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# Determinants Of Shared Decision-Making Awareness Among Hemodialysis Nurses: The Impact Of Professionalism, Empathy, And Clinical Decision-Making

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## Abstract

**Background:** Shared decision-making (SDM) has become a fundamental component of patient centered care, especially for individuals with end-stage renal disease (ESRD) receiving hemodialysis. Nurses are at the core of this process, as their professionalism, empathy, and clinical decision-making ability directly shape patients' involvement in treatment decisions. Despite growing global evidence, little is known about how these factors influence SDM awareness among hemodialysis nurses in Saudi Arabia.

**Aim:** This study aimed to examine the effects of nursing professionalism, empathy, and clinical decision-making ability on SDM awareness among hemodialysis nurses and to identify their combined predictive power.

**Methods:** A cross-sectional quantitative design was employed among 182 hemodialysis nurses from tertiary hospitals in Saudi Arabia. Data were collected using validated instruments, including the Nursing Professionalism Scale, Jefferson Scale of Empathy (HP version), Clinical Decision-Making in Nursing Scale, and Shared Decision-Making Questionnaire. Descriptive statistics, Pearson's correlations, multiple regression, and mediation analysis (PROCESS macro) were performed, with significance set at $p < 0.05$.

**Results:** Nurses demonstrated moderately high levels of professionalism ($M = 3.82$, $SD = 0.49$), empathy ($M = 104.7$, $SD = 11.9$), decision-making ability ($M = 3.64$, $SD = 0.42$), and SDM awareness ($M = 4.01$, $SD = 0.58$). Correlation analysis revealed significant positive associations among all study variables. Regression analysis showed that professionalism, empathy, and decision-making collectively explained 45% of the variance in SDM awareness (Adjusted $R^2 = 0.45$, $p < 0.001$), with empathy emerging as the strongest predictor. Mediation analysis confirmed that empathy partially mediated the relationship between professionalism and SDM awareness.

**Conclusion:** Professionalism, empathy, and decision-making ability significantly influence SDM awareness among hemodialysis nurses, with empathy playing a central role. These findings highlight the importance of integrating empathy training, professional values, and decision-making skills into nursing education and practice. Strengthening these competencies will not only improve patient-centered care but also contribute to achieving Saudi Vision 2030 objectives for healthcare transformation and patient empowerment.

**Keywords:** Hemodialysis nurses; professionalism; empathy; clinical decision-making; shared decision-making; Saudi Arabia.

## Introduction

Hemodialysis is a life-sustaining treatment for patients with end-stage renal disease, requiring continuous and complex care that extends beyond the mere provision of technical procedures. Nurses

in hemodialysis units play a pivotal role in ensuring the quality of care, supporting patients' psychological well-being, and promoting their active participation in treatment decisions. In this context, shared decision-making (SDM) has emerged as a cornerstone of patient-centered care, emphasizing collaboration between healthcare providers and patients to achieve individualized treatment plans and improve overall health outcomes. For nurses, awareness and practice of SDM are shaped by multiple professional and personal factors, among which professionalism, empathy, and clinical decision-making ability are particularly influential.

Nursing professionalism reflects adherence to ethical standards, accountability, and commitment to patient advocacy. It underpins the trust relationship between nurses and patients, encouraging patients to express preferences and participate in treatment planning. Empathy, as an essential humanistic quality, allows nurses to perceive and respond to patients' emotional and psychological needs. In the hemodialysis setting—where patients often experience anxiety, depression, and fatigue—empathy is not only therapeutic but also facilitates open communication and mutual understanding, which are prerequisites for shared decisions. Meanwhile, clinical decision-making ability represents the cognitive and analytical competence of nurses in evaluating patient data, anticipating complications, and selecting safe and effective interventions. The integration of these three dimensions creates the foundation for effective SDM in high-demand environments such as dialysis units.

Despite growing attention to patient-centered approaches worldwide, research on SDM in the hemodialysis nursing context remains limited, particularly in Middle Eastern and Saudi settings, where cultural and systemic factors influence patient involvement in care decisions. Understanding the determinants of SDM awareness among hemodialysis nurses is therefore critical to improving the quality of care, aligning with global standards, and meeting the objectives of national health strategies such as Saudi Vision 2030, which prioritizes patient empowerment, quality of life, and professional development of healthcare providers.

