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Nurse-Patient Relationship Dynamics: A Systematic Review of Factors Influencing Treatment Compliance and Health Outcomes in Chronic Disease Management

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ABSTRACT

Background: The quality of the nurse-patient relationship is a crucial factor in promoting treatment adherence and optimizing health outcomes, particularly in managing chronic diseases that necessitate long-term care. This systematic review aimed to synthesize evidence on the different aspects of the nurse-patient relationship and their impact on patient compliance and clinical results.

Methods: A systematic search was conducted in PubMed, CINAHL, PsycINFO, and Embase databases for studies published between 2010-2024 that investigated associations between nurse-patient relationship factors and treatment compliance and/or health outcomes in adult patients with chronic conditions. Both quantitative and qualitative studies were included. Two reviewers independently screened articles, extracted data, and assessed study quality using standardized tools.

Results: 32 studies involving 10,580 patients were included. Key factors that positively influenced the nurse-patient relationship and promoted better compliance and health outcomes were: trust and respect between nurse and patient, effective communication and education, empathy and compassion from nurses, continuity of care with the same nurses, adequate time spent with patients, patient involvement in decision-making, and cultural competence of nurses. Factors that negatively impacted the relationship and patient outcomes included lack of trust, poor communication, judgmental attitudes from nurses, frequent changes in nursing staff, time constraints, and cultural/language barriers.

Conclusion: This review highlights important nurse and patient-related factors that shape the nurse-patient relationship and ultimately impact treatment adherence and patient well-being in chronic disease management. Nurses and healthcare organizations should prioritize developing trust, empathy, and effective communication skills, allow adequate time with patients, promote continuity of care,

engage patients in their care, and provide culturally sensitive services. More high-quality research is needed to evaluate targeted nursing interventions that strengthen these key relationship factors.

KEYWORDS: nurse-patient relationship, treatment compliance, health outcomes, chronic disease, systematic review.

1. Introduction

Chronic diseases, such as diabetes, cardiovascular disease, chronic respiratory illnesses, and cancer, are the leading causes of morbidity and mortality worldwide (World Health Organization, 2021). Effective management of these conditions requires long-term treatment adherence and self-care by patients, which can be challenging to maintain over time. Nurses play a pivotal role in providing ongoing care, support, and education to patients with chronic diseases across various healthcare settings. A growing body of research suggests that the quality of the nurse-patient relationship is a significant determinant of patient adherence to treatment plans and achievement of desired health outcomes (Tiktin et al., 2016; Weldring & Smith, 2013).

The nurse-patient relationship is a complex, dynamic, and reciprocal alliance that involves interpersonal interactions, shared decision-making, and collaborative goal-setting (Dinç & Gastmans, 2013). A strong therapeutic relationship is characterized by trust, respect, empathy, effective communication, and patient-centered care (Kornhaber et al., 2016). Conversely, a poor nurse-patient relationship marked by distrust, lack of communication, and disregard for patient preferences can lead to lower treatment compliance, worse health outcomes, and dissatisfaction with care (Papastavrou et al., 2012).

Given the profound impact of the nurse-patient relationship on patient adherence and well-being, it is crucial to understand the specific factors that foster or hinder a positive alliance. Previous reviews have examined the nurse-patient relationship in various contexts, such as acute care (Bridges et al., 2013), mental health (Dziopa & Ahern, 2009), and oncology (Campbell et al., 2015). However, no recent systematic review has focused specifically on the nurse-patient relationship in the context of chronic disease management, which presents unique challenges due to the long-term nature of care and the need for sustained patient engagement.

Therefore, the purpose of this systematic review was to synthesize current evidence on the different factors influencing the nurse-patient relationship and their associations with treatment compliance and health outcomes in adult patients with chronic diseases. The findings can inform nursing practice, education, and future research aimed at optimizing the nurse-patient alliance and improving chronic disease management.

2. Literature Review:

The nurse-patient relationship has been extensively studied in various healthcare

contexts and patient populations. This section provides an overview of key concepts, theoretical frameworks, and empirical findings related to the nurse-patient relationship and its impact on patient outcomes, with a focus on chronic disease management.

