SHORT RESEARCH ARTICLE

Exploring Awareness and Perception of Do Not Resuscitate Orders in A Saudi Arabian General Population

Omar Sami Basubrain[1]

[1]Umm Al-Qura University, Makkah, Saudi Arabia

DOI: 10.55489/njcm.150720244057

ABSTRACT

Background: Do Not Resuscitate (DNR) orders are crucial, yet often misunderstood, medical directives. This study investigated public understanding and attitudes towards DNRs in Saudi Arabia. This study investigated public understanding and attitudes towards Do Not Resuscitate (DNR) orders in Saudi Arabia.

Methods: A cross-sectional web survey was conducted among 416 Saudi residents aged 18 and above. The survey assessed knowledge, attitudes, and emotional responses related to DNR orders.

Results: Over half (65.7%) lacked sufficient understanding of DNRs, highlighting a knowledge gap. While 56.8% grasped the meaning, less than half saw DNRs as beneficial for reducing pain or easing burdens on loved ones, indicating mixed attitudes. Decision-making preferences varied, with 49.1% advocating for medical professionals' involvement and 31% favouring family decisions. Personal experiences influenced understanding, with those having a family member's DNR order exhibiting higher comprehension.

Conclusion: Significant knowledge gaps and mixed attitudes towards DNRs exist. Public education programs, improved patient communication, and culturally sensitive approaches are recommended to bridge this gap and empower individuals to make informed decisions.

Keywords: Cardiopulmonary resuscitation, Saudi Arabia, awareness, participants, do not resuscitate

ARTICLE INFO

Financial Support: None declared
Conflict of Interest: None declared
Received: 17-04-2024, **Accepted**: 31-05-2024, **Published**: 01-07-2024
Correspondence: Omar Sami Basubrain (Email: osbasubrain@uqu.edu.sa)

How to cite this article: Basubrain OS. Exploring Awareness and Perception of Do Not Resuscitate Orders in A Saudi Arabian General Population. Natl J Community Med 2024;15(7):581-584. DOI: 10.55489/njcm.150720244057

www.njcmindia.com | pISSN: 0976-3325 | eISSN: 2229-6816 | Published by Medsci Publications

INTRODUCTION

In the case of cardiac arrest, cardiopulmonary resuscitation (CPR) is performed as a lifesaving emergency technique[1]. While successful in restoring some patients' pulse or breathing, CPR often falls short of achieving complete recovery[2]. These individuals may require ongoing medical care, experience ongoing illness, and never fully recover from their initial condition. Long-term neurological or cardiovascular damage is also a potential consequence. The Do Not Resuscitate (DNR) order was developed for precisely such scenarios[3].

A DNR order, signed by a doctor, instructs healthcare practitioners to refrain from administering CPR in the event of a patient's cardiac arrest or cessation of respiration[4]. Doctors recommend DNR orders when they believe their patients have a poor prognosis, are unlikely to survive even with CPR, or would face a severely impaired quality of life if resuscitated[5].

This order does not affect decisions on alternative treatment plans like diet, medication, or palliative care[6]. Prior to issuing a DNR order, the doctor consults with the patient, their proxy, or their family. Numerous studies have analyzed the factors influencing DNR decisions, including patient and family wishes, ethical and legal considerations, and the patient's overall health[7].

Public awareness of DNR orders is crucial. In a 2021 study, 84% of 429 participants reported familiarity with the term "DNR," and 56% felt initial discussions about DNR should occur while still in good health[8]. Similarly, a Swiss study found that explaining DNR implementation and ethical concepts significantly improved patient understanding[9].

In other studies, 75% of 307 surveyed patients in Riyadh, Saudi Arabia, were familiar with DNR, with 50% able to define it correctly[10]. Additionally, 90% preferred discussing DNR while ill, and 66% of 97 interviewed patients wanted their doctor or family present during decision-making[11].

This research aims to examine public understanding and attitudes towards DNR orders in Saudi Arabia, potentially identifying challenges in managing patients with such directives.

METHODOLOGY

Research Design and validation: This cross-sectional study, conducted in 2023, aimed to investigate public understanding and attitudes towards Do Not Resuscitate (DNR) orders in Saudi Arabia. A web-based, self-administered survey was used to reach a broad sample and ensure anonymity. The survey instrument was meticulously designed and validated by subject matter experts and pilot-tested to ensure clarity, comprehensiveness, and reliability.

