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ASSESSING HEALTH CARE PROVIDERS' PERSPECTIVES ABOUT ADVANCE DIRECTIVES AT TERTIARY CARE HOSPITAL: A QUANTITATIVE CROSS-SECTIONAL STUDY

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Abstract

Background: *Advance directives (AD) are medical-legal documents that outline a patient's preferences regarding healthcare when the person is not competent to make decisions. Its application and understanding among healthcare providers are important but remained underexplored in Pakistan.*

Purpose: *The purpose of this study was to assess the level of knowledge and attitudes of healthcare providers toward advance directives at a tertiary care hospital in Karachi, Pakistan.*

Method: *A cross-sectional survey was conducted with 306 healthcare providers, including nurses and physicians, across various specialties. Knowledge and attitudes toward ADs were assessed using a structured questionnaire. Chi-square tests were used to examine associations between participants' characteristics and their knowledge and attitudes.*

Finding(s): *The majority of participants (73.9%) demonstrated adequate knowledge about ADs, while 79.4% exhibited positive attitudes. Older and more experienced healthcare providers were more likely to have positive attitudes toward ADs. Despite high overall knowledge, there were gaps, particularly in understanding specific types of ADs and their applications. The study found no statistically significant associations between knowledge.*

INTRODUCTION

Advance directives (AD) are medical-legal documents that enable individuals to outline their healthcare preferences for situations where they cannot communicate their decisions. These directives include components such as living wills and durable power of attorney for healthcare, empowering patients to ensure their wishes are respected (Chan, 2019; Panfilis et al., 2020). Research highlights the potential of ADs to promote patient autonomy and reduce healthcare costs, particularly through increased utilization of palliative care over aggressive interventions at the end of life (Panfilis, 2020; Bond et al., 2018).

Despite these benefits, the adoption of advance directives in Low- and Middle-Income Countries (LMICs), including Pakistan, remains limited.

Factors such as the absence of legal frameworks and guidelines, limited awareness among healthcare providers and patients, and ethical dilemmas further hinder their implementation (Panjwani, 2013; Niazi, 2021). Studies reveal a lack of awareness among both physicians and patients, with only 20% of physicians and 12% of patients familiar with advance directives (Aguilar-Sanchez, 2016). Additionally, healthcare providers' unfamiliarity with ADs often leads to uncertainty in initiating discussions about end-of-life care preferences (Osman et al., 2022; Nedjat-Haiem et al., 2023).

The study is particularly relevant in Pakistan due to rising life expectancy and the increasing prevalence of chronic and terminal illnesses. Advance directives can ensure that end-of-life care aligns with patients' values and preferences. Moreover, in Pakistan's resource-constrained healthcare system, ADs can optimize resource utilization by directing interventions toward patients' desired outcomes. This study aims to assess the knowledge and attitudes of healthcare providers at tertiary care hospitals in Karachi regarding advance directives (AD). The primary objective is to understand current perspectives on ADs to inform the development of targeted educational interventions and policies that enhance their implementation and acceptance within the healthcare system.

Methodology

Study Design and Setting

A quantitative cross-sectional descriptive study design was employed to assess healthcare providers' perspectives on advance directives at Aga Khan University Hospital, Karachi. The hospital was chosen for its diverse healthcare environment, which includes a wide range of physicians and nurses across various specialties, providing a comprehensive setting ideal for this study. The study targeted healthcare providers (physicians and nurses) with at least one year of practice experience at Aga Khan University Hospital, Karachi, excluding medical and nursing interns.

Study Variables

- **Independent Variables:** Demographic factors such as age, gender, place of specialty, professional role (nurse or physician), and years of experience.
- **Dependent Variables:** The level of knowledge and attitudes of healthcare providers regarding advance directives.