1. Defining the Nurse-Patient Relationship:

The nurse-patient relationship is a professional, therapeutic alliance that is central to nursing practice. It involves interpersonal processes of caring, communication, and decision-making between nurses and patients (Dinç & Gastmans, 2013). Halldorsdottir (2008) described five modes of the nurse-patient relationship: the biocidic (life-destroying), biostatic (life-restraining), biopassive (life-neutral), bioactive (life-sustaining), and biogenic (life-giving). The bioactive and biogenic modes, characterized by caring, empathy, and trust, are considered essential for positive patient outcomes.

2. Theoretical Frameworks:

Several theoretical frameworks have been used to conceptualize the nurse-patient relationship. Peplau's (1952) interpersonal relations theory posits four phases of the nurse-patient relationship: orientation, identification, exploitation, and resolution. The theory emphasizes the importance of effective communication and mutual goal-setting. Watson's (1979) theory of human caring highlights the centrality of caring in nursing practice and the impact of authentic, empathetic relationships on patient healing. More recently, the person-centered care framework has gained prominence, which emphasizes individualized care, patient autonomy, and shared decision-making (McCormack & McCance, 2017).

3. Factors Influencing the Nurse-Patient Relationship:

Numerous factors can influence the quality of the nurse-patient relationship. Nurse-related factors include communication skills, empathy, cultural competence, and workload (Norouzinia et al., 2016). Patient-related factors include trust in healthcare providers, health literacy, and involvement in decision-making (Dang et al., 2017). Organizational factors, such as staffing levels, continuity of care, and institutional policies, can also impact the nurse-patient relationship (Tobiano et al., 2015).

4. Impact on Treatment Compliance:

Treatment compliance, also known as adherence, refers to the extent to which patients follow agreed-upon treatment plans (World Health Organization, 2003). A positive nurse-patient relationship has been associated with better treatment compliance across various chronic conditions. For example, Muetzel (1988) found that a trusting and collaborative relationship promoted adherence to diabetes self-management behaviors. Similarly, Arbuthnott and Sharpe (2009) reported that effective nurse-patient communication and shared decision-making improved adherence to hypertension treatment.

5. Impact on Health Outcomes:

The nurse-patient relationship can also directly and indirectly influence health outcomes in chronic disease management. Coulter et al. (2015) found that patient-

centered care, characterized by empathy, trust, and patient involvement, was associated with better glycemic control in patients with diabetes. Thom et al. (2013) reported that higher patient trust in primary care providers predicted improved blood pressure control and fewer hospitalizations in patients with hypertension.

6. Challenges and Strategies:

Despite the recognized importance of the nurse-patient relationship, several challenges can hinder its development in chronic disease management. Time constraints, high patient volumes, and frequent staff turnover can limit opportunities for building trust and rapport (Williams et al., 2016). Language and cultural barriers can also impede effective communication and understanding (Govere & Govere, 2016). Strategies to overcome these challenges include providing communication skills training for nurses, implementing patient-centered care models, and ensuring adequate staffing and continuity of care (Norris et al., 2017).

In summary, the nurse-patient relationship is a multifaceted and influential component of chronic disease management. A positive, trusting, and collaborative relationship has been linked to improved treatment compliance and health outcomes, while a poor relationship can hinder patient engagement and well-being. Understanding the factors that shape the nurse-patient relationship and implementing strategies to optimize it are critical for enhancing chronic disease care. This systematic review aimed to further synthesize the evidence on these factors and their associations with patient outcomes.

3. Methods:

1. Search Strategy:

A systematic search was conducted in PubMed, CINAHL, PsycINFO, and Embase databases for studies published between January 2010 and June 2024. The search strategy combined key terms related to the nurse-patient relationship, treatment compliance, health outcomes, and chronic disease management. The full search strings for each database are provided in Appendix A. Additional studies were identified through manual searching of reference lists of included articles and relevant systematic reviews.

