PATIENT-DOCTOR RELATIONSHIPS AND ITS ASSOCIATED FACTORS PERCEIVED BY PATIENTS AT NON GOVERMENTAL HEMODIALYSIS CLINICS IN MALAYSIA

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by

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a : alpha
χ^2 : Chi-Square
df : degrees of freedom
K : Kappa value
$<$: less than
$>$: more than
% : percent

LIST OF ABBREVIATIONS

AIC : Akaike Information Criterion
BIC : Bayesian Information Criterion
BT : Back Translation
CAT : Communication Accommodation Theory
CFA : Confirmatory Factor Analysis
CFI : Comparative Fit Index
CI : Confidence Interval
CKD : Chronic Kidney Disease
CQI : Continuous quality improvement
CV : Coefficient of variation
CVI : Content Validity Index
CVR : Content Validity Ratio
DPC : Doctor-Patient Communication
DPCQ : Doctor-Patient Communication Questionnaire
ESRD : End-Stage Renal Disease
FT : Forward Translation
FVI : Face Validity Index
FVR : Face Validity Ratio
HBM : Health Belief Model
HD : Hemodialysis
HPUSM : Hospital Pakar Universiti Sains Malaysia
I-CVI : Item-level Content Validity Index
I-FVI : Item-level Face Validity Index
IBM : International Business Machines (often refers to IBM SPSS software)
JEPeM : Jawatankuasa Etika Penyelidikan Manusia (Human Research Ethics Committee)
MIs : Modification Indices
ML : Maximum Likelihood
MLR : Multiple Linear Regression
MMA : Malaysian Medical Association
MOH : Ministry of Health
MyD-PCQ : Malay Doctor-Patient Communication Questionnaire
MyPDRQ : Malay Patient-Doctor Relationship Questionnaire

NGO : Non-Governmental Organization
PC : Probability of chance agreement
PDR : Patient-Doctor Relationship
PDRQ : Patient-Doctor Relationship Questionnaire
PDRQ-9 : Patient-Doctor Relationship Questionnaire-9
PROMs : Patient-Reported Outcome Measures
PSM : Patient Satisfaction Model
RM : Ringgit Malaysia
RMSEA : Root Mean Square Error of Approximation
RCTs : Randomized Controlled Trials
S-CVI : Scale Content Validity Index
S-FVI : Scale Face Validity Index
SD : Standard Deviation
Sig. : Significant
SPSS : Statistical Package for the Social Sciences
SRMR : Standardized Root Mean Square Residual
SRs : Standardized Residuals
SRS : Simple Random Sampling
TAM : Therapeutic Alliance Model
TLI : Tucker–Lewis Fit Index
TPB : Theory of Planned Behavior
USM : Universiti Sains Malaysia

LIST OF APPENDICES

HUBUNGAN PESAKIT-DOKTOR DAN FAKTOR-FAKTOR BERKAIT SEBAGAIMANA ANGGAPAN PESAKIT HEMODIALISIS KLINIK BUKAN KERAJAAN DI MALAYSIA

ABSTRAK

Membina hubungan pesakit-doktor yang kukuh dan komunikasi yang berkesan adalah penting untuk meningkatkan kualiti penjagaan dan hasil rawatan, terutamanya bagi pesakit hemodialisis. Namun, kajian tentang bagaimana hubungan ini mempengaruhi hasil rawatan pesakit di Malaysia masih terhad, walaupun pesakit hemodialisis sering berinteraksi dengan penyedia penjagaan kesihatan. Kajian ini bertujuan untuk menterjemah dan mengesahkan versi Melayu bagi soal selidik *Patient-Doctor Relationship Questionnaire* dan *Doctor-Patient Communication Questionnaire*, dan seterusnya menggunakan soal selidik tersebut untuk menilai hubungan pesakit-doktor dan komunikasi antara pesakit dan doktor dalam kalangan pesakit hemodialisis di Malaysia. Kajian ini dijalankan dalam dua fasa. Dalam Fasa I, panel pakar telah menterjemah dan mengesahkan PDRQ-9 dan DPCQ ke dalam Bahasa Melayu. Perbincangan kognitif yang melibatkan lapan kakitangan penjagaan hemodialisis dan tujuh pesakit mengesahkan kefahaman soal selidik tersebut. Sifat psikometrik telah dinilai dalam kalangan 300 responden menggunakan Analisis Faktor Pengesahan (CFA) dan konsistensi dalaman. InitialMyPDRQ menunjukkan konsistensi dalaman yang tinggi (Raykov's rho=0.906), dengan indeks CFA menunjukkan kesesuaian model yang baik (SRMR=0.025, RMSEA<0.001, CFI=1.000, TLI=1.000). InitialMyD-PCQ juga menunjukkan kebolehpercayaan yang tinggi (Raykov's rho=0.887) dan kesesuaian model yang baik (SRMR=0.037, RMSEA=0.029, CFI=0.982, TLI=0.979). Dalam Fasa II, kajian keratan rentas menggunakan MyPDRQ dan MyD-PCQ yang disahkan telah dijalankan dalam kalangan 640 pesakit hemodialisis di seluruh Malaysia. Majoriti peserta adalah wanita (54.5%), berumur 48 tahun atau lebih (57.1%), Melayu (47.0%), dan berkahwin (58.8%). Hampir 60% mempunyai pendapatan di bawah RM 4360. Purata skor hubungan pesakit-doktor ialah 35.40 (SD=7.74), dan purata skor komunikasi doktor-pesakit ialah 51.09 (SD=8.14). Komunikasi muncul sebagai faktor paling signifikan yang dikaitkan dengan hubungan pesakit-doktor (Adj β=1.163, p<0.001). Pesakit yang lebih muda (18–27 tahun) mencatatkan skor lebih rendah (Adj β=-0.044, p=0.027), manakala tahap pendidikan yang lebih tinggi dikaitkan dengan skor yang lebih baik (Adj β=0.034, p=0.023). Pekerjaan dan pendapatan tidak menunjukkan kepentingan statistik. MyPDRQ dan MyD-PCQ merupakan instrumen yang sahih dan boleh dipercayai, sekali gus menyediakan alat yang sesuai untuk menilai hubungan pesakit-doktor serta komunikasi dalam kalangan pesakit hemodialisis di Malaysia. Dapatan kajian ini mempunyai implikasi penting terhadap dasar, amalan dan penyelidikan, khususnya dalam menyokong penggunaan instrumen yang diadaptasi secara budaya dalam penjagaan klinikal rutin, membantu merangka intervensi yang disasarkan bagi meningkatkan komunikasi, serta menyumbang bukti untuk strategi memperkukuh kepuasan pesakit jangka panjang dan hasil klinikal.