Sample Size and Sampling Method

Using OpenEpi version 3.01 software, the required sample size was calculated as 278 with a 95% confidence level. After accounting for a 10% attrition rate, the final sample size was adjusted to 306. Purposive sampling was used to select participants based on the inclusion criteria, ensuring the relevance and quality of the data collected. Participants were recruited through their respective departments. The study's purpose, procedures, and voluntary participation were explained, and paper-based surveys were distributed and collected to ensure high response rates and efficient data collection

Survey Instrument and Statistical Analysis

A structured questionnaire, adapted from the Knowledge and Attitudes towards Advance Directives (KAAD) scale, was used to collect data. It consisted of three parts: demographic information, 12 knowledge-related questions on advance directives, and 27 attitude-related questions. Knowledge was considered satisfactory if participants scored 8 or more out of 12, while a positive attitude was indicated by a score of 16 or more out of 27. Data analysis was performed using SPSS version 26. Descriptive statistics summarized participants' demographic characteristics, while inferential statistics, like chi-square tests, examined associations and differences in perspectives based on demographic and professional variables.

Ethical Considerations

The study received ethical approval from Aga Khan University's Ethical Committee (2024-9667-28723) and permission from the Chief Medical Officer and Chief Nursing Officer to conduct the research, ensuring ethical compliance.

Results

The study sample of 306 participants was diverse in sociodemographic characteristicsas shown in Table 1. The majority were between 30-40 years old (45.8%), with females making up 52.9% and nurses comprising 67.6% of the sample. Most participants had 1-10 years of experience (84%), and the largest group worked in adult medical-surgical units (41.5%). This diversity in age, experience, gender, and specialty allows for a comprehensive understanding of healthcare providers' perspectives on advance directives across various career stages and healthcare settings.

Table 1. Sociodemographic characteristics of the study participants (n=306)

Variables	Sample size (n)	Percentage %
Age		
Less than 30	117	38.2
30 to 40	140	45.8
40 to 50	49	16
Gender		
Male	144	47.1
Female	162	52.9
Year of Experience		
Less than 5 years	126	41.2
5 to 10 years	131	42.8
Above 10 years	49	16
Place of specialty		
Women and child health	58	19
oncology	24	7.8
Emergency Medicine	53	17.3
All Adult medical surgical units	127	41.5
All Adult Critical units	44	14.4
Practice specialty		
Physician	99	32.4
Nurse	207	67.6

Health Care Providers' Knowledge Regarding Advance Directives

The data presented in Table 2 reveal that healthcare providers generally have a strong understanding of advance directives, with 88.6% recognizing them as legal documents for patients' healthcare wishes if they become mentally incompetent. Most were aware of types like living wills (81.4%) and durable power of attorney (69%). However, 21.6% lacked knowledge about the purpose of living wills, and 19% were unaware of the types of advance directives. A majority understood that advance directives do not affect care while the patient is still competent (73.5%) and were aware of patient choices on life-sustaining treatments, CPR, DNR, and nutrition (72.9%–76.1%). Additionally, 72.2% recognized the importance of discussing advance directives when a patient is terminally ill. These findings highlight the need for ongoing education to address knowledge gaps and improve implementation.

Table 2. Health Care Providers Knowledge of Advance Directives (n=306)

Statement	Yes	No/I do not know
An advance directive is a legal document that informs the physician about patients' wishes earlier about future health care if he/she becomes mentally incompetent.	271 (88.6%)	35 (11.4%)
The types of advance directives are the living will and the durable power of attorney for health care:	249 (81.4%)	57 (18.6%)
The living will is a document aims to govern specific future health care decisions merely when a patient becomes incapable to make decisions on their own.	240 (78.4%)	66 (21.6)
A durable power of attorney for health is an official document in which patient designates a person to be his/her proxy to make all his/her health care decisions if he/she becomes incapable.	211 (69%)	95 (31%)
An advance directive will not influence the type or quality of patient care while he/she can express his/her decisions. It only becomes effective when he/she mentally cannot do so?	225 (73.5%)	81 (26.5%)
In the advance directives, the patient can decide whether or not to use life-sustaining machines, like a mechanical ventilator and dialysis.	233 (76.1%)	73 (23.9%)
In the advance directives, the patient can decide whether or not to have a CPR or DNR.	221 (72.92%)	85 (27.8%)
In the advance directives, the patient can decide whether or not to withhold nutrition and hydration.	229 (74.8%)	77 (25.2%)
In the advance directives, the patient can decide the place of terminal care and death.	233 (76.1%)	73(23.9%)
The most appropriate time to discuss advanced directive is when the patient is terminally or seriously ill.	221 (72.2%)	85 (27.8%)
In an effective advanced directive communication, it is imperative to ask the patient to nominate a principal person as a health care proxy.	217 (70.9%)	89 (29.1%)
It is imperative to include the patient's healthcare proxy in the discussion of advance directive	223 (72.9%)	83 (27.1%)

