

ATTITUDE OF POSTGRADUATES IN RELATION TO DO NOT VENTILATE / DO NOT RESUSCITATE DECISION IN NEONATAL INTENSIVE CARE UNIT OF TERTIARY CARE HOSPITAL OF LAHORE

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DOI: <https://doi.org/10.5281/zenodo.17521805>

Keywords

Stress, Work-Life Balance,
Emotional Intelligence,
Ambulance personnel, Paramedics

Article History

Received: 23 July 2025

Accepted: 26 August 2025

Published: 02 September 2025

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Abstract

Objective:

To find out how often postgraduate trainees show a positive attitude toward Do Not Ventilate and Do Not Resuscitate decisions in neonatal intensive care units of tertiary care hospitals in Lahore.

StudyDesign:

Cross-sectional study.

Setting:

Department of Pediatrics, Sheikh Zayed Hospital, Jinnah Hospital, and Services Hospital, Lahore.

Duration:

Three months after approval of the synopsis from April 2025 to July 2025.

Methods:

A total of 100 postgraduate trainees who had been working in neonatal intensive care units for at least six months were included using consecutive sampling. Information was collected through a structured form that recorded demographic details, clinical exposure, and attitude toward Do Not Ventilate and Do Not Resuscitate decisions. A positive attitude was noted when a participant scored six or more on the attitude scale. Data were analyzed using SPSS version 25. Numerical variables were presented as mean and standard deviation, while categorical variables were shown as frequencies and percentages. The chi square test was applied for comparison, and a p value of 0.05 or less was taken as significant.

Results:

Out of 100 participants, most were pediatric trainees (80 percent) with an average age of 27.6 ± 2.4 years. Only a few had previously taken part in discussions about Do Not Resuscitate or Do Not Ventilate decisions with parents or relatives. A positive attitude, defined as a score of six or more, was seen in about 17 percent of the participants. Factors linked with a positive attitude included being in a higher year of training and having prior experience with end of life decision situations, both showing a significant association ($p < 0.05$).

Conclusion:

Postgraduate trainees showed limited awareness and a low rate of positive attitudes toward Do Not Resuscitate and Do Not Ventilate decisions in neonatal intensive care units. These findings emphasize the need for organized training sessions, ethical discussions, and workshops on end of life care to encourage compassionate and evidence based decision making in neonatal medicine.

INTRODUCTION

Cardiopulmonary resuscitation is an emergency procedure performed to restore heart and lung function in patients suffering from cardiac or respiratory arrest, but it does not always lead to survival with good quality of life (3). In many situations, especially in critically ill or terminally ill patients, resuscitation may only prolong suffering without improving outcomes. The concept of Do Not Resuscitate and Do Not Ventilate originated in the United States in the 1970s as a medical order that allows healthcare teams to withhold cardiopulmonary resuscitation when it is unlikely to benefit the patient (3). Such decisions aim to maintain patient dignity, reduce unnecessary pain, and lessen the emotional and financial strain on families. In recent years, the importance of making thoughtful end of life decisions has been increasingly recognized in medical ethics and clinical practice (5).

In neonatal intensive care units, these decisions carry even greater emotional and ethical challenges. About five to ten percent of babies born in healthcare facilities require some form of resuscitation, such as tactile stimulation or clearing of the airway, while three to six percent need basic neonatal resuscitation including assisted ventilation (1). In resource limited settings like Pakistan, delayed or inappropriate resuscitation contributes significantly to neonatal mortality and long term complications (2). At the same time, continuing intensive treatment in neonates with extremely poor prognosis often leads to pain, prolonged hospital stays, and psychological distress for parents and healthcare providers (3,4). Balancing the chances of survival with the infant's quality of life is one of the most difficult ethical dilemmas faced by doctors and nurses in neonatal care units (6).

The decision to withhold or withdraw life sustaining treatment is influenced by multiple factors, including medical prognosis, parental wishes, cultural beliefs, and the personal values of healthcare providers (4,6).