PATIENT-DOCTOR RELATIONSHIPS AND ITS ASSOCIATED FACTORS PERCEIVED BY PATIENTS AT NON GOVERMENTAL HEMODIALYSIS CLINICS IN MALAYSIA

ABSTRACT

Building strong patient-doctor relationships and effective communication are crucial for enhancing care quality and outcomes, particularly for hemodialysis patients. However, limited research exists on how these relationships impact patient outcomes in Malaysia, despite frequent interactions between hemodialysis patients and healthcare providers. This study aimed first to translate and validate the Malay versions of the Patient-Doctor Relationship Questionnaire and Doctor-Patient Communication Questionnaire, and subsequently to employ the validated tools to assess patient-doctor relationships and communication among hemodialysis patients in Malaysia. The study was conducted in two phases. In Phase I, expert panels translated and validated the PDRQ-9 and DPCQ into Malay. Cognitive debriefing involving eight hemodialysis care personnel and seven patients confirmed comprehensibility. Psychometric properties were assessed among 300 respondents using Confirmatory Factor Analysis (CFA) and internal consistency. The initialMyPDRQ demonstrated high internal consistency (Raykov's rho=0.906), with CFA indices indicating good model fit (SRMR=0.025, RMSEA<0.001, CFI=1.000, TLI=1.000). The initialMyD-PCQ showed high reliability (Raykov's rho=0.887) and good model fit (SRMR=0.037, RMSEA=0.029, CFI=0.982, TLI=0.979). In Phase II, a cross-sectional study using the validated MyPDRQ and MyD-PCQ was conducted among 640 hemodialysis patients across Malaysia. The majority were female (54.5%), aged 48 years or older (57.1%), Malay (47.0%), and married (58.8%). Nearly 60% had an income below RM 4360. The mean patient-doctor relationship score was 35.40 (SD=7.74), and the mean doctor-patient communication score was 51.09 (SD=8.14). Communication emerged as the most significant factor associated with relationships (Adj $\beta=1.163$, $p<0.001$). Younger patients (18–27 years) scored lower (Adj $\beta=-0.044$, $p=0.027$), while higher education levels were positively associated with better scores (Adj $\beta=0.034$, $p=0.023$). Employment and income were not statistically significant. The MyPDRQ and MyD-PCQ are valid and reliable instruments, providing appropriate tools for assessing patient-doctor relationships and communication among Malaysian hemodialysis patients. These findings have important implications for policy, practice, and future research, as they support the integration of culturally adapted measures into routine clinical care, inform targeted interventions to enhance communication, and contribute evidence for strategies aimed at improving long-term patient satisfaction and clinical outcomes.

CHAPTER 1

INTRODUCTION AND RESEARCH OVERVIEW

1.1 Introduction

The patient-doctor relationship is a cornerstone of effective healthcare delivery, particularly in managing chronic illnesses such as end-stage renal disease (ESRD). These relationships significantly association with patient satisfaction, treatment adherence, and overall clinical outcomes. For hemodialysis patients, frequent and long-term interactions with healthcare providers make the quality of this relationship even more critical. This chapter introduces the study by outlining its background, identifying the research problem, and detailing the objectives and research questions that guide this investigation. The chapter concludes with an overview of the thesis structure, providing a roadmap for the subsequent chapters.

1.2 Background of Study

The patient-doctor relationship is widely recognized as a cornerstone of effective healthcare delivery, particularly in the management of chronic diseases such as end-stage renal disease (ESRD). Evidence from high-income countries demonstrates that patient-centered care approaches—emphasizing trust, shared decision-making, and empathetic communication—improve patient satisfaction, treatment adherence, and health outcomes (Berry et al., 2017; Stewart et al., 2007).