Health Care Providers' Attitudes towards Advance Directives (n=306) The data in Table 3 show generally positive attitudes towards advance directives among healthcare providers, with 77.8% agreeing that they should be discussed with every patient, and 76.8% emphasizing their importance for patients with life-threatening diseases. A majority (71.2%) saw advance directives as tools to ease decision-making at the end of life and improve confidence in treatment choices. Concerns about legal implications were also addressed, with 69.3% feeling that advance directives reduce legal worries. However, there were mixed views about their emotional impact, with 70.6% believing they could diminish patients' hope, yet the same percentage felt they could improve family satisfaction with end-of-life care. Most agreed that advance directives reduce unnecessary care (74.2%) and align with patient-centered care (74.8%). Cultural factors were a concern, with 74.5% feeling such discussions could create onfrontational relationships. These findings suggest that while there is strong support for advance directives, further education and cultural sensitivity may be needed.

Table 4. Health Care Provider Attitude Towards Advance Directives (n=306)

Statement	Yes	No/ I do not know
The advanced directive has to be discussed with every patient irrespective of his/her diagnosis.	238 (77.8%)	68 (22.2%)
Discussion of the advanced directive is imperative to patients who are diagnosed with life-threatening diseases.	235 (76.8%)	71 (23.2%)
The advanced directive could lessen the end-of-life care decisional catastrophe.	218 (71.2%)	88 (28.8%)
In a catastrophic situation, you would have more confidence in the treatment choices if directed by an advance directive.	235 (76.8%)	71 (23.2%)
You would worry less about legal consequences of limiting treatment if you were following an advance directive.	212 (69.3%)	94 (30.7%)
Discussion of advanced directive could end patients' sense of hope.	216 (70.6%)	90 (29.4%)
Discussion of advanced directive could improve patients' and families' satisfaction with end-of-life care.	216 (70.6%)	90 (29.4%)
Advanced directive reduces the use of futile/unnecessary care at the end of life.	227 (74.2%)	79 (25.8%)
Discussion of the advanced directive is the physician's responsibility.	242 (79.1%)	64 (20.9%)
Practicing advanced directive could be consistent with patient-centered care standards in your health care institution.	229 (74.8%)	77 (25.2%)
Most of your patients are willing to know their diagnosis, prognosis, and care options.	226 (73.9%)	80 (26.1%)
Most patients with end stages diseases are willing to communicate their wishes for end-of-life care.	218 (71.2%)	88 (28.8%)
In your culture, it feels easy when discussing matters related to the end of life with patients and their families.	218 (71.2%)	88 (28.8%)
In your culture, discussion of an advance directive would produce a more confrontational relationship with the patient.	228 (74.5%)	78 (25.5%)
A prospective problem with advance directives is that patients' families could change their minds about treatment when their patient becomes terminally ill.	203 (66.3%)	103 (33.7%)
In your culture, it feels easy when discussing advanced directive with patients with progressive diseases.	207 (67.6%)	99 (32.4%)
I feel confident in my ability to communicate "bad news."	224 (73.2%)	82 (26.8%)
The advanced directive in long term reduces the cost of unnecessary treatment/care.	239 (78.1%)	67 (21.9%)
Advance directive document could be useful in your institution	240 (78.4%)	66 (21.6%)

Your administration/colleagues would support the practice of advanced directive.	229 (74.8%)	77 (25.2%)
The advance directive may be a relief for families in some circumstances.	201 (65.7%)	105 (34.3%)
The advance directive might be culturally accepted and established.	192 (62.7%)	114 (37.3%)
The advance directive does not interfere with the Islamic regulations.	217 (70.9%)	89 (29.1%)
The advance directive can be applied in your institution if legalized.	226 (73.9%)	80 (26.1%)
The advance directive in long term affects positively the cost of total care and save medical expenditures.	228 (74.5%)	78 (25.5%)
The advance directive can improve and facilitates the discharge plan process.	235 (76.8%)	71 (23.2%)
You would recommend your health care institution to adopt the practice of advance directive.	223 (72.9%)	83 (27.1%)

