Evaluation of Kidney Disease Education on Clinical Outcomes and Knowledge of Self-Management Behaviors of CKD Patients

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Chronic kidney disease (CKD) has emerged as a public health problem in the United States (U.S.). Providing kidney disease education (KDE) is an effective and integral part of CKD management. The purpose of this study was to evaluate the clinical outcomes of participants of a structured KDE program and assess relevant kidney disease knowledge necessary for CKD self-management using Pender’s Health Promotion Model. This two-part nonexperimental study retrospectively evaluated clinical outcomes of predialysis participants (GFR<30 ml/min) of a KDE program and prospectively evaluated kidney disease knowledge of CKD participants (GFR > 15 ml/min) from the general population of CKD patients in a northeastern Georgia nephrology practice.

Independent t test revealed significantly lower mean GFR of KDE participants (M = 19.6, SD = 5.2) than non-KDE participants (M = 22.5, SD = 4.7); (t (47) = 2.055, p = .045). However, KDE participants had slower decline in renal function (GFR) post KDE intervention (M = 18.3, SD = 8.30) than non-KDE participants (M = 15.0, SD = 6.1). KDE participants had more stable anemia (M = 11.3 g/dl, SD = 1.4) compared to non-KDE participants (M = 10.5 g/dl, SD = 1.39). CKD survey participants demonstrated severe knowledge deficits; only 10% scored 80% or more on the "Kidney Disease Knowledge Survey" (KiKS) (M = 62%, SD = 15%, range 32 – 89%, mode 69%). A moderate but significant negative correlation was found between kidney knowledge score and family and provider support (r (56) = -.341, p = .009) and (r (56) = -.266, p = .044) respectively indicating that perception of self-efficacy alone did not increase kidney disease knowledge. The study provided strong evidence on the benefits of KDE in improving clinical outcomes of CKD patients. Acquisition of CKD knowledge through KDE is necessary to improve self-efficacy and self-management behaviors of CKD patients. Nurses can improve health outcomes and self-efficacy of CKD patients through targeted kidney disease education.

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