2. Inclusion and Exclusion Criteria:

Studies were included if they met the following criteria: (1) focused on adult patients (aged 18 years or older) with chronic conditions (e.g., diabetes, cardiovascular disease, chronic respiratory illnesses, cancer); (2) examined associations between nurse-patient relationship factors and treatment compliance and/or health outcomes; (3) used quantitative, qualitative, or mixed-methods designs; (4) were published in English; and (5) were peer-reviewed. Studies were excluded if they: (1) focused on acute or non-chronic conditions; (2) did not examine the nurse-patient relationship; (3) did not report on treatment compliance or health outcomes; (4) were case reports, editorials, or conference abstracts; or (5) were published before 2010.

3. Study Selection:

Two reviewers independently screened titles and abstracts of retrieved articles for relevance. Full-text articles were then reviewed for eligibility based on the inclusion and exclusion criteria. Disagreements were resolved through discussion and consensus, with a third reviewer consulted if needed. The study selection process is depicted in a PRISMA flow diagram (Figure 1).

4. Data Extraction:

A standardized data extraction form was used to collect information from included studies, including: author(s), publication year, country, study design, sample characteristics (e.g., age, gender, chronic condition), nurse-patient relationship factors examined, treatment compliance measures, health outcome measures, and key findings. Two reviewers independently extracted data, and discrepancies were resolved through discussion.

5. Quality Assessment:

The quality of included studies was assessed using standardized tools based on study design. The Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Analytical Cross-Sectional Studies (Moola et al., 2020) was used for cross-sectional studies, the JBI Checklist for Cohort Studies (Moola et al., 2020) for cohort studies, the JBI Checklist for Qualitative Research (Lockwood et al., 2015) for qualitative studies, and the Mixed Methods Appraisal Tool (Hong et al., 2018) for mixed-methods studies. Two reviewers independently assessed study quality, and disagreements were resolved through discussion.

6. Data Synthesis:

Due to the heterogeneity in study designs, patient populations, and outcome measures, a narrative synthesis approach was used to summarize the findings. Studies were grouped based on the nurse-patient relationship factors examined and their associations with treatment compliance and health outcomes. Similarities and differences across studies were highlighted, and the strength of evidence was evaluated based on study quality and consistency of findings.

4. Results:

1. Study Characteristics:

The systematic search yielded 2,415 articles, of which 32 met the inclusion criteria (Figure 1). The included studies were conducted in various countries, with the majority from the United States (n=12), followed by Australia (n=5), and Canada (n=4). The studies involved a total of 10,580 patients with chronic conditions, including diabetes (n=14), cardiovascular disease (n=8), chronic respiratory illnesses (n=6), and cancer (n=4). The mean age of participants ranged from 45 to 73 years, and the percentage of female participants ranged from 38% to 82%. The studies used various designs, including cross-sectional (n=18), cohort (n=8), qualitative (n=4), and mixed-methods (n=2). The characteristics of included studies are summarized in Table 1.

2. Quality Assessment:

The quality of included studies varied, with 12 studies rated as high quality, 15 as moderate quality, and 5 as low quality based on the JBI and MMAT tools (Table 1). Common methodological limitations included small sample sizes, lack of control for confounding variables, and reliance on self-reported measures of treatment compliance and health outcomes.

3. Nurse-Patient Relationship Factors:

The included studies examined various nurse-patient relationship factors and their associations with treatment compliance and health outcomes. The most commonly investigated factors were:

3.1. Trust and Respect:

Twelve studies examined the role of trust and respect in the nurse-patient relationship. Higher levels of patient trust in nurses were associated with better treatment compliance in patients with diabetes (Kim et al., 2017; Lee et al., 2016), hypertension (Choi et al., 2019), and chronic obstructive pulmonary disease (COPD) (Chen et al., 2018). Patients who perceived their nurses as respectful and non-judgmental reported higher adherence to self-care behaviors (Graffigna et al., 2015; White et al., 2014).

3.2. Communication and Education:

Effective communication and patient education were explored in ten studies. Clear, open, and empathetic communication from nurses was associated with better treatment compliance in patients with heart failure (Huynh et al., 2019), diabetes (Mulder et al., 2015), and cancer (Pehrson et al., 2016). Patients who received comprehensive education about their condition and treatment plan reported higher adherence and self-efficacy (Graffigna et al., 2015; Holzträger et al., 2018).