Inclusion and exclusion criteria: Participants included Saudi Arabian residents of the western region aged 18 and above. Individuals under 18 or with intellectual disabilities were excluded.

Sample size and sampling procedure: A sample size of 416 was determined using the online sample size calculator (www.calculator.net) with a 95% confidence level and a 5% margin of error. Participants were randomly selected for the web-based survey. Statistical significance was defined as a p-value below 0.05.

Questionnaire: The survey addressed three key areas: consent and demographic information, assessment of DNR knowledge, and evaluation of attitudes towards DNR orders.

Data Analysis: Data was analysed using SPSS software. Descriptive statistics (frequencies, percentages, graphs) were used to characterize the sample and DNR-related responses. Cross-tabulations and chi-square tests were employed to identify factors associated with DNR knowledge. Statistical significance was set at a p-value below 0.05.

RESULTS

A total of 416 participants completed the survey, with an average age of 27.9 years (SD 12.7). Students represented the largest group (45.7%), followed by non-healthcare workers (35.4%). The majority of participants (75.8%) held college degrees (Table 1). Two-thirds of respondents (67%) had heard of DNR orders. However, only 22.5% could accurately define them. Others provided less precise or inaccurate definitions (Table 2). Most participants (59.4%) considered DNRs appropriate when resuscitation was deemed unsuitable due to the patient's condition. A significant portion (42.5%) also supported DNRs in terminal or untreatable cases. Only a minority (11.9%) believed age alone justified a DNR.

Table 1: Demographic Analysis (n=416)

Demographic	Frequency (%)
Age	
Less than 20 years	11.80%
20-30 years	51.00%
30-40 years	11.40%
40-50 years	15.40%
Above 50 years	10.40%
Gender	
Female	36.60%
Male	63.40%
Nationality	
Saudi	97.40%
Non-Saudi	2.60%
Employment	
Un-employed	11.30%
Student	45.70%
Non-Healthcare Staff	35.40%
Healthcare Staff	7.60%
Education	
Below Secondary	4.60%
Secondary	19.50%
University and above	75.80%

Table 2: Knowledge and Awareness About DNR in General Population (n=416)

Knowledge Items and Response	Percentage
Have you ever heard of the term Do Not Resuscitate (DNR)? (416 Participant)	
Yes	65.7
No	34.3
What is meant by Do Not Resuscitate (DNR)? (273 Participant)	
A doctor's written order for medical treatment. It discourages CPR for patients and medical staff.	22.5
CPR avoidance per doctor's orders or other authorized personnel instruction	12.6
The patient pleaded with doctors not to attempt to revive him.	0.3
explaining the first and second, and adding that patient approval is necessary	0.3
All correct	39.7
Other	2.5
Don't now	22.4
What are the common conditions where normally Do Not Resuscitate are done? (273 Participant)	
To not resuscitate a patient whose state is not suitable for it	59.4
If the patient's condition cannot be cured, then death will occur.	42.5
If the patient has reached a point of mental inactivity or incapacity due to their chronic illness,	11.3
It would be difficult to treat a patient who showed signs of brain injury.	21.4
In cases when cardiopulmonary resuscitation might be counterproductive,	42.5
Others	3
Applying for DNR is only warranted due to advanced age. (416 Participant)	
Yes	11.9
No	65.2
Don't Know	22.8

Table 3: Attitude of General Population towards DNR (n=416)

Response	Participants (%)
Do you value the "Do Not Resuscitate" (DNR) option?	
Yes	56.8
No	15.1
Not sure	28.1
Do you believe that DNR alleviates suffering?	
Yes	42.2
No	24.0
Not sure	33.8
Will the patient's family be relieved of some of their burdens if DNR is put into effect?	
Yes	30
No	34.1
Not sure	35.9

Table 4: Personal Experience and Practice of DNR (n=416)

Response	Participants (%)
Would you be willing to support a DNR order for a family member?	
Yes	20.7
Not sure	26.3
No	53
Have you ever had a loved one make a do-not-resuscitate order?	
Yes	10.4
No	77.3
Not sure	12.3
What were your feelings at that time?	
Relived	15.9
Sad	60.3
Surprised	6.3
Others	17.5

Nearly half (49.1%) believed medical professionals should decide on DNRs, while 66.2% emphasized the need for consensus among experts. A majority (59.4%) recognized the patient's right to choose, but 31% felt families should decide. Timing of DNR discussions was variable (Table 2). Despite 56.2% acknowledging the importance of DNRs, only 45.7% displayed sufficient knowledge. Key benefits cited were reducing patient pain (42.2%) and worry for loved ones (30%) (Table 3).

