

UNIVERSITI TEKNOLOGI MARA

**VALIDATION, SUITABILITY AND ACCEPTABILITY OF A NEWLY
DEVELOPED “*DIALYSIS BUDDIES: SIHAT BERSAMA*” DIETARY
EDUCATIONAL MODULE FOR YOUNG HAEMODIALYSIS PATIENTS**

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ABSTRACT

Younger Chronic Kidney Disease (CKD) patients undergoing Haemodialysis usually lack access in engaging an age-appropriate nutrition education. Therefore, this study aimed to validate the content suitability and acceptability of a “*Dialysis Buddies: Sihat Bersama*” for young CKD patients. A mixed-method approach was used. The content validity was assessed by seven experts of panellists using a structured evaluation comprising nine items, with rated on a 4-point scale (CVI). Whereas the suitability and the acceptability of the e-module were evaluated by 27 younger Haemodialysis patients using the Patient Education Assessment Tool for printable Materials (PEMAT-P) and the Suitability Assessment of the Materials (SAM). The Content Validity Index (CVI) showed excellent scores, with item-level CVIs (I-CVI) ranging from 0.857 to 1.000. The scale-level CVI average (S-CVI/Ave) was 0.969, and universal agreement (S-CVI/UA) reached 0.857, indicating strong expert consensus on relevance and clarity. Patient evaluations revealed high understandability (mean = 94.44%, SD = 10.19, range = 63.64–100%) and perfect actionability (mean = 100%, SD = 0.0) scores for the PEMAT-P. SAM results demonstrated a mean percentage score of 85.76% (SD = 10.82, range = 50.00–94.12), with 88.9% (n=24) of participants rating the module as Superior, and 11.1% (n=3) as Adequate. No participants classified the module as Not Suitable. The “*Dialysis Buddies: Sihat Bersama*” module demonstrated excellent content validity, high suitability, and strong patient acceptability. These findings support its potential as an innovative tool for improving dietary knowledge and self-management among younger CKD patients. Further studies are recommended for improved recruitment strategies, culturally adapted content and refined evaluation tools to enhance generalizability and impact.

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CHAPTER 1: INTRODUCTION

1.1 Research Background

Chronic kidney disease (CKD) has emerged as a significant global health concern, with rising prevalence placing a heavy burden on healthcare systems worldwide. CKD is characterized by a gradual decline in kidney function, progressing through five stages, ultimately leading to end-stage renal disease (ESRD) where dialysis or kidney transplantation becomes necessary (KDIGO, 2012). Haemodialysis (HD), the most commonly utilized renal replacement therapy, plays a crucial role in maintaining life for ESRD patients. However, it also imposes substantial dietary and lifestyle adjustments which can be overwhelming, particularly for younger patients (Jha et al., 2013).

Globally, CKD affects approximately 10% of the population, with Southeast Asia experiencing a marked increase due to factors such as diabetes mellitus, hypertension, and aging populations (GBD, 2020). In Malaysia, the National Kidney Foundation (NKF) reported over 40,000 patients receiving dialysis in 2021, with projections indicating continued growth (NKF Malaysia, 2021). Among these patients, dietary non-adherence remains a persistent issue, contributing to complications such as hyperkalaemia fluid overload, and cardiovascular morbidity (KDOQI, 2020). Studies show that younger dialysis patients (aged 18–40) often face additional challenges including poor understanding of nutritional restrictions, limited engagement with traditional educational resources, and greater exposure to unhealthy food environments (Karavetian et al., 2014).

Patient education is widely recognized as a critical component in managing CKD, yet conventional methods pamphlets, face-to-face counselling, and printed booklets may not appeal to younger demographics accustomed to digital content. Evidence suggests that digital interventions, such as interactive modules, mobile applications, and telehealth platforms, can enhance patient engagement and comprehension by delivering information in more dynamic and accessible formats (Abdul Manaf et al., 2023). This aligns with