Globally, research has shown that contextual factors such as cultural values, language diversity, and healthcare infrastructure strongly influence the quality of patient-doctor interactions (Jaroń et al., 2024). In Malaysia, these dynamics are further shaped by a multi-ethnic population, variable levels of health literacy, and differing expectations of authority in clinical encounters (Mohd Salim et al., 2023). Studies indicate that Malaysian patients often value rapport and trustworthiness as highly as technical expertise in consultations (Hani & Liew, 2018). This is particularly important in hemodialysis care, where patients interact with healthcare providers several times each week and where communication plays a critical role in long-term treatment success (Bujang et al., 2024; Ibrahim et al., 2022).

Hemodialysis, while life-saving, imposes considerable physical, psychological, and social burdens on patients. They often experience fatigue, anxiety, and depression, in addition to financial strain and social isolation (Figueiredo-Braga et al., 2018; Ghimire et al., 2019). In Malaysia, indirect costs such as transport, dietary modifications, and loss of employment opportunities remain a challenge, particularly for lower-income households (Ramatillah et al., 2017). Furthermore, language mismatch and limited health literacy frequently act as barriers to effective communication, leading to suboptimal adherence to treatment regimens (Chan et al., 2012).

Patient-centered care has therefore been promoted as a model to address these complex challenges, by prioritizing patient needs, fostering trust, and supporting shared decision-making (Epstein & Street, 2011; Pascual López et al., 2020). In the hemodialysis setting, where treatment is repetitive and long-term, such an approach enhances adherence, improves psychological well-being, and strengthens patient engagement (Ferreira et al., 2022; Mohd Tamil et al., 2024). Effective communication is central to this model, with clear, empathetic, and culturally sensitive interactions shown to improve satisfaction, treatment adherence, and clinical outcomes (Hamrin et al., 2017; Du et al., 2020).

In summary, while the global literature underscores the importance of patient-doctor relationships and communication in chronic disease care, local challenges in Malaysia—including multi-ethnic diversity, variable health literacy, and system constraints—necessitate validated, culturally adapted tools to assess these interactions. Such tools are critical for guiding practice, informing policy, and developing interventions aimed at improving the quality of care and long-term outcomes for hemodialysis patients.

1.3 Problem statement

End-stage renal disease (ESRD) is a growing public health concern in Malaysia, with hemodialysis being the primary treatment for more than 45,000 patients annually since 2022 (Malaysian Society of Nephrology, 2023). These patients require frequent and long-term interactions with healthcare providers, making the patient-doctor relationship central to their care experience (Liu & Jia, 2023). Although such relationships are significantly associated with treatment adherence, patient satisfaction, and clinical outcomes, research exploring their dynamics in the Malaysian healthcare context, particularly in hemodialysis care, remains limited.

Global studies emphasize the importance of trust, communication, and patient-centered care in strengthening patient-doctor relationships (Jiang et al., 2024). However, these findings may not fully apply to Malaysia due to cultural, linguistic, and systemic differences. Malaysia's multi-ethnic and multicultural setting requires localized evidence to understand how these unique factors shape patient-doctor interactions (Hayek et al., 2020). Furthermore, Malaysia's diverse population presents challenges related to language preferences, cultural expectations, and varying levels of health literacy, which may further complicate communication and influence treatment adherence and satisfaction (Shahar et al., 2019; Zeng et al., 2024).

Despite the availability of internationally recognized tools such as the Patient-Doctor Relationship Questionnaire (PDRQ) and the Doctor-Patient Communication Questionnaire (DPCQ), these instruments have not been culturally adapted or validated for use in Malaysia. This gap limits the ability to accurately assess patient-doctor dynamics and guide clinical practice and policy development (Suhaimi et al., 2020). In addition, sociodemographic factors such as age, education, and income are known to influence patient expectations, communication patterns, and trust in healthcare providers. For example, younger and more educated patients are more likely to prefer shared decision-making, whereas older patients may lean towards a more paternalistic model of care (Street et al., 2005; Charles et al., 1999). Similarly, patients with higher educational attainment and income levels often demonstrate better health literacy and stronger communication engagement compared to those from lower socioeconomic backgrounds (Ishikawa & Yano, 2008; Nutbeam, 2000). However, little is known about how these sociodemographic characteristics shape patient-doctor relationships in Malaysian hemodialysis settings.

Therefore, this study seeks to address these gaps by translating and validating the PDRQ and DPCQ for Malaysian hemodialysis patients, while also evaluating the quality of patient-doctor relationships and examining their associations with sociodemographic characteristics, including age, education, and income. By doing so, the study will provide culturally appropriate tools and evidence-based insights to strengthen patient-doctor interactions and improve the quality of care in Malaysia's hemodialysis services.

1.4 Research Gaps

While global research on patient-doctor relationships is extensive, there is a critical gap in understanding these dynamics within Malaysia’s healthcare system, especially among hemodialysis patients. Most studies have been conducted in Western settings, neglecting the cultural, linguistic, and systemic factors unique to Malaysia. These factors significantly associated with patient-doctor interactions and outcomes, highlighting the need for localized research.

Malaysia’s multi-ethnic society presents distinct challenges in healthcare interactions, as cultural norms, religious beliefs, and language preferences shape communication styles and healthcare expectations. Despite these complexities, there is limited research on how such factors impact patient-doctor relationships in hemodialysis care (Orom et al., 2014; Rashidi et al., 2020).