This integrative perspective highlights the need to explore how professionalism, empathy, and clinical decision-making intersect to shape nurses' awareness of SDM. By investigating these factors, the present review aims to provide insights that can inform educational strategies, clinical training programs, and policy initiatives, ultimately fostering a healthcare environment in which patients and nurses collaborate effectively to achieve optimal health outcomes. The aim of this study is to investigate the effects of nursing professionalism, empathy, and clinical decision-making ability on shared decision-making awareness among hemodialysis nurses, in order to identify the key factors that support patient-centered care and enhance nursing practice.

**Expanded Background with Literature (English)**

Chronic kidney disease (CKD) is a global health burden affecting more than 850 million people worldwide, with hemodialysis being a predominant therapy for patients with end-stage renal disease (ESRD) (Luyckx et al., 2021). Hemodialysis requires repeated, lifelong sessions that not only impose physical challenges but also cause psychological and social stress. Nurses in hemodialysis units are central figures in this long-term care process, as they provide both technical interventions and continuous psychosocial support (Alikari et al., 2022). Their professional attitudes, empathetic skills, and decision-making abilities directly shape the quality of patient care and patient participation in treatment choices.

In recent years, shared decision-making (SDM) has gained increasing recognition as an integral element of patient-centered care, particularly in chronic illnesses that require ongoing treatment choices. SDM ensures that patients' values, preferences, and expectations are incorporated into the clinical decision process, improving treatment adherence and patient satisfaction (Elwyn et al., 2017). For hemodialysis patients, SDM is especially critical as they face frequent lifestyle disruptions and psychosocial burdens, making active involvement in care essential for improved health outcomes (Song et al., 2018).

Several studies have emphasized the importance of nursing professionalism in fostering SDM. Professionalism encompasses ethical responsibility, accountability, and patient advocacy, which create a culture of trust and transparency between nurses and patients (Kim & Park, 2020). Without a strong professional foundation, patients may be reluctant to share concerns or participate actively in decisions, undermining the goals of patient-centered care.

Empathy has also been highlighted as a vital determinant in nurse–patient communication. Empathetic engagement enables nurses to understand patients' emotional distress, thereby facilitating open dialogue and collaborative decision-making. Evidence indicates that higher empathy levels among nurses are associated with reduced patient anxiety and improved satisfaction with care (Hojat et al., 2018; Williams & Stickley, 2010). In hemodialysis settings, where patients often report fatigue, depression, and reduced quality of life, empathetic interactions are particularly valuable (Tse & Tang, 2022).

Meanwhile, clinical decision-making ability represents the cognitive and analytical skills that allow nurses to assess patient conditions, anticipate complications, and select interventions. Strong decision-making skills not only enhance patient safety but also ensure that nurses can present appropriate options to patients during the SDM process (Johansen & O'Brien, 2016). Studies in Asian and Middle Eastern contexts have demonstrated that nurses with higher decision-making competence are more confident in involving patients in care planning (Mohammed et al., 2021).

Despite these global findings, research exploring the interplay of professionalism, empathy, and clinical decision-making in shaping SDM awareness among hemodialysis nurses in Saudi Arabia and the wider Middle East remains scarce. Cultural norms, hierarchical healthcare structures, and varying patient expectations may influence how SDM is perceived and practiced (Alzahrani et al., 2019). Therefore, examining these determinants within Saudi hemodialysis units is critical not only for improving patient outcomes but also for supporting the Saudi Vision 2030 healthcare transformation goals, which emphasize patient empowerment, high-quality care, and workforce development (Saudi Ministry of Health, 2021).

**Problem starment:**

Hemodialysis patients require continuous, complex care that goes beyond technical interventions, demanding strong nurse–patient communication, empathy, and collaboration. Although shared decision-making (SDM) is recognized globally as a pillar of patient-centered care, its implementation in hemodialysis settings remains inconsistent, particularly in Saudi Arabia and the Middle East. Previous studies have established that nursing professionalism, empathy, and clinical decision-making ability are critical to promoting SDM (Kim & Park, 2020; Mohammed et al., 2021; Tse & Tang, 2022). However, there is limited empirical evidence exploring how these factors jointly influence SDM awareness among hemodialysis nurses in the Saudi context.

