E-ISSN: 3116-5974 P-ISSN: 3116-5966
DOI: https://doi.org/10.66206/eduheart.ijnhha.105

Lifestyle Compliance and Treatment Adherence Among Young Adults undergoing Hemodialysis in Selected Nephro Centers in Quezon City: Basis for Nurse-Led Lifestyle Compliance Enhancement Program

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ABSTRACT

This study addressed the need for age-specific evidence on lifestyle compliance and treatment adherence among young adults undergoing hemodialysis in support of Sustainable Development Goal 3 (Good Health and Well-Being) using a quantitative descriptive-correlational design involving 51 respondents from selected nephrology centers in Quezon City. The findings revealed high levels of lifestyle compliance, treatment adherence, and perceived nursing-led support. Employment status was significantly associated with lifestyle compliance, which in turn was significantly associated with better treatment adherence, while perceived nursing-led support showed no significant relationship with either variable. The study concludes that promoting healthy lifestyle behaviors may enhance treatment adherence and recommends implementing the LIFE-HD (Lifestyle Improvement through Focused Empowerment for Hemodialysis) Program and conducting further research with larger samples and additional psychosocial factors.

Keywords: *Lifestyle compliance, treatment adherence, hemodialysis, chronic kidney disease, nurse-led support*

INTRODUCTION

Chronic Kidney Disease (CKD) often progresses to end-stage kidney failure, making hemodialysis essential, but young adults frequently struggle to follow treatment and lifestyle recommendations because of physical, emotional, and social challenges (Boueri et al., 2025). Studies have reported varying levels of adherence among hemodialysis patients, with common problems in dietary and fluid restrictions, medication use, and dialysis attendance, while younger patients are particularly vulnerable to poor adherence due to psychosocial stress and lifestyle disruption (Al-Khattabi, 2023; Chilcot et al., 2021; Griva et al., 2022; Win et al., 2025). This study examines lifestyle compliance, treatment adherence, and perceived nursing support among young adults undergoing hemodialysis to provide evidence to inform the development of a nurse-led program that promotes better self-management and health outcomes.

Statement of the Problem

This study seeks to examine the lifestyle and treatment compliance of young adults undergoing hemodialysis and to determine how demographic factors and perceived nursing support for health promotion influence their adherence to prescribed care.

Specifically, it seeks to answer the following questions:

1. What are the demographic and dialysis-related profiles of young adults undergoing hemodialysis in terms of age, educational attainment, employment status, duration of hemodialysis, and frequency of dialysis per week?
2. What are the levels of lifestyle compliance in terms of diet, fluid restrictions, physical activity, and stress management; treatment adherence in terms of dialysis attendance and medication adherence; and perceived nursing-led support among young adults undergoing hemodialysis?
3. Is there a significant relationship between the demographic and dialysis-related profiles of young adults and their lifestyle compliance, treatment adherence, and perceived nursing-led support?
4. Is there a significant relationship between lifestyle compliance, treatment adherence, and perceived nursing-led support among young adults undergoing hemodialysis?
5. Based on the findings of the study, what Nurse-Led Compliance Enhancement Program may be developed for young adults undergoing hemodialysis?

Scope and Delimitations

The study examines the demographic and dialysis-related profiles, lifestyle compliance, treatment adherence, and perceived nursing-led support among young adults aged 18–40 years undergoing maintenance hemodialysis in selected nephrology centers in Quezon City, with the findings serving as the basis for a Nurse-Led Lifestyle Compliance Enhancement Program. Using a descriptive-correlational design and self-administered questionnaires, the study is limited by its reliance on self-reported data, its inability to establish causality, its restriction to selected centers, and its exclusion of other factors that may influence compliance behaviors.