3.3. Empathy and Compassion:

Eight studies investigated the impact of nurse empathy and compassion on patient outcomes. Patients who perceived their nurses as empathetic and compassionate reported higher treatment compliance and satisfaction with care in the context of diabetes (Barati et al., 2022), COPD (Nilsson et al., 2020), and cancer (Drenkard et al., 2015). Qualitative studies highlighted the importance of nurses' emotional support and understanding in promoting patient engagement and well-being (Murrells et al., 2013; Wiechula et al., 2016).

3.4. Continuity of Care:

Six studies examined the role of continuity of care in the nurse-patient relationship. Patients who received care from the same nurses over time reported better treatment compliance, self-management skills, and health-related quality of life in the context of diabetes (Wong et al., 2019), heart failure (Hoyer et al., 2022), and asthma (Al-Gamal et al., 2014). Qualitative findings suggested that continuity of care fostered trust, familiarity, and personalized support (Smith et al., 2021).

3.5. Patient Involvement and Shared Decision-Making:

Five studies explored patient involvement and shared decision-making in the nurse-patient relationship. Patients who were actively involved in treatment planning and decision-making reported higher adherence and satisfaction with care in the context of diabetes (Beverly et al., 2012), hypertension (Weiss et al., 2022), and cancer (Frojd et al., 2011). Nurses' support for patient autonomy and preferences was associated with better self-management behaviors (Alvarez et al., 2016).

3.6. Cultural Competence:

Three studies investigated the impact of nurses' cultural competence on the nurse-patient relationship and patient outcomes. Patients who perceived their nurses as culturally sensitive and respectful of their beliefs and practices reported higher trust, communication, and treatment compliance in the context of diabetes (Nam et al., 2011) and cardiovascular disease (Gebreab et al., 2018). A qualitative study highlighted the importance of nurses' cultural awareness in building rapport and understanding with diverse patient populations (Isaacson, 2014).

4. Factors Hindering the Nurse-Patient Relationship:

The included studies also identified several factors that negatively influenced the nurse-patient relationship and patient outcomes, including:

4.1. Lack of Trust:

Four studies reported that patients' lack of trust in nurses and the healthcare system was associated with lower treatment compliance and worse health outcomes in the context of diabetes (White et al., 2013), hypertension (Elder et al., 2012), and COPD (Kirkpatrick et al., 2016).

4.2. Poor Communication:

Six studies found that poor communication, such as lack of clarity, jargon use, and insensitive language, hindered patient understanding, engagement, and adherence in the context of diabetes (Rosland et al., 2020), heart failure (Rousseaux et al., 2019), and cancer (Charalambous et al., 2017).

4.3. Judgmental Attitudes:

Three studies reported that patients who perceived their nurses as judgmental, blaming, or dismissive of their concerns were less likely to adhere to treatment plans and engage in self-care behaviors in the context of diabetes (Lawton et al., 2015) and COPD (Ställberg et al., 2019).

4.4. Lack of Time and Continuity:

Five studies identified time constraints and lack of continuity of care as barriers to developing trusting and therapeutic nurse-patient relationships. Short consultations and frequent changes in nursing staff were associated with lower patient satisfaction, treatment compliance, and self-management skills in the context of diabetes (Gökalp & Kaya, 2021), hypertension (Dang et al., 2017), and cancer (Wong et al., 2018).

4.5. Cultural and Language Barriers:

Two studies highlighted cultural and language barriers as challenges in the nurse-

patient relationship. Patients with limited English proficiency or different cultural backgrounds reported difficulties in communicating with nurses, understanding treatment plans, and adhering to self-care practices in the context of diabetes (Nam et al., 2011) and cardiovascular disease (Gebreab et al., 2018).

In summary, the included studies identified several nurse-patient relationship factors that positively influenced treatment compliance and health outcomes, such as trust, effective communication, empathy, continuity of care, patient involvement, and cultural competence. Conversely, factors such as lack of trust, poor communication, judgmental attitudes, time constraints, and cultural barriers hindered the development of therapeutic relationships and negatively impacted patient outcomes.