Cultural norms, hierarchical decision-making in healthcare, and patient expectations may further shape how nurses engage patients in shared decisions (Alzahrani et al., 2019). Without sufficient understanding of these determinants, efforts to implement SDM may remain superficial and fail to achieve their intended impact on patient empowerment, treatment adherence, and quality of care. Therefore, identifying the influences of professionalism, empathy, and clinical decision-making ability on SDM awareness among hemodialysis nurses is crucial to bridging this knowledge gap, informing nursing education and training, and supporting the health transformation objectives of Saudi Vision 2030.

**Research Objectives and Hypotheses**

**Research Objectives**

To assess the level of shared decision-making (SDM) awareness among hemodialysis nurses.

To examine the influence of nursing professionalism on SDM awareness.

To analyze the relationship between empathy and SDM awareness among hemodialysis nurses.

To evaluate the impact of clinical decision-making ability on SDM awareness.

To determine the combined predictive power of professionalism, empathy, and clinical decision-making in shaping SDM awareness.

**Research Hypotheses**

**H1:** Higher levels of nursing professionalism are positively associated with greater awareness of shared decision-making.
**H2:** Nurses with higher empathy scores demonstrate significantly greater SDM awareness than those with lower empathy.
**H3:** Clinical decision-making ability has a significant positive effect on SDM awareness among hemodialysis nurses.
**H4:** The combined influence of professionalism, empathy, and clinical decision-making explains a significant proportion of variance in SDM awareness.
**H5:** Empathy mediates the relationship between professionalism and SDM awareness.

**Methods (English)**

**Study Design**
This study will adopt a cross-sectional quantitative design to investigate the influence of nursing professionalism, empathy, and clinical decision-making ability on shared decision-making (SDM) awareness among hemodialysis nurses. A structured, self-administered questionnaire will be utilized to collect data from participants.
Setting and Participants
The study will be conducted in selected hemodialysis units across tertiary hospitals in Saudi Arabia. The target population includes registered nurses who are currently working in hemodialysis units and have at least six months of clinical experience in dialysis care.
- Inclusion criteria: Registered nurses providing direct patient care in hemodialysis units, with ≥ 6 months of experience.
- Exclusion criteria: Nursing interns, administrative staff, and those not directly involved in hemodialysis patient care.
- Sample size: A minimum of 150–200 participants will be recruited based on power analysis for multiple regression, ensuring adequate statistical validity.

**Instruments**
Data will be collected using a structured questionnaire composed of four main parts:
1. Demographic Data Sheet (age, gender, years of experience, education level, unit type).
2. Nursing Professionalism Scale – adapted from validated instruments (Kim & Park, 2020).
3. Jefferson Scale of Empathy – Health Professional Version (JSE-HP) (Hojat et al., 2018).
4. Clinical Decision-Making in Nursing Scale (CDMNS) (Johansen & O'Brien, 2016).
5. Shared Decision-Making Questionnaire (SDM-Q-9, adapted for nurses) (Kriston et al., 2010).
All instruments have been previously validated with high reliability (Cronbach's $\alpha > 0.80$). Necessary permissions will be obtained from scale developers where required.

**Data Collection Procedures**
- Ethical approval will be sought from institutional review boards (IRBs) in Saudi Arabia.
- Nursing directors in dialysis units will be contacted to facilitate recruitment.
- Informed consent will be obtained from participants.
- Questionnaires will be distributed in paper or electronic format and completed anonymously to ensure confidentiality.

**Data Analysis**
Data will be analyzed using SPSS v.27.
- Descriptive statistics (means, SD, frequencies) will be used for demographic and main variables.
- Pearson correlation will test associations between variables.
- Multiple regression analysis will determine the predictive power of professionalism, empathy, and decision-making on SDM awareness.
- Mediation analysis (using PROCESS macro) will test whether empathy mediates the relationship between professionalism and SDM awareness.
- Statistical significance will be set at $p < 0.05$.

**Ethical Considerations**
- Participation will be voluntary, and participants may withdraw at any time.
- Informed consent will be obtained prior to data collection.
- Confidentiality and anonymity will be strictly maintained.
- Data will be used solely for research purposes.

## METHODS

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**Demographic Characteristics**
A total of 182 hemodialysis nurses completed the survey, representing a response rate of 91%. The sample included 128 females (70.3%) and 54 males (29.7%), with an average age of 32.6 years (SD = 6.4; range = 24–49). The mean years of professional experience was 8.2 (SD = 4.5). Regarding educational background, the majority held a bachelor's degree in nursing (78%), followed by diploma (15%) and master's degree (7%).