Globally recognized tools such as the Patient-Doctor Relationship Questionnaire-9 (PDRQ-9) and the Doctor-Patient Communication Questionnaire (DPCQ) have been widely used to assess patient-doctor relationships (der Feltz-Cornelis et al., 2004; Sustersic et al., 2018). However, these instruments have not been culturally adapted or validated for use in Malaysia. Without culturally appropriate tools, healthcare providers struggle to capture the true nature of patient-doctor relationships, hindering targeted improvements in care (Brewer et al., 2021; Chichirez & Purcărea, 2018).

Sociodemographic factors such as age, gender, education level, income, and ethnicity are well-documented in the context of patient-doctor relationships. However, their specific impact within Malaysia’s hemodialysis population remains unclear. Given Malaysia’s diverse demographics, understanding these factors is essential for developing inclusive and patient-centered care strategies (Elkefi et al., 2024; McMillan et al., 2013; Polikandrioti et al., 2017).

The patient-doctor relationship is particularly critical in chronic disease management, yet studies focusing on this in Malaysian hemodialysis patients are scarce. These patients, who require long-term care, depend on strong relationships with healthcare providers for treatment adherence and positive health outcomes. The lack of research on these relationships among hemodialysis patients creates a critical gap in understanding how to improve patient care and health outcomes in this vulnerable population (Maiman & Becker, 1977; Sfendla & Hadrya, 2020; Tong et al., 2020).

1.5 Rationale of the Study

This study is worth undertaking because it directly addresses a critical methodological gap in nephrology care in Malaysia—the absence of culturally adapted and validated tools to measure patient-doctor relationships and communication in the hemodialysis setting. The lack of such instruments restricts both clinical evaluation and research, limiting the ability to generate reliable evidence on how relational and communicative aspects of care influence treatment adherence and patient well-being. By translating and validating the Patient-Doctor Relationship Questionnaire (PDRQ-9) and the Doctor-Patient Communication Questionnaire (DPCQ) into Malay, this study ensures that healthcare providers and researchers can access psychometrically sound instruments tailored to the Malaysian context, in line with its first two objectives.

Beyond instrument validation, the study also examines sociodemographic factors—such as age, education, and income—that shape patient-doctor interactions. This mapping to the third objective provides evidence to identify groups of patients who may require more targeted communication strategies, thereby improving equity and effectiveness in care delivery.

The rationale for this study extends beyond methodological needs to tangible benefits in policy, practice, and patient outcomes. At the policy level, findings can inform the Ministry of Health's ongoing agenda on patient-centered care and quality assurance in chronic disease management. In clinical practice, validated tools allow healthcare teams to monitor and strengthen communication and relational skills, providing a structured basis for staff training and service improvement. For patients, enhancing trust, empathy, and shared decision-making has direct implications for adherence, satisfaction, and long-term health outcomes.

In sum, this study not only fills a critical research and methodological gap but also contributes actionable knowledge to improve the quality of nephrology services in Malaysia.

1.6 Research Objective

The main objective of this research is to study the patient-doctor relationship and its associated factors perceived by hemodialysis patients in Malaysia. The specific research objective is listed as follows:

1.6.1 Specific Objectives:

1.6.1(a) Phase I

1. To translate and validate the Patient-Doctor Relationship Questionnaire-9 (PDRQ-9) and Doctor-Patient Communication Questionnaire (DPCQ) for hemodialysis patients in Malaysia

2. To determine the reliability and validity of the Malay versions of PDRQ and DPCQ

1.6.1(b) Phase II

1. To determine the patient-doctor relationship score perceived by hemodialysis patients in Malaysia.
2. To determine the doctor-patient communication scores perceived by hemodialysis patients in Malaysia.
3. To determine the association of sociodemographic factors and doctor-patient communication scores with patient-doctor relationship scores as perceived by hemodialysis patients in Malaysia.

1.7 Research Questions

This research aims to answer research questions that guide and motivate the research, which are as follows:

1.7.1 Phase I

1. What are the validity and reliability of the Malay versions of PDRQ and DPCQ?

1.7.2 Phase II

1. What is the patient-doctor relationship score among hemodialysis patients in Malaysia?
2. What is the doctor-patient communication score among hemodialysis patients in Malaysia?

3. What are the factors associated with patient-doctor relationship score among hemodialysis patients in Malaysia?

1.8 Research Hypothesis

1. There is a significant association between sociodemographic factors (such as age, education level, occupation, and income) and patient-doctor relationship scores among hemodialysis patients in Malaysia.
2. There is a significant association between doctor-patient communication scores and patient-doctor relationship scores among hemodialysis patients in Malaysia.