Total Participants' Knowledge and Attitude Scores

The total knowledge and attitude scores showed that 73.9% of healthcare providers had adequate knowledge about advance directives, while 26.1% had inadequate knowledge (fig. 1). For attitudes, 79.4% had a positive outlook toward advance directives, while 20.6% held negative views (fig. 2). These findings highlight that while most providers are knowledgeable and positive about advance directives, there is a need for further education and support to address knowledge gaps and negative attitudes.

Figure .1 Total Knowledge Score

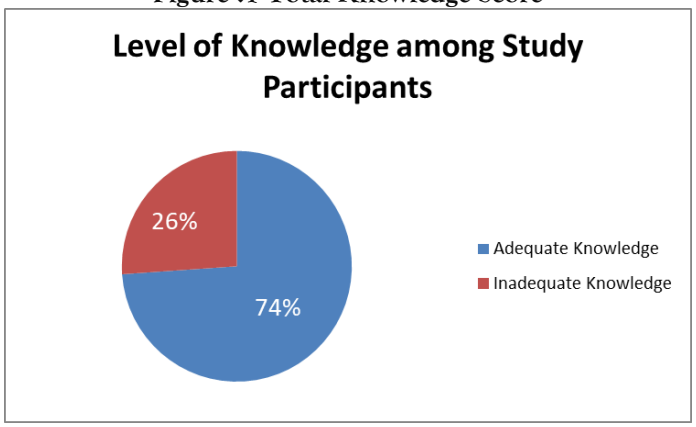
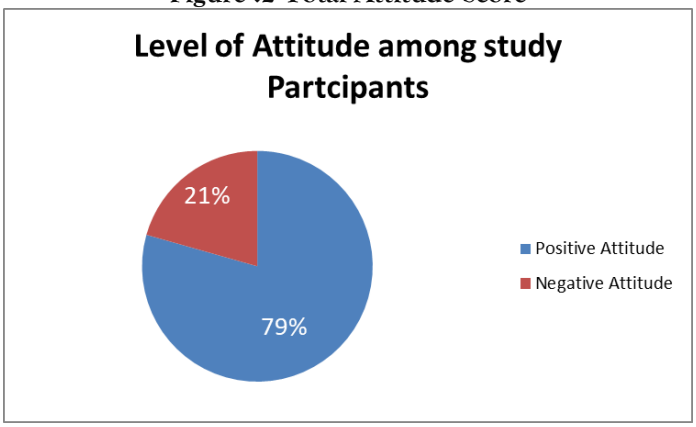


Figure .2 Total Attitude Score



Chi-Square Test of Significance: Participants' Characteristics and Knowledge (n=306): The chi-square test results in Table 7 show no significant associations between participant characteristics (gender, age, years of experience, practice specialty, and place of specialty) and their knowledge of advance directives. Specifically, p-values for gender (0.16), age (0.36), years of experience (0.48), practice specialty (0.38), and place of specialty (0.09) all indicate no significant relationship. These findings suggest that education on advance directives should be targeted at all healthcare providers, regardless of these demographic factors, to improve understanding.

Table 4. Chi-Square Test of Significance: Participants' Characteristics and Knowledge (n=306)

Variables	Adequate Knowledge	Inadequate Knowledge	P-value
Gender			
Male	101 (44.7%)	43 (53.8%)	0.16
Female	125 (55.3%)	37 (46.3%)	
Age			
Less than 30 years	90 (39.8%)	27 (33.8%)	0.36
30 to 40 years	98 (43.4%)	42 (52.5%)	
40 to 50 years	38 (16.8%)	11 (13.8%)	
Year of Experience			
Less than 5 years	96 (42.5%)	30 (37.5%)	0.48
5 to 10 years	97 (42.9%)	34 (42.5%)	
Above 10 years	33 (14.6%)	16 (20.0%)	
Practice specialty			
Physician	70 (31.0%)	29 (36.3%)	0.38
Nurse	156 (69.0%)	51 (63.7%)	
Place of Specialty			
Women and Child Health	44 (19.5%)	14 (17.5%)	0.09
Oncology	23 (10.2%)	1 (1.3%)	
Emergency Medicine	40 (17.7%)	13 (16.3%)	
All Adult Medical surgical units	88 (38.9%)	39 (48.8%)	
All Adult Critical Care units	31 (13.7%)	13 (16.3%)	