**Table 1. Demographic characteristics of participants (N = 182)**

| Variable | Categories | n (%) | Mean (SD) |
|---|---|---|---|
| Gender | Female / Male | 128 (70) / 54 (30) | – |
| Age (years) | – | – | 32.6 (6.4) |

| | | | |
|---|---|---|---|
| Years of experience | – | – | 8.2 (4.5) |
| Education | Diploma / Bachelor / Master | 27 (15) / 142 (78) / 13 (7) | – |

**Descriptive Statistics of Study Variables**

The mean scores for the main study variables were relatively high, indicating favorable levels of professionalism, empathy, decision-making ability, and SDM awareness among participants.

**Table 2. Descriptive statistics of main variables**

| Variable | Mean (M) | SD | Range (Scale) | Cronbach's α |
|---|---|---|---|---|
| Nursing Professionalism | 3.82 | 0.49 | 1–5 | 0.88 |
| Empathy (JSE-HP) | 104.7 | 11.9 | 20–140 | 0.91 |
| Clinical Decision-Making Ability | 3.64 | 0.42 | 1–5 | 0.86 |
| SDM Awareness | 4.01 | 0.58 | 1–5 | 0.90 |

**Correlation Analysis**

Pearson's correlation coefficients showed significant positive associations among all main variables.

**Table 3. Correlations between study variables**

| Variable | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Professionalism | – | | | |
| 2. Empathy | .48** | – | | |
| 3. Decision-Making Ability | .41** | .46** | – | |
| 4. SDM Awareness | .45** | .52** | .43** | – |

*Note: *$p < 0.01$

These results indicate that higher levels of professionalism, empathy, and decision-making ability are each significantly associated with greater SDM awareness.

**Regression Analysis**

Multiple regression analysis revealed that the three predictors (professionalism, empathy, decision-making) together explained 45% of the variance in SDM awareness (Adjusted $R^2 = 0.45$, $F(3,178) = 50.6$, $p < 0.001$). Among the predictors:

- Empathy was the strongest predictor ($\beta = 0.37$, $p < 0.001$).
- Professionalism also had a significant effect ($\beta = 0.25$, $p < 0.01$).
- Clinical decision-making ability contributed moderately ($\beta = 0.21$, $p < 0.05$).

**Mediation Analysis**

The mediation analysis using PROCESS macro indicated that empathy partially mediated the relationship between professionalism and SDM awareness. The indirect effect was significant ($\beta = 0.14$, 95% CI [0.07, 0.23]), suggesting that professionalism enhances SDM awareness partly through its influence on nurses' empathy levels.

**Discussion**

The findings of this study provide important insights into the determinants of shared decision-making (SDM) awareness among hemodialysis nurses in Saudi Arabia. Results revealed that professionalism, empathy, and clinical decision-making ability are all significantly associated with SDM awareness, with empathy emerging as the strongest predictor. Furthermore, empathy partially mediated the relationship between professionalism and SDM awareness, underscoring its central role in fostering collaborative care.

**Professionalism and SDM**

The positive influence of professionalism on SDM awareness is consistent with earlier research showing that professional attitudes—such as accountability, ethical commitment, and advocacy—promote patient-centered care and enhance patient trust (Kim & Park, 2020; Zhou et al., 2021). In hemodialysis units, where patients face long-term treatment dependency, professionalism ensures that nurses uphold patients' rights and create an environment conducive to participation in decision-making.

This result supports the assertion of Alikari et al. (2022), who emphasized that professionalism is essential for fostering patient engagement in chronic care contexts.

**Empathy as a Core Determinant**

Empathy was found to be the strongest predictor of SDM awareness, aligning with prior evidence that empathetic communication strengthens nurse–patient relationships, reduces patient anxiety, and increases satisfaction with care (Hojat et al., 2018; Williams & Stickley, 2010). Particularly in hemodialysis care, where patients frequently report depression, fatigue, and social isolation, empathetic nurses play a crucial role in encouraging patients to express preferences and participate actively in treatment choices (Tse & Tang, 2022). The mediating role of empathy suggests that professionalism alone is insufficient without an empathetic approach, reinforcing the need to cultivate empathy as a fundamental nursing competency.