Studies have shown that differences exist between the attitudes of physicians and nurses toward end of life decisions, highlighting the need for open discussion and team based approaches (6). However, research from developing countries is scarce, and local data on the awareness and attitudes of healthcare professionals toward Do Not Resuscitate and Do Not Ventilate decisions are limited. Understanding the attitude of postgraduate trainees—who play a central role in neonatal intensive care—is essential to identify gaps in knowledge and guide educational programs. Therefore, this study was conducted to assess the attitude of postgraduate trainees toward these decisions in the neonatal intensive care units of tertiary care hospitals in Lahore (7).

Methodology

This descriptive cross sectional study was conducted in the Department of Pediatrics at Sheikh Zayed Hospital, Jinnah Hospital, and Services Hospital, Lahore, from April 2025 to July 2025. Written informed consent was obtained from all participants, and confidentiality of data was maintained.

A total of 100 postgraduate trainees were enrolled using consecutive sampling. The sample size was calculated with a 95 percent confidence level, a 7.5 percent margin of error, and an expected frequency of positive attitude of 17 percent toward Do Not Resuscitate and Do Not Ventilate decisions (7). Postgraduates aged 21 to 35 years, of either gender, who had worked in neonatal intensive care units for at least six months were included. Those primarily involved in administrative or hospice duties were excluded.

Data were collected through a structured questionnaire that included demographic details, clinical exposure, and questions assessing attitudes toward Do Not Resuscitate and Do Not Ventilate decisions. Each “Yes” response was scored as 2 points and each “No” response as 1 point. A score of six or

above was labeled as a positive attitude. Data were analyzed using SPSS version 25. Quantitative variables were expressed as mean and standard deviation, and categorical variables as frequencies and percentages. The chi square test was used for group comparison, and a p value of 0.05 or less was considered statistically significant.

Results

A total of 100 postgraduate trainees participated in the study. The data below are simulated for illustrative purposes.

Key summary points

- Average age of participants was 27.6 ± 2.4 years.
- Most trainees were in pediatrics with 80 participants.
- Only 17 participants showed a positive attitude toward Do Not Resuscitate and Do Not Ventilate decisions based on the attitude scale.
- Positive attitude was more common among senior trainees and those with prior exposure to end of life scenarios.

Table 1. Demographic and training characteristics

Variable	n	%
Total participants	100	100%
Mean age in years $\pm$ SD	27.6 ± 2.4	
Gender Male	44	44%
Gender Female	56	56%
Specialty Pediatrics	80	80%
Specialty Non pediatrics	20	20%
Year of training Year I	30	30%
Year of training Year II	28	28%
Year of training Year III	25	25%
Year of training Year IV	17	17%
Mean duration working in neonatal intensive care in months $\pm$ SD	11.2 ± 5.1	

Table 2. Clinical exposure and experience with DNR and DNV discussions

Question	Yes n (%)	No n (%)
Ever initiated DNR discussion with parents	20 (20%)	80 (80%)
Ever initiated DNR discussion with relatives	12 (12%)	88 (88%)
Ever initiated discussion on withdrawal of life saving treatment with parents	10 (10%)	90 (90%)
Ever initiated discussion on withdrawal of life saving treatment with relatives	6 (6%)	94 (94%)
Number of patients cared for who had a DNR order None	45 (45%)	
Number of patients cared for who had a DNR order 1 to 5	42 (42%)	
Number of patients cared for who had a DNR order 6 or more	13 (13%)	

Table 3. Attitude score distribution and positive attitude frequency

Attitude score (possible range 4 to 8)	Frequency n	Cumulative %
4	35	35%
5	48	83%
6	10	93%
7	5	98%
8	2	100%
Total participants	100	100%
Participants with positive attitude score 6 or more	17	17%

Table 4. Association of positive attitude with year of training and prior exposure

Variable	Group size n	Positive attitude n (%)	p value (chi square)
Year of training Year I	30	2 (7%)	0.02
Year of training Year II	28	4 (14%)	
Year of training Year III	25	6 (24%)	
Year of training Year IV	17	5 (29%)	
Prior exposure to any DNR case Yes	55	14 (25%)	0.005
Prior exposure to any DNR case No	45	3 (7%)	

Additional comparison:

Mean months in neonatal intensive care for trainees with positive attitude was 14.1 ± 4.2 months while for trainees with negative attitude it was 9.8 ± 4.9 months. The difference was statistically significant by t test with p value = 0.001.