Review of Related Literature

Recent literature indicates that demographic and dialysis-related factors, along with perceived nursing support, significantly influence lifestyle compliance, treatment adherence, and self-management among young adults undergoing hemodialysis. Studies show that perceived nursing support through education, motivation, and patient-centered care improves adherence to dialysis, medication, diet, fluid restriction, physical activity, and stress management (Boueri et al., 2025; Seo et al., 2022; Zhou et al., 2024). Current evidence also supports the effectiveness of nurse-led interventions in improving adherence and health outcomes, providing a strong basis for developing a Nurse-Led Lifestyle Compliance Enhancement Program.

Theoretical Framework

Orem's Self-Care Deficit Nursing Theory states that when young adults undergoing hemodialysis are unable to independently meet their self-care needs, supportive-educative nursing interventions help strengthen their self-care abilities, thereby improving lifestyle compliance and treatment adherence (Orem, 2001).

Betty Neuman's Systems Model explains that perceived nursing support helps young adults undergoing hemodialysis cope with internal and external stressors, thereby promoting lifestyle compliance and treatment adherence (Neuman & Fawcett, 2011).

The Health Belief Model explains that individuals are more likely to adopt healthy behaviors when they recognize health risks, perceive the benefits of recommended actions, overcome barriers, and have confidence in their ability to perform them. In this study, the model suggests that young adults undergoing hemodialysis with greater awareness of the consequences of non-compliance and stronger perceived nursing support are more likely to adhere to lifestyle recommendations and treatment.

Conceptual Framework

The study is guided by the **Input–Process–Output (IPO) Model**, in which the inputs include respondents' demographic and dialysis-related characteristics and their perceived nursing support for health promotion. The process involves nursing interventions, including health education, motivation, emotional support, follow-up, and guidance, which enhance patients' self-care behaviors and treatment adherence. The expected output is improved lifestyle and treatment compliance among young adults undergoing hemodialysis, which will serve as the basis for developing a **Nurse-Led Lifestyle Compliance Enhancement Program**.

METHODOLOGY

This study employed a quantitative descriptive-correlational research design involving 51 young adults undergoing maintenance hemodialysis in selected nephrology centers in Quezon City, Philippines. Respondents were selected using purposive sampling based on established inclusion criteria. Data were collected using an adapted, validated self-administered questionnaire and analyzed using frequencies, percentages, means, standard deviations, Spearman's rank correlation, the Chi-square test, and Pearson product-moment correlation, with G*Power and appropriate statistical software.

Research Design

This study employed a quantitative descriptive-correlational research design to objectively measure lifestyle and treatment compliance, as well as perceived nursing support for health promotion, using structured questionnaires and statistical analysis. The design was appropriate for describing existing conditions and examining the relationships among demographic and dialysis-related factors, nursing support, and compliance behaviors without manipulating patient care. The findings provided reliable evidence that served as the basis for developing the LIFE-HD (Lifestyle Improvement through Focused Empowerment for Hemodialysis) Program for young adults undergoing hemodialysis.

Research Steps

After conducting a thorough evaluation of the existing literature, the research design was meticulously developed to align with the study's aims and be specific to young adults undergoing hemodialysis. The research utilized a quantitative, descriptive-correlational research design with structured questionnaires administered to young adults undergoing hemodialysis treatment in selected nephron centers. The purpose of these methods was to gather detailed and comprehensive information about their lifestyle compliance and treatment adherence, a basis for a nurse-led lifestyle compliance enhancement program.

Data Collection and Sample Selection

The study employed purposive sampling to recruit eligible young adults aged 18–40 years who had been receiving maintenance hemodialysis for at least 3 months at selected nephrology centers in Quezon City, in accordance with established inclusion and exclusion criteria. After obtaining ethical approval, institutional permission, and written informed consent, the researcher personally administered the structured questionnaire to clinically stable participants during their hemodialysis sessions while ensuring unbiased data collection. Completed questionnaires were checked for completeness, coded to maintain confidentiality, securely stored, and prepared for statistical analysis.