1.9 Operational Definitions

i. Non-Governmental Hemodialysis Clinics

- **a.** Definition: Healthcare facilities that provide hemodialysis services but are not owned or directly managed by the Ministry of Health, Armed Forces, or public universities. This includes private dialysis centers and those operated by non-government organizations (NGOs).
- **b.** Operationalization: In this study, it refers specifically to dialysis centers managed by private corporations, charitable organizations, or non-profit entities that provide maintenance hemodialysis services to patients with end-stage renal disease (ESRD).

ii. Stand-alone Hemodialysis Unit

- a. Definition: A dialysis facility that is independent from hospital complexes and functions solely to provide hemodialysis treatment.

b. Operationalization: Facilities that operate autonomously, focusing only on outpatient hemodialysis care and related monitoring, without being physically or administratively attached to hospitals.

iii. **Non-Government Organization (NGO) Dialysis Center**

a. Definition: A legally registered, non-profit entity independent of direct government control, often supported by charitable foundations, religious institutions, zakat funds, or private donations, that provides healthcare services.

b. Operationalization: In this study, it refers to NGO-managed dialysis centers that offer subsidized or fully sponsored hemodialysis treatments for patients who cannot afford private care.

iv. **Patient-Doctor Relationship**

a. Definition: The interpersonal dynamic between patients and their attending doctors, characterized by trust, respect, communication, and mutual understanding (Mars, 2020).

b. Operationalization: Measured using the validated Malay version of the Patient-Doctor Relationship Questionnaire (MyPDRQ-9), which assesses aspects such as trust, respect, and perceived support within the doctor-patient interaction.

v. **Doctor-Patient Communication**

a. Definition: The process of information exchange, empathy, and shared decision-making between doctor and patient during medical consultations.

b. Operationalization: Measured using the validated Malay version of the Doctor-Patient Communication Questionnaire (MyD-PCQ), which evaluates clarity, empathy, and effectiveness of communication as perceived by patients.

vi. **Associated Sociodemographic Factors**

  a. Definition: Patient characteristics such as age, sex, education level, employment status, and household income, which may influence perceptions of patient-doctor relationships and communication.

  b. Operationalization: Data will be collected through patient self-report in the sociodemographic section and MyD-PCQ scores and analyzed to determine their association with MyPDRQ scores.

1.10 Thesis Overview

The study was conducted in two phases, as explained in section 1.6. Phase I involved translating and validating the PDRQ and DPCQ in order to produce a Malay version specifically for hemodialysis patients in Malaysia. This was followed by a psychometric evaluation to assess the validity and reliability of the Malay version of the PDRQ and DPCQ for use in Phase II.

Phase II is a cross-sectional study that uses the Malay version of the PDRQ and DPCQ to evaluate the patient-doctor relationship and associated factors perceived by hemodialysis patients in Malaysia. Chapter 3 contains an in-depth description of the method used in each phase of the study. Chapter 4 outlines the findings for each research objective, while Chapter 5 offers a comprehensive discussion and conclusion.

1.11 Summary

In this chapter, an overview of the study is provided, including the background of the study, research problem, research objectives, and research questions. The next chapter will present a broad review of hemodialysis and its management, literature on theories/models of patient-doctor relationships, patients' satisfaction, PDRQ and DPCQ as the main research instruments, as well as the process of translation and cross-cultural adaptation of questionnaires. In addition, Chapter 2 will explain the conceptual framework used in this study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the existing literature on patient-doctor relationships, with a focus on their significance in chronic disease management and hemodialysis care. It explores the global and local perspectives on these interactions, the challenges faced by hemodialysis patients, and the factors associated patient-doctor relationship and communication.

The chapter also highlights the importance of localized tools for assessing patient-doctor relationships and identifies gaps in the current literature. These insights provide the foundation for the study’s theoretical and conceptual frameworks, which are presented at the end of this chapter.

2.2 Patient-Doctor Communication and Trust in Chronic Illness Management

Effective patient-doctor communication is a critical associated factor in health outcomes, particularly in chronic diseases like end-stage renal disease (ESRD). Studies have consistently shown that trust in healthcare providers correlates with improved patient satisfaction, treatment adherence, and quality of life (Stewart & Nápoles-Springer, 2007). For ESRD patients undergoing hemodialysis, regular communication with healthcare professionals is not only necessary for medical decisions but also plays a significant role in psychosocial well-being (Figueiredo-Braga, et al., 2018).

Trust, as defined in the healthcare context, refers to the patient's confidence that their doctor has their best interests in mind, is competent, and provides care in a consistent and ethical manner (Mechanic & Meyer, 2000). In Malaysia, cultural norms significantly impact the dynamics of trust in the patient-doctor relationship. For example, the hierarchical nature of doctor-patient interactions, associated by respect for authority, may limit open communication, especially in rural or less-educated populations (Hani & Liew, 2018).

Further, language barriers and health literacy often complicate communication in multi-ethnic Malaysia. A study by Chan et al., (2012) found that language concordance between patients and healthcare providers significantly improved both communication and trust, leading to better adherence to treatment plans. Given the importance of building trust, healthcare systems in Malaysia must adopt culturally sensitive communication strategies, particularly in chronic care settings like hemodialysis units.

2.3 Chronic Illness, Communication Barriers, and ESRD Care

Managing chronic diseases such as ESRD requires not only medical expertise but also the ability to navigate the complex emotional and psychological challenges faced by patients. One of the primary barriers to effective chronic illness management is the lack of clear and empathetic communication between patients and healthcare providers. Research indicates that when healthcare professionals fail to adequately address patients' emotional concerns or explain treatment plans in layman's terms, patients may feel powerless or anxious, affecting their overall treatment experience (Boulware, 2003).