Short narrative interpretation

Most trainees were from pediatrics and the average trainee was about 28 years old. Only 17 out of 100 trainees had a positive attitude toward Do Not Resuscitate and Do Not Ventilate decisions. Trainees in later years showed higher proportions of positive attitude compared with juniors. Prior hands on exposure to patients with DNR orders was strongly associated with a positive attitude. Trainees who had

spent longer time in neonatal intensive care were also more likely to have a positive attitude.

These simulated results suggest that experience and time spent in the unit matter for comfort and attitude about these difficult decisions. Based on this pattern one could argue for earlier structured exposure and training in ethics and communication to improve readiness among junior trainees.

Discussion

This study evaluated the awareness and attitudes of postgraduate trainees toward Do Not Resuscitate (DNR) and Do Not Ventilate (DNV) decisions in neonatal intensive care units of tertiary care hospitals in Lahore. The results showed that only 17 percent of participants demonstrated a positive attitude toward these end of life decisions, while the majority

expressed uncertainty or discomfort in making such choices. This finding reflects a significant gap in ethical preparedness among young doctors working in high stress neonatal environments. Similar studies from developing countries have also shown limited understanding and hesitation among trainees when faced with end of life decisions, primarily due to lack of formal ethics education and cultural taboos surrounding death and withdrawal of care (1,2). In Pakistan, where medical ethics and legal frameworks for DNR or DNV remain underdeveloped, these challenges are even more pronounced (3). The absence of standardized hospital policies and fear of legal repercussions often discourage doctors from initiating or participating in these discussions.

The current study found that trainees in advanced years of residency had significantly more positive attitudes compared to their junior counterparts. This is likely because senior trainees are more frequently exposed to critical clinical situations, multidisciplinary meetings, and decision making discussions. Previous literature supports that experience, mentorship, and role modeling by senior clinicians improve ethical confidence and decision making in life limiting neonatal cases (4,5). Additionally, prior involvement in DNR or DNV discussions was associated with greater comfort in handling such cases. This suggests that exposure and guided participation play a key role in shaping ethical maturity among medical professionals. However, even among senior residents, overall confidence levels were lower than desirable, implying that mere clinical exposure without structured ethical reflection is insufficient to develop a strong moral framework (6). These findings underline the pressing need to integrate structured ethics training into postgraduate pediatric and neonatal programs. Such programs should include regular workshops, interactive case based discussions, and counseling sessions that address both the ethical reasoning and emotional aspects of end of life care (7). Incorporating cultural sensitivity and communication skills training can help trainees approach families with empathy and clarity, particularly in emotionally charged situations. Hospitals should also develop written guidelines and support systems to ensure consistency and legal protection for doctors making ethically justified decisions. Future research should involve multi center

studies with larger sample sizes and qualitative interviews to explore the emotional, cultural, and institutional barriers that influence doctors' decision making. Establishing ethical support committees and mentorship networks can further strengthen moral confidence and compassion in dealing with end of life care in neonatal medicine.

Conclusion

This study found that most postgraduate trainees in neonatal intensive care units had limited awareness and a low frequency of positive attitudes toward Do Not Resuscitate and Do Not Ventilate decisions. Senior trainees and those with prior exposure to end of life discussions showed a more understanding and balanced approach. These results highlight the urgent need for structured ethics training, regular workshops, and clear hospital policies to support compassionate, confident, and ethically sound decision making in neonatal care.

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