Data Analysis Method

The collected data were encoded, tabulated, and analyzed using appropriate statistical tools, with G*Power used to determine the required sample size and ensure adequate statistical power. Descriptive statistics (weighted mean and standard deviation) were used to determine the levels of lifestyle compliance, treatment adherence, and perceived nursing-led support, while Pearson or Spearman correlation analyses examined the relationships among demographic and dialysis-related factors and the study variables at a 0.05 level of significance. The findings served as the basis for developing a Nurse-Led Lifestyle Compliance Enhancement Program to improve compliance behaviors and strengthen nursing support interventions for young adults undergoing hemodialysis.

Research Hypotheses and Validation

Although young adults undergoing hemodialysis demonstrated high levels of lifestyle compliance, treatment adherence, and perceived nursing support, there is still room for improvement in healthy behaviors. Therefore, targeted nurse-led interventions are recommended to strengthen compliance and promote better long-term health

Study Limitations and ethical considerations

The study was limited to young adults undergoing hemodialysis in selected nephrology centers in Quezon City and used a descriptive-correlational design with self-administered questionnaires, which may limit the generalizability of the findings and does not establish cause-and-effect relationships. Ethical approval was obtained from the appropriate ethics review committee before the study was conducted. Informed consent was obtained from all participants, and their confidentiality, anonymity, and privacy, as well as their right to withdraw at any time, were fully protected throughout the research.

RESULTS AND DISCUSSION

The respondents were predominantly 36–40 years old, college-educated, unemployed, and undergoing maintenance hemodialysis three times weekly; they demonstrated high levels of lifestyle compliance (particularly in fluid restriction and stress management), treatment adherence (dialysis attendance and medication adherence), and perceived nursing-led support across all domains. Most demographic and dialysis-related variables—including age, sex, educational attainment, length of time on hemodialysis, and dialysis frequency—were not significantly associated with lifestyle compliance, treatment adherence, or perceived nursing-

led support, although employment status showed a weak but significant positive relationship with lifestyle compliance. Furthermore, lifestyle compliance was significantly and positively associated with treatment adherence, whereas perceived nursing-led support, despite consistently being rated highly, was not significantly associated with either lifestyle compliance or treatment adherence, suggesting that individual self-management behaviors play a greater role in adherence among young adults undergoing hemodialysis.

SUMMARY

The study found that most respondents were 36–40 years old, college-educated, unemployed, had undergone maintenance hemodialysis for one to three years, and received dialysis three times weekly, with high lifestyle compliance, very high treatment adherence, and very high perceived nursing-led support. Employment status was the only demographic factor significantly associated with lifestyle compliance, and these findings informed the development of the LIFE-HD (Lifestyle Improvement through Focused Empowerment for Hemodialysis) Program to strengthen self-management and treatment adherence among young adults undergoing hemodialysis.

CONCLUSIONS

The study found that young adults undergoing maintenance hemodialysis generally demonstrated high lifestyle compliance, treatment adherence, and perceived nursing-led support, with employment status significantly associated with lifestyle compliance, which in turn was positively related to treatment adherence. These findings support implementing the LIFE-HD (Lifestyle Improvement through Focused Empowerment for Hemodialysis) Program to strengthen self-management and improve long-term health outcomes among young adults undergoing hemodialysis.

RECOMMENDATIONS

The study recommends that young adults consistently follow prescribed treatment regimens, adopt healthy lifestyle behaviors, and maintain open communication with healthcare providers to improve treatment outcomes. It also encourages nurses, healthcare institutions, educators, policymakers, and researchers to strengthen nurse-led health promotion, implement the LIFE-HD (Lifestyle Improvement through Focused Empowerment for Hemodialysis) Program, and conduct further research with larger and more diverse populations.

ACKNOWLEDGMENTS

We express our gratitude to all individuals who assisted in completing this research. We would also like to express our gratitude to our colleagues and friends for their unwavering encouragement, support, and valuable comments over the entire process. Ultimately, our families warrant gratitude for their enduring patience and unwavering support throughout the entire process. These individuals contributed to the feasibility of this research.

AI DECLARATION STATEMENT

AI-supported tools helped with grammar and structure in creating this article. No AI tools were used to collect, analyze, or interpret data; all authors are credited for their academic contributions.

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