involvement.

4.2. Implications for practice, policy, and research

The findings of this study offer several implications for clinical practice, organizational policy, and future research. Nurses' attitudes toward family involvement are influenced by a multifaceted interplay of emotional well-being, relational orientation, and workplace context. Efforts to foster family-centered care should therefore extend beyond structural access policies and include targeted strategies to support psychological resilience, particularly by reducing burnout and depersonalization and enhancing perceived professional competence. These

interventions may be especially critical for nurses working in intensive care settings or under rotating shift schedules, who consistently reported more negative perceptions of family engagement.

Tailored initiatives, such as structured relational communication training or facilitated emotional debriefing, may prove effective in mitigating the relational costs associated with high-stress environments. At the institutional level, policies that formalize or expand caregiver access were associated with more favorable attitudes, particularly regarding families as conversational partners. However, access alone does not appear sufficient to contrast perceptions of families as burdensome or to activate their potential as care resources. Emotional fatigue and relational disengagement remain substantial barriers, underscoring the necessity for integrated approaches that couple procedural facilitation with psychological support.

From a research perspective, these findings call for deeper exploration of the emotional and relational mechanisms underlying nurses' attitudes. The limited influence of staffing adequacy calls for the need for further research to explore if nurses' subjective experiences of time pressure and workload across clinical settings might influence their attitudes toward family. Further, the potential role of nurses' personal family dynamics in shaping their professional interactions with caregivers, particularly in terms of role recognition, boundary management, and relational expectations, merits closer investigation. Finally, longitudinal studies are needed to trace how attitudes toward family evolve over time in response to organizational changes, professional transitions, or cumulative emotional strain, offering a more dynamic understanding of the relational climate within nursing care.

5. Conclusion

This study underscores the complexity of nurses' attitudes toward family involvement in care. While overall perceptions were positive, variations across settings and influencing factors were evident. Burnout, particularly depersonalization and diminished personal accomplishment, emerged as a key determinant of less favorable attitudes, alongside shift work and private family functioning.

Organizational features, such as caregiver access policies and clinical area, mostly contributed significantly to more positive views, though they did not reduce perceptions of burden. These results suggest that structural enablers are essential, although alone are insufficient without attention to emotional and relational aspects of care.

Promoting family engagement requires integrated strategies that address both systemic conditions and nurses' psychological resources. Further research should examine how attitudes evolve over time and how personal and professional factors interact in shaping nurses' approaches to involving families in care.

CRediT authorship contribution statement

Jessica Longhini: Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Federica Canzan:** Writing – review & editing, Methodology, Conceptualization. **Erika Bassi:** Writing – original draft, Resources, Investigation. **Alberto Dal Molin:** Writing – review & editing, Resources, Investigation. **Beatrice Albanesi:** Writing – review & editing, Methodology, Investigation. **Tatiana Bolgeo:** Writing – review & editing, Resources, Investigation. **Anna Brugnolli:** Writing – review & editing, Resources, Investigation. **Sara Campagna:** Writing – review & editing, Resources, Investigation. **Valerio Dimonte:** Writing – review & editing, Resources, Investigation. **Alvisa Palese:** Writing – review & editing, Resources, Investigation. **Elisa Ambrosi:** Writing – review & editing, Methodology, Conceptualization.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ijnurstu.2026.105358.

Data availability

Data are available from the authors upon reasonable request.

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