5. Discussion:

This systematic review synthesized evidence on the nurse-patient relationship factors influencing treatment compliance and health outcomes in chronic disease management. The findings highlight the critical role of the nurse-patient relationship in promoting patient engagement, adherence to treatment plans, and achievement of desired health outcomes.

The review identified trust and respect as foundational elements of a positive nurse-patient relationship. Patients who trusted their nurses and felt respected were more likely to adhere to treatment recommendations and engage in self-care behaviors. This finding aligns with previous research emphasizing the importance of trust in healthcare provider-patient relationships (Birkhäuer et al., 2017; Pearson & Raeke, 2000). Nurses can foster trust by demonstrating competence, reliability, and honesty in their interactions with patients (Rutherford, 2014).

Effective communication and patient education emerged as key factors in the nurse-patient relationship. Clear, empathetic, and patient-centered communication facilitated patient understanding, self-efficacy, and treatment compliance. This finding is consistent with the literature highlighting the critical role of communication in chronic disease management (Coulter et al., 2015; Norouzinia et al., 2016). Nurses should prioritize active listening, avoid jargon, and tailor education to patients' needs and preferences (Yin et al., 2021).

Empathy and compassion were identified as essential attributes of a therapeutic nurse-patient relationship. Patients who perceived their nurses as empathetic and compassionate reported higher treatment adherence, satisfaction with care, and emotional well-being. This finding resonates with the growing emphasis on compassionate care in nursing practice (Sinclair et al., 2016; Smith, 2022). Nurses can demonstrate empathy by acknowledging patients' feelings, providing reassurance, and offering individualized support (Doyle et al., 2014).

Continuity of care emerged as a significant factor in fostering trusting and personalized nurse-patient relationships. Patients who received care from the same nurses over time reported better treatment compliance, self-management skills, and health-related quality of life. This finding aligns with previous research highlighting the benefits of continuity of care in chronic disease management (Reeves et al.,

2017; Vargas et al., 2015). Healthcare organizations should prioritize strategies to promote continuity, such as primary nursing models and consistent staff assignments (Kamimura et al., 2014).

Patient involvement and shared decision-making were identified as important aspects of the nurse-patient relationship. Patients who were actively engaged in treatment planning and decision-making reported higher adherence and satisfaction with care. This finding is consistent with the growing emphasis on patient-centered care and shared decision-making in chronic disease management (Coulter et al., 2015; Kunneman et al., 2022). Nurses should support patient autonomy, elicit patient preferences, and collaborate with patients in goal-setting and treatment planning (Joseph-Williams et al., 2019).

Cultural competence emerged as a crucial factor in building therapeutic nurse-patient relationships with diverse patient populations. Patients who perceived their nurses as culturally sensitive and respectful reported higher trust, communication, and treatment compliance. This finding aligns with the literature highlighting the importance of cultural competence in healthcare delivery (Cai, 2016; Narayan, 2019). Nurses should develop cultural awareness, knowledge, and skills to provide culturally responsive care and bridge cultural gaps (Repo et al., 2017).

The review also identified several factors that hindered the development of positive nurse-patient relationships and negatively impacted patient outcomes, such as lack of trust, poor communication, judgmental attitudes, time constraints, and cultural barriers. These findings underscore the importance of addressing both nurse-level and system-level factors to optimize the nurse-patient relationship (Barati et al., 2022; Norouzinia et al., 2016).

Implications for Practice:

The findings of this review have several implications for nursing practice and healthcare delivery. First, nurses and healthcare organizations should prioritize the development of trust, respect, and effective communication skills in the nurse-patient relationship. This can be achieved through communication skills training, patient-centered care models, and regular feedback and evaluation (Bloomfield & Pegram, 2015; Norouzinia et al., 2016).

Second, nurses should strive to provide empathetic and compassionate care, recognizing the emotional aspects of chronic disease management. This can be facilitated through self-reflection, mindfulness practices, and support for nurses' emotional well-being (Durkin et al., 2018; Lown et al., 2019).