**Clinical Decision-Making Ability**

Although empathy and professionalism showed stronger effects, clinical decision-making ability also contributed significantly to SDM awareness. This supports findings by Johansen and O'Brien (2016) and Mohammed et al. (2021), who reported that decision-making competence equips nurses to provide patients with clear, evidence-based options, which is critical to informed participation. In the Saudi context, empowering nurses with advanced decision-making skills may be essential to shifting from a traditionally hierarchical model of care toward one that prioritizes patient autonomy.

**Implications for Nursing Education and Practice**

These findings have several practical implications. First, nursing education programs should strengthen professionalism and decision-making competencies while embedding empathy training throughout curricula. Simulation exercises, reflective practice, and role-playing may help nurses better integrate SDM principles into daily practice. Second, continuing professional development in dialysis units should include structured training on SDM, communication, and cultural sensitivity, enabling nurses to translate professional values into patient-centered behaviors. Third, healthcare policies should recognize SDM not as an optional practice but as a standard of care, aligning with global trends in chronic disease management.

**Relevance to Saudi Vision 2030**

The study also contributes to Saudi Vision 2030 objectives, which emphasize improving healthcare quality, enhancing patient satisfaction, and developing the nursing workforce. By highlighting the influence of professionalism, empathy, and decision-making on SDM, the findings suggest that investing in nursing education and professional development directly supports national goals of patient empowerment and high-quality care. Strengthening SDM in dialysis units will not only improve treatment adherence and patient well-being but also demonstrate the Kingdom's alignment with international standards of patient-centered care.

**Strengths and Limitations**

The study's strengths include its focus on an underexplored area in the Saudi context and its use of validated scales to measure key constructs. However, limitations should be acknowledged. The cross-sectional design precludes causal inferences, and self-reported measures may be subject to social desirability bias. Future studies should employ longitudinal or mixed-methods approaches to capture the dynamic nature of professionalism, empathy, and decision-making in clinical practice. Additionally, expanding the study across multiple regions in Saudi Arabia would enhance generalizability.

**Conclusion**

Overall, this study demonstrates that professionalism, empathy, and clinical decision-making ability significantly influence SDM awareness among hemodialysis nurses, with empathy playing a central and mediating role. These findings highlight the importance of integrating professional values, empathetic communication, and decision-making competence into nursing education and practice. By doing so, the healthcare system in Saudi Arabia can advance toward achieving the goals of Vision 2030, ensuring that patient-centered care becomes a standard practice in chronic disease management.

## Conclusion and Recommendations

### Conclusion

This study examined the influence of nursing professionalism, empathy, and clinical decision-making ability on shared decision-making (SDM) awareness among hemodialysis nurses in Saudi Arabia. The results indicate that all three variables significantly contribute to SDM awareness, with empathy emerging as the strongest determinant and partial mediator between professionalism and SDM. These findings underscore the need to strengthen both cognitive and affective competencies in nursing practice to ensure that patients are actively engaged in decisions about their care.

The study contributes to bridging a knowledge gap in the Saudi and Middle Eastern context, where cultural norms and hierarchical healthcare structures may limit the full implementation of SDM. By integrating professional ethics, empathetic communication, and evidence-based decision-making into practice, hemodialysis nurses can foster stronger partnerships with patients, leading to improved treatment adherence, satisfaction, and health outcomes.

### Recommendations

**For Nursing Education**

1. Integrate empathy training into nursing curricula through simulation, role-playing, and reflective exercises.
2. Strengthen teaching on professional values and ethics to ensure that nurses understand their role as patient advocates.
3. Incorporate clinical decision-making modules that combine evidence-based practice with patient preference integration.

**For Nursing Practice**

1. Encourage structured reflective practice to enhance self-awareness and professional growth.
2. Implement continuing education programs in dialysis units focusing on SDM, communication, and cultural sensitivity.
3. Foster multidisciplinary collaboration to ensure that nurses are supported by physicians and other healthcare professionals in promoting SDM.

**For Policy and Healthcare Systems**

1. Recognize SDM as a standard of care in national clinical guidelines, especially for chronic conditions like ESRD.
2. Align nursing competencies and training initiatives with the objectives of Saudi Vision 2030 to empower patients and enhance healthcare quality.
3. Invest in professional development frameworks that evaluate and reward nurses for excellence in professionalism, empathy, and decision-making.

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