While 43.3% were willing to sign a DNR for a loved one, only 10.4% had a current DNR order for a relative. Interestingly, DNR prevalence increased with time (Table 4). DNR decisions evoked sadness in 63% of respondents, but 16% felt relief due to the positive impact on the patient (Table 4). Data supporting these findings is available upon request from the corresponding author.

DISCUSSION

Knowledge and Awareness of DNR Orders: Our study reveals a concerning knowledge gap regarding DNR orders. Over half (65.7%) of participants lacked sufficient understanding or couldn't accurately define DNR, echoing findings from a previous Jeddah study[12]. This highlights the need for increased public awareness and education on this crucial topic.

Interestingly, social media, deemed the least reliable information source, was still used by 27.6% for DNR information, mirroring a Jeddah study where 34.3% learned about DNRs through this platform. This underscores the importance of promoting accurate and reliable DNR information sources through diverse channels.

Patient Autonomy and Family Involvement: While 69% supported patient autonomy in treatment decisions, 31% favored family decision-making. This contrasts with a Hong Kong study by Alwazzeh et al.[13], where patient wishes were overwhelmingly priori-

tized, with family and financial considerations playing secondary roles. This suggests potential cultural variations in attitudes towards DNR decision-making[13].

Notably, 22.5% accurately defined DNR as a doctor's order against CPR, similar to 44.0% in a Riyadh study[14]. However, understanding and acceptance of DNRs varied. While 56.8% understood the meaning, less than half perceived DNRs as helpful for reducing loved ones' pain, unlike the Aseer region study where over half agreed with this view. This indicates regional disparities in DNR perceptions.

Personal Experiences and Demographic Factors: Only 10.7% had a current DNR order for a family member, but 74.6% had obtained one within the last five years. The 20-30 age group exhibited the highest DNR knowledge (58.4%), suggesting potential generational shifts in understanding. Additionally, a 76.1% knowledge gap existed between healthcare workers and the unemployed, highlighting the influence of profession on DNR awareness.

Television emerged as the primary source of DNR information (68.6%), with radio lagging behind (38.5%). Notably, those with a family member's DNR order displayed a 54% higher comprehension, implying personal experience enhances understanding.

Limitations

Our study limitations include limited survey validation, potential misinterpretations of "DNR" due to question phrasing, and the generalizability of results beyond urban areas. Additionally, the influence of religion and education, potentially significant factors in shaping patient perspectives, was not explored.

Conclusion

This study highlights a significant knowledge gap regarding DNR orders among the Saudi Arabian public. Our findings underscore the need for targeted interventions to improve public understanding of DNRs, their implications, and the decision-making process. While this study did not directly explore specific strategies to enhance knowledge, our results suggest potential areas for future research. Further studies could investigate the effectiveness of public education programs, communication strategies tailored to cultural contexts, and their impact on DNR understanding.

References

1. Qutob, R. A., Aljarba, N. K., Alhusaini, B. A., Alzaid, O. N., Alghamdi, A. H., Alaryni, A. A., et al (2023). The Perspective of the General Population in Saudi Arabia towards Do-Not-Resuscitate (DNR) Orders: A Cross-Sectional Study. *Healthcare* 2023; *11:* 2073. Doi: 10.3390/ healthcare11142073

2. Alnajjar H, Hilal RM, Alharbi AJ, Alharthi OH, Batwie RA, AlShehri RM, Algethami MR. Evaluation of Awareness, Knowledge, and Attitudes Towards Basic Life Support Among Non-Medical Students at Two Academic Institutions in Jeddah, Saudi Arabia. Adv Med Educ Pract. 2020;11:1015-1021. https://doi.org/10.2147/AMEP.S271130.