Chi-Square Test of Significance: Participants' Characteristics and Attitude (n=306): Table 5 presents chi-square test results showing the relationship between participant characteristics and attitudes toward advance directives. The analysis found no significant associations for gender (p-value = 0.72), years of experience (p-value = 0.50), practice specialty (p-value = 0.09), and place of specialty (p value = 0.36). However, age showed a significant association (p-value = 0.04), with older participants (40-50 years) demonstrating more positive attitudes toward advance directives. Younger participants (less than 30 years) were more likely to have negative attitudes. Despite some differences in attitude between nurses and physicians, the overall data suggest that age may be a more significant factor in shaping attitudes toward advance directives.

Table 5. Chi-Square Test of Significance: Participants' Characteristics and Attitude (n=306)

Variables	Positive Attitude	Negative attitude	P-value
Gender			
Male	108 (44.4%)	36 (57.1%)	0.72
Female	135 (55.6%)	27 (42.9%)	
Age			
Less than 30 years	87 (35.8%)	30 (47.6%)	0.04
30 to 40 years	111 (45.7%)	29 (46.0%)	
40 to 50 years	45 (18.5%)	4 (6.3%)	
Year of Experience			
Less than 5 years	96 (39.5%)	30 (47.6%)	0.50
5 to 10 years	107 (44.0%)	24 (38.1%)	
Above 10 years	40 (16.5%)	9 (14.3%)	
Practice specialty			
Physician	73 (30.0%)	26 (41.3%)	0.09
Nurse	170 (70.0%)	37 (58.7%)	
Place of Specialty			
Women and Child Health	42 (17.3%)	16 (25.4%)	0.36
Oncology	22 (9.1%)	2 (3.2%)	
Emergency Medicine	41 (16.9 %)	12 (19.0%)	
All Adult Medical surgical units	102 (42.0%)	25 (39.7%)	
All Adult Critical Care units	36 (14.8%)	8 (12.7%)	

Discussion

This study reveals that healthcare providers in tertiary care hospitals in Karachi generally possess a foundational understanding of advance directives (ADs). Older and more experienced providers demonstrated more positive attitudes, possibly due to greater exposure to end-of-life care, consistent with Coffey et al. (2016), who found similar trends. Cultural barriers remain significant; many participants feared that discussing ADs could reduce patient hope or lead to conflicts, reflecting the cultural sensitivities highlighted by Cheung and Dunn (2023). These findings underscore the need for targeted education and culturally sensitive communication training to improve AD implementation, echoing recommendations by Walczak et al. (2013).

This study's strengths lie in addressing the underexplored topic of healthcare providers' knowledge and attitudes toward advance directives (ADs) in Pakistan, providing a baseline for future research. It included diverse specialties, offering insights across various professional roles, and utilized a quantitative cross-sectional design to gather data efficiently from a large sample. However, its limitations include a single-center focus at Aga Khan University Hospital, limiting generalizability to non-accredited or public-sector hospitals, and reliance on self-reported data, which risks social desirability bias. The cross-sectional nature captures only a snapshot in time, and the quantitative design limits exploration of cultural or emotional factors influencing attitudes. Additionally, excluding patient perspectives restricts a holistic understanding of ADs in the region.

Conclusion

This study highlights healthcare providers' generally positive attitudes and high knowledge of ADs, though gaps in understanding specific directives remain. The findings emphasize the need for targeted education, integrating theory and practice, to bridge knowledge-attitude gaps. Limited to a single institution, future research should explore diverse settings and include patient perspectives to enhance the systemic integration of ADs in clinical practice.

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