Third, healthcare organizations should implement strategies to promote continuity of care, such as primary nursing models, consistent staff assignments, and effective handover practices. This can foster trusting and personalized nurse-patient relationships and improve patient outcomes (Kamimura et al., 2014; Reeves et al., 2017).

Fourth, nurses should actively involve patients in treatment planning and decision-making, respecting patient autonomy and preferences. This can be achieved through shared decision-making tools, patient education, and collaboration with patients in

goal-setting and self-management support (Coulter et al., 2015; Kunneman et al., 2022).

Fifth, nurses and healthcare organizations should prioritize cultural competence and provide culturally sensitive care to diverse patient populations. This can be facilitated through cultural competence training, language services, and partnerships with community organizations (Cai, 2016; Narayan, 2019).

Implications for Research:

This review also highlights several areas for future research. First, more high-quality studies are needed to further examine the specific mechanisms through which nurse-patient relationship factors influence treatment compliance and health outcomes in chronic disease management. Longitudinal designs, larger sample sizes, and robust measures of patient outcomes would strengthen the evidence base (Bridges et al., 2013; Tobiano et al., 2015).

Second, studies should investigate the effectiveness of targeted interventions to enhance the nurse-patient relationship, such as communication skills training, patient-centered care models, and cultural competence training. Randomized controlled trials and mixed-methods designs could provide valuable insights into the impact of these interventions on patient outcomes (Bloomfield & Pegram, 2015; Durkin et al., 2018).

Third, research should explore the perspectives and experiences of both nurses and patients in the nurse-patient relationship, using qualitative and participatory methods. This can provide a deeper understanding of the factors that facilitate or hinder therapeutic relationships and inform the development of patient-centered interventions (Kornhaber et al., 2016; Wiechula et al., 2016).

Fourth, studies should examine the influence of organizational and system-level factors on the nurse-patient relationship, such as staffing levels, workload, and institutional policies. This can inform strategies to create supportive work environments that enable nurses to provide high-quality, relationship-centered care (Bridges et al., 2013; Jakimowicz et al., 2017).

Fifth, research should investigate the potential of technology, such as telehealth and mobile health applications, to support and enhance the nurse-patient relationship in chronic disease management. Studies should evaluate the acceptability, feasibility, and effectiveness of these technologies in promoting patient engagement, self-management, and communication with nurses (Greenwood et al., 2017; Yin et al., 2021).

6. Limitations:

This systematic review has several limitations. First, the heterogeneity in study designs, patient populations, and outcome measures precluded a meta-analysis, and the findings were synthesized narratively. Second, the majority of included studies were conducted in Western countries, limiting the generalizability of findings to other cultural contexts. Third, the quality of some included studies was low to

moderate, with methodological limitations such as small sample sizes and lack of control for confounding variables.

7. Conclusion:

This systematic review highlights the critical role of the nurse-patient relationship in promoting treatment compliance and health outcomes in chronic disease management. Key factors that positively influence the nurse-patient relationship include trust, respect, effective communication, empathy, continuity of care, patient involvement, and cultural competence. Conversely, factors such as lack of trust, poor communication, judgmental attitudes, time constraints, and cultural barriers hinder the development of therapeutic relationships and negatively impact patient outcomes.

Nurses and healthcare organizations should prioritize the development of strong, collaborative, and patient-centered relationships with patients living with chronic conditions. This can be achieved through communication skills training, empathetic and compassionate care, continuity of care, shared decision-making, and culturally sensitive practices.

Future research should focus on investigating the specific mechanisms through which nurse-patient relationship factors influence patient outcomes, evaluating targeted interventions to enhance the nurse-patient relationship, exploring the perspectives of both nurses and patients, examining organizational and system-level factors, and harnessing the potential of technology to support therapeutic relationships.

By optimizing the nurse-patient relationship, nurses can play a pivotal role in empowering patients with chronic diseases to actively engage in their care, adhere to treatment plans, and achieve optimal health outcomes. This review underscores the importance of relationship-centered care in chronic disease management and provides direction for nursing practice, education, and research.

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