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Cultural influences on physical activity and exercise beliefs in patients with Chronic Kidney Disease- The Culture-CKD Study.

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Introduction

Cardiovascular disease (CVD) remains the leading cause of mortality for patients with Chronic Kidney Disease (CKD). Inactivity increases the chance of developing CVD. Interventions designed to increase physical activity (PA) levels for people with CKD are warranted. Research investigating exercise interventions in individuals with CKD has shown benefits in exercise capacity and arterial stiffness. Review of a recent study evaluating exercise post kidney transplant revealed 11 of 18 non-completers were from black and minority ethnic groups. This led to this pilot study, utilising a mixed-method approach to explore cultural and ethnic influences on the perception of, and decision to engage with PA and exercise training in patients with CKD from the most widely represented ethnic groups at an NHS Foundation Trust.

Methods

Participants were recruited from the renal unit at an NHS Foundation Trust between December 2019 and June 2020 for focus group discussion. Following completion and analysis of twenty individual semi-structured interviews, sixty-four patients with a diagnosis of CKD (stages 2-5), aged between 25 and 79 (mean age 57) were recruited for a focus group discussion. Individuals were approached using purposive sampling in accordance with ethnicity, to participate. Six, single sex focus group discussions were undertaken, with individuals from the following ethnic groups; Black African and Black Caribbean (male n= 8 , female n= 5) , South Asian (male n= 7 , female n= 6) and White Caucasian (male n= 6 , female n= 4). Translators were employed as required (n= 4). Interview data were transcribed verbatim and analysed using an inductive, thematic analysis approach, including line by line open coding grounded in the data. All participants completed the General Practice Physical Activity Questionnaire (GPPAQ) and Self-Efficacy to Regulate Exercise Questionnaire. Data was analysed using Spearman's rank correlation to determine if there was a significant relationship between the Self-Efficacy to Regulate Exercise scores and GPPAQ levels.

Results

Analysis of focus group data revealed a range of physical, psychological, social, and environmental factors that were perceived to influence exercise. Analysis identified four core themes; 'me as myself'; evolution as an individual with CKD; support and education; and taking ownership of health. Subthemes revealed the role of inter-personal relationships; socio-cultural beliefs and previous exercise exposure. Cross sectional analyses between groups suggested the need for specialist support from renal healthcare professionals to facilitate exercise engagement. Spearman's rank correlation revealed a significant correlation between GPPAQ levels of activity and Self-Efficacy to Regulate Exercise behaviour ($r = -0.40$, $p=0.01$).

Conclusion

These findings suggest a relationship between levels of self-efficacy for exercise behaviours and GPPAQ reported levels of PA. Thematic analyses suggests that the understanding, attitudes and beliefs to exercise

and PA are complex. It is important to understand the socio-cultural influences related to exercise and PA for individuals with a diagnosis of CKD from a variety of ethnic backgrounds. Understanding patient's experiences, thoughts and beliefs may be of relevance to clinicians to facilitate engagement with many elements of care. As such, this may help design more inclusive clinical services.