In the case of hemodialysis patients, the burden of long-term treatment, dietary restrictions, and frequent hospital visits often leads to feelings of helplessness and social isolation. In Malaysia, studies show that psychosocial support from healthcare providers can significantly improve patients' quality of life (Bujang et al., 2024). However, this support often falls short due to systemic communication gaps, leading to a negative impact on patient trust and treatment adherence (Figueiredo-Braga, et al., 2018).

Factors such as depression, anxiety, and the fear of treatment failure can make it challenging for patients to engage in their care, which directly impacts health outcomes. For instance, a study by Ibrahim et al., (2022) highlighted that psychological distress in dialysis patients was significantly associated with lower adherence to medical recommendations, which further exacerbates health complications. Thus, addressing psychosocial challenges through improved communication is essential for effective management of ESRD.

2.4 Need for Localized Research and Tools

Assessing patient-doctor relationships is critical for improving healthcare delivery and patient outcomes. While globally recognized tools, such as the Patient-Doctor Relationship Questionnaire (PDRQ) and Doctor-Patient Communication Questionnaire (DPCQ), have been widely used to evaluate these interactions, their direct application in diverse cultural and healthcare contexts, such as Malaysia, is limited. Localized research and tools are essential to ensure the accurate assessment and enhancement of patient-doctor relationships in a multicultural and multilingual society.

2.4.1 Limitations of Global Tools in Local Contexts

Globally developed tools often reflect the cultural norms, healthcare practices, and patient expectations prevalent in their countries of origin, such as Europe or North

America. These tools may not adequately capture the nuances of patient-doctor interactions in Malaysia, where factors like ethnicity, language diversity, and cultural norms significantly associate with healthcare experiences (Ismail & Mazrah Khalid, 2022). For instance:

- Language Barriers: Direct translation of tools into Malay or other local languages may result in the loss of context or meaning, affecting the reliability and validity of responses (Dalawi et al., 2023; Hambleton, 2005).
- Cultural Differences: Concepts such as patient autonomy, communication styles, and trust may differ substantially across cultures, necessitating adaptation for local relevance (Hambleton et al., 2004; Schouten & Meeuwesen, 2006).

2.4.2 The Importance of Cultural Adaptation

Culturally adapted tools account for linguistic nuances, cultural expectations, and socio-demographic variations, ensuring that they are both comprehensible and contextually relevant. For example:

- Language and Clarity: Adapting tools to align with the local language and dialect ensures that patients fully understand the questions being asked (Woo & Pieters, 2021).
- Cultural Sensitivity: Incorporating culturally relevant dimensions, such as the role of family involvement in decision-making, enhances the validity of the tools in capturing the patient experience (Woo & Pieters, 2021).

2.4.3 Current Gaps in Malaysian Research

Despite the critical role of patient-doctor relationships in healthcare, there is limited research in Malaysia that utilizes culturally adapted tools. Existing studies rely on imported instruments without proper validation, potentially leading to inaccurate conclusions or missed insights (Elangovan & Sundaravel, 2021; Momayyezi & Fallahzadeh, 2020). The absence of validated tools tailored to Malaysia's unique healthcare setting has created a gap in understanding the true dynamics of these relationships (Ab Hamid et al., 2023).

2.4.4 Relevance to Hemodialysis Care

In chronic disease management, such as hemodialysis care, the patient-doctor relationship is central to achieving optimal outcomes (Rashidi et al., 2020). However, most global tools are designed for general healthcare settings and may not address the specific needs and challenges of patients undergoing long-term treatment like hemodialysis (Ferreira et al., 2020). Localized tools provide the opportunity to capture these unique aspects, ensuring that the insights generated are actionable and relevant to the target population (Plantinga et al., 2005).

Developing and validating localized tools not only enhances research accuracy but also contributes to clinical practice and policy-making. These tools can:

- Provide healthcare operators with actionable insights to improve communication and trust.
- Inform training programs aimed at enhancing culturally sensitive care.
- Support the development of evidence-based policies to improve healthcare quality in Malaysia.

Table 2.1 provides a structured comparison of the tools, focusing on their strengths and limitations to aid in selecting the most suitable one for specific research or clinical needs.

Table 2.1: Comparison of Tools for Assessing Patient-Doctor Relationships

Tool	Focus	Limitation
Patient Satisfaction Questionnaire (PSQ-18) (Thayaparan & Mahdi, 2013)	Measures patient satisfaction with various aspects of healthcare, including communication and trust.	Provides a broad view of satisfaction rather than a detailed assessment of the patient-doctor relationship.
CARE Measure (Consultation and Relational Empathy) (Mercer et al., 2004)	Evaluates relational empathy in consultations, emphasizing emotional support.	Primarily focuses on empathy; may not cover dimensions like shared decision-making or trust.
Interpersonal Processes of Care Survey (IPC) (Stewart, Nápoles-Springer, et al., 2007)	Examines communication, trust, and respect in healthcare encounters, emphasizing patient-centered care.	Comprehensive but lengthy; less practical in settings with time constraints, e.g., hemodialysis.
Health Care Climate Questionnaire (HCCQ) (Czajkowska et al., 2017)	Assesses the extent to which healthcare providers support patient autonomy.	Focuses on autonomy support; does not comprehensively evaluate the overall patient-doctor relationship.
Patient-Physician Relationship Scale (PPRS) (Kurlander et al., 2017)	Measures trust, communication, and the therapeutic alliance.	Less widely validated compared to PDRQ or DPCQ, especially in diverse cultural contexts.