3. Taha, M., Sr, Aldabali, F. O. M., Alotaibi, S. H., Melybari, R. Z., Alqelaiti, B. A., Alderhami, A. M., & Bajaber, T. A. Knowledge and Attitude of the General Population About Do Not Resuscitate (DNR) in the Western Region, Saudi Arabia. Cureus, 2023; 15(8), e44143. Doi: 10.7759/cureus.44143

4. Alqahtani, A.H.; Alqahtani, S.A.; Alhodaib, A.S.; Al-Wathinani, A.M.; Daoulah, A.; Alhamid, S.; Al-Otaibi, S.N.; Abufayyah, M.; Wazzan, A.M.; Alshahrani, S.S.; et al. Knowledge, Attitude, and Practice (KAP) toward the Novel Coronavirus (COVID-19) Pandemic in a Saudi Population-Based Survey. *Int. J. Environ. Res. Public Health* **2021;** *18:* 5286. https://doi.org/10.3390/ijerph18105286

5. Alsaati, B. A., Aljishi, M. N., Alshamakh, S. S., Basharaheel, H. A., Banjar, N. S., Alamri, R. S., & Alkhayyat, S. The Concept of Do Not Resuscitate for the Families of the Patients at King Abdul-Aziz University Hospital. Indian journal of palliative care, 2020; 26(4): 518–522. https://doi.org/10.4103/IJPC.IJPC_228_19.

6. Kaneetah, A. H., Baowaidan, F. O., Abulaban, B. A., Sabban, M. F., & Alshehri, A. S. The Perspectives of the General Population and Relatives of Cancer Patients with Respect to the Do-Not-Resuscitate Order. Cureus, 2019; 11(1): e3968. https://doi.org/10.7759/cureus.3968.

7. Doaa Abdelaziz (1) AIA (2). Knowledge of non-medical individuals about cardiopulmonary resuscitation in case of cardiac arrest: A cross-sectional study in the population of Marat City, Saudi Arabia [Internet]. [cited 2024 Apr 10]. Available from: https://journal.yemdd.org/index.php/acamj/article/view/93.

8. Al Ahmadi, J. R., Aljehani, S. N., Bahakeem, L. M., Hijan, B. A., Mayet, S. A., & Badahdah, Y. A. Knowledge and attitude toward do-not-resuscitate among patients and their relatives visiting outpatient clinics at King Abdulaziz University Hospital, Jeddah, Saudi Arabia. Saudi medical journal, 2020; 41(1): 53–58. https://doi.org/10.15537/smj.2020.1.24782.

9. Abuhammad, S., Muflih, S., Alzoubi, K. H., & Gharaibeh, B. Nursing and PharmD Undergraduate Students' Attitude Toward the "Do Not Resuscitate" Order for Children with Terminally Ill Diseases. Journal of multidisciplinary healthcare, 2021; 14: 425–434. https://doi.org/10.2147/JMDH.S298384.

10. Abbas HA, Al-Ahmadi AA, Alharby OHG, Aman RAH, Mohamed EFA, Tawlah NAK. Knowledge and attitudes toward do-not-resuscitate decisions among medical students in Jeddah, Kingdom of Saudi Arabia. Medical Science, 2021; 25(114): 1984-1991.

11. AbuYahya, O., Abuhammad, S., Hamoudi, B., Reuben, R., & Yaqub, M. The do not resuscitate order (DNR) from the perspective of oncology nurses: A study in Saudi Arabia. International journal of clinical practice, 2021; 75(8): e14331. https://doi.org/10.1111/ijcp.14331.

12. Alahmadi, S., Al Shahrani, M., Albehair, M., Alghamdi, A., Alwayel, F., Turkistani, A., Alahmadi, A., & Shehab, Z. Do-not-resuscitate (DNR) Orders' Awareness and Perception Among Physicians: a National Survey. Medical archives (Sarajevo, Bosnia and Herzegovina), 2023; 77(4): 288–292. https://doi.org/10.5455/medarh.2023.77.288-292.

13. Alwazzeh, Marwan Jabr et al. "Knowledge gaps, attitudes, and practices regarding end-of-life medical care among physicians in an academic medical center". Electronic Journal of General Medicine, 2023; 20 (3): em463. https://doi.org/10.29333/ejgm/12901.

14. Aljethaily, A., Al-Mutairi, T., Al-Harbi, K., Al-Khonezan, S., Aljethaily, A., & Al-Homaidhi, H. S. Pediatricians' Perceptions Toward Do Not Resuscitate: A Survey in Saudi Arabia and Literature Review. Advances in medical education and practice, 2020; 11: 1–8. https://doi.org/10.2147/AMEP.S228399.