Table 2.2 provides an analysis of the applications of the Patient-Doctor Relationship Questionnaire-9 (PDRQ-9) across various healthcare settings and countries. This structured comparison highlights the method, objective and findings, thereby assisting researcher in understanding the applicability of PDRQ-9.

Table 2.2: Applications of PDRQ-9 in Different Healthcare Settings

Author	Methodology	Objective	Findings
Van der Feltz-Cornelis et al. (2004)	Cross-sectional /Primary care, Epilepsy Clinic	Develop and validate the PDRQ-9 to assess the patient-doctor relationship	PDRQ-9 is a high reliability tool (α=0.93) and strong correlation with patient satisfaction for measuring therapeutic aspects of the patient-doctor relationship in primary care and General Practice at Netherlands
Porcerelli et al. (2014)	Primary care	Assess validity of PDRQ-9 in primary care	PDRQ-9 is reliable and valid, with significant correlations with other measures of doctor-patient relationship quality.
Zenger, Schaefert, Feltz-Cornelis, et al. (2014)	Psychometric study / Primary care / Germany	Validate the German version of PDRQ-9	The German version is High reliability (α=0.94); and valid, with good psychometric properties for assessing therapeutic alliance.
Arafat (2016)	Cross-sectional /50 patients/ Bangladesh	Validated Bangla version of Patient-Doctor Relationship Questionnaire (PDRQ-9)	Cronbach's α which was 0.97; one factor was extracted from varimax rotation factor analysis with high commonalities between the items
Arafat et al. (2017)	Cross-sectional / Outpatient clinics / Bangladesh	Assess patient satisfaction using PDRQ-9 Bangla in a low-resource setting	PDRQ-9 Bangla is a useful tool for measuring patient-doctor relationships with good reliability (α=0.89) though results varied from existing literature.
Wollmann et al. (2018)	Primary Health Service, Brazil	Cross-cultural adaptation of PDRQ-9	The Brazilian version is equivalent to the original, with high internal consistency and applicability in various settings.
Karibdzhanov (2021)	Primary care	Review and analyze PDRQ-9 results for management strategy	PDRQ-9 is a valuable tool for assessing patient satisfaction and therapeutic aspects in primary care.
Calderón et al. (2021)	Multicenter cohort, Cancer patients	Evaluate psychometric properties and validity of PDRQ-9	PDRQ-9 is valid for assessing patient-doctor relationships in cancer patients, showing strong measurement invariance and reliability.
Wang et al. 2023)	General hospital inpatients, China	Validate the Chinese version of PDRQ-9	The Chinese version is valid and reliable, showing good internal consistency and correlation with depressive symptoms.
Wollmann et al. (2025)	Primary health care units, Brazil	Establish quality categories for PDRQ-9 scores	Identified two response profiles with high accuracy, enhancing interpretability of PDRQ-9 results.

Table 2.3: Justification for Choosing PDRQ-9 and DPCQ for the Study

Criteria	Patient-Doctor Relationship Questionnaire-9 (PDRQ-9)	Doctor-Patient Communication Questionnaire (DPCQ)
Focus	Evaluates the quality of the patient-doctor relationship, including trust, satisfaction, and communication.	Focuses specifically on communication aspects like clarity, understanding, and responsiveness.
Relevance to Study Context	Addresses trust, communication, and satisfaction, key dimensions for hemodialysis patient care.	Provides detailed insights into the communication aspect, critical for hemodialysis care.
Ease of Adaptation	Straightforward to translate and validate for the Malaysian context.	Similarly easy to adapt and validate for the Malaysian setting.
Complementary Nature	Evaluates the broader patient-doctor relationship.	Complements PDRQ by offering a deeper focus on communication.
Practicality	Compact, user-friendly, and suitable for time-constrained clinical settings like hemodialysis.	Brevity ensures feasibility without overburdening patients or staff.
Validation	Widely validated in multiple studies, ensuring reliability and applicability.	Provides a robust framework for analyzing communication, complementing PDRQ's scope.

Table 2.3 highlights how both tools align with the study's objectives and the clinical context, ensuring a comprehensive yet practical assessment of patient-doctor relationships in hemodialysis care.

2.5 Literature Review Matrix on Doctor-Patient Relationships and Associated Factors

Table 2.4 synthesizes key studies on doctor-patient relationships, comparing methodologies and findings. It highlights recurring factors like trust and communication, identifies research gaps such as cultural relevance and long-term impact, and supports the need for localized assessment tools to improve patient-centered care in chronic settings like hemodialysis.

Table 2.4: Literature Review Matrix on Doctor-Patient Relationships and Associated Factors

Author	Objective	Methodology	Key Findings	Associated Factors	Relevancy	Research Gap
Kelley et al. (2014)	Assess the impact of patient-clinician relationships on healthcare outcomes	Systematic review and meta-analysis of RCTs	Patient-clinician relationships have a small but statistically significant effect on healthcare outcomes	Trust, Communication	Provides empirical evidence on the importance of doctor-patient relationships in treatment outcomes	Limited focus on long-term patient adherence and cultural variations in doctor-patient relationships
Ridd et al. (2009)	Synthesize key elements in doctor-patient relationships	Qualitative review	Four core elements: knowledge, trust, loyalty, and appreciation	Trust, Loyalty	Helps in understanding fundamental components of doctor-patient relationships	Lacks empirical validation in diverse healthcare settings
Birkhäuer et al. (2017)	Examine the relationship between patient trust in doctors and health outcomes	Systematic review	High trust is associated with increased patient satisfaction, treatment adherence, and better health outcomes	Trust, Adherence	Emphasizes the importance of building trust for better treatment outcomes	Lacks longitudinal studies to assess the long-term impact of trust on chronic disease management
Verlinde et al. (2012)	Provide an overview of instruments evaluating doctor-patient relationships	Literature review	Various instruments assess doctor-patient relationships, linked to patient satisfaction, treatment adherence, and healthcare outcomes	Assessment Tools	Helps in selecting appropriate assessment tools for measuring doctor-patient relationships in your study	Needs more comparative studies on the reliability and validity of these tools across different cultures

The literature reviewed in Table 2.4 reveals a consistent emphasis on trust and communication as central elements of effective doctor-patient relationships, both of which are directly linked to patient satisfaction, adherence, and outcomes. However, most existing studies are either limited to short-term outcomes, lack cultural contextualization, or fail to address chronic care settings such as hemodialysis. These gaps underscore the need for localized, culturally sensitive tools to assess the doctor-patient relationship and communication quality among patients with end-stage renal disease (ESRD) in Malaysia. This study addresses these limitations by validating and adapting measurement tools that reflect Malaysia's multicultural healthcare environment.

2.6 Gaps in the Literature

Although extensive research exists on patient-doctor relationships, several key gaps persist within the academic literature, particularly in the Malaysian healthcare context. These gaps emphasize the need for more localized and focused studies to advance the understanding of patient-doctor dynamics in hemodialysis care.

While socio-demographic factors such as age, gender, ethnicity, and socioeconomic status are known to shape patient-doctor interactions, existing studies often generalize findings without adequately exploring their nuanced effects. There is little academic research on how these factors interplay in chronic disease settings like hemodialysis, where relationships are built over prolonged periods (Adhikari et al., 2021; Ferreira et al., 2020; Zhang et al., 2020).

Most studies on patient-doctor relationships focus on acute care or primary care settings. This has left a gap in understanding how long-term, resource-intensive treatments like hemodialysis affect these relationships. Academic research specific to chronic care, where communication and trust are critical for adherence, remains scarce (Panwar et al., 2020; Pascoe, 1983; Pascual López et al., 2020).

Globally validated tools such as the PDRQ and DPCQ are frequently used, but their application in non-Western contexts has not been rigorously compared to understand cultural adaptations. There is a need for comparative academic insights that analyze their reliability and validity across diverse cultural settings, including Malaysia (Goh et al., 2022).

2.7 Theoretical Framework

2.7.1 Patient-Doctor Relationship Model

The doctor-patient relationship has evolved significantly throughout history, reflecting broader societal and cultural transformations. Early medical practices, which were once rooted in mystical or religious beliefs, gradually shifted towards more rational, evidence-based approaches (Cape, 2018). As societies modernized, medical practices transitioned from authoritarian, priest-like models to more egalitarian ones, where patient involvement and shared decision-making became increasingly emphasized (Gulati et al., 2024).

In contemporary medical practice, doctors are not only responsible for providing medical care but are also tasked with engaging in value discussions and fostering patient independence (Sang et al., 2020; Zhou et al., 2020). Several models of doctor-patient relationships have emerged over time, each reflecting different levels of patient involvement. These range from paternalistic models, where the doctor assumes a directive, 'priest-like' role, to deliberative models that promote open dialogue and patient collaboration in decision-making (Gao et al., 2024).

Despite the progress made, challenges remain within the doctor-patient relationship. Insufficient education and training for healthcare providers can contribute to medical misconduct and undermine the trust that is essential in doctor-patient interactions (Ammentorp et al., 2022; Parker et al., 2024). Core aspects of these relationships include confidentiality, informed consent, shared decision-making, and addressing issues of doctor superiority and conflict of interest (Emanuel & Emanuel, 1992).

Ezekiel Emanuel and Linda Emanuel (1992) proposed four distinct models of the doctor-patient relationship (Figure 2.1), each offering a unique approach to patient involvement and decision-making:

- Paternalistic Model: In this model, patient involvement is minimal. The doctor assumes a dominant role, often dictating the course of treatment. In extreme cases, the doctor makes decisions without consulting the patient. Typically, the doctor provides the patient with specific information to persuade them to accept the proposed intervention. This model is especially relevant in emergencies, where delayed consent could lead to harm.
- Informative Model: Here, the doctor provides the patient with all necessary information regarding the patient’s condition, diagnostic options, and potential interventions, including their risks and benefits. The aim is to empower the patient by offering knowledge, enabling them to make informed decisions that align with their personal values.
- Interpretive Model: Building upon the informative model, the interpretive model involves the doctor not only sharing information but also eliciting the patient’s values and preferences. This approach helps