

## Abstract

Taking part in physical activity is a complicated phenomenon, tied up in social, cultural and economic environments. Researching an exercise referral scheme in an applied setting therefore requires consideration of a wide variety of influences. The objective of this research was to elicit a comprehensive understanding of the concept of success within an exercise referral scheme. Recognising the complexity of the experience, the research design embraced a holistic approach. An uncontrolled population-based cohort approach maximised the ecological validity of the findings. The study used a mixed methods design (triangulation design- convergence model), with quantitative and qualitative methods implemented simultaneously, within the same time-frame and with equal weighting.

The qualitative phase comprised of three parts. Four focus groups were carried out with referred patients (n=17), individual interviews with facilitators (scheme providers) (n=4) and individual interviews with referring health professionals (n=7). Grounded theory methodology guided the analysis resulting in three models depicting the concept of success for the three parties involved. These results were subsequently combined to form one overall model of success for the scheme.

The quantitative phase investigated patients referred to the scheme during a three-year period (n= 1315). The data comprised of the routinely collected patient data obtained as part of scheme protocol. Logistic regression was conducted to examine the influence of several independent variables (such as demographics) on the outcome variables (attendance, weight loss and blood pressure reduction). This resulted in three models depicting the influences on the measures of success. The results show significant associations between age (Exp ( $\beta$ )=1.019; 1.008- 1.030), ethnicity (Exp( $\beta$ )=6.310; 1.388-28.695), the pulmonary referral reason (Exp( $\beta$ ) =0.546; 0.346-0.860) and attendance. The mixed ethnic category (Exp( $\beta$ )=3.991; 1.191-13.373) and attendance (Exp( $\beta$ )=3.541; 2.721-4.608) were significantly associated with weight loss. The results also indicate that the skilled manual occupation (Exp ( $\beta$ )=1.875; 1.044-3.227), attendance (Exp( $\beta$ )= 1.680; 1.250-2.003) and weight loss (Exp( $\beta$ )= 1.292; 1.008-1.641) are associated with blood pressure reduction for this scheme.

The quantitative and qualitative results were then interpreted and combined to gain insight into the concept of success. This highlighted the multidimensional nature of the concept of success. Success embraced a wide range of notions (i.e., enjoyment, weight loss, making friends and knowledge) evident from the examination of different types of data and the perceptions from the different people involved in the process. Shared components of success were also highlighted. The routine markers of success, such as levels of attendance, weight loss and blood pressure, demonstrate how success has been conceived previously by those developing and evaluating schemes. In practice success is valued, observed and appreciated in a more holistic manner.

By unpacking success as a concept, these findings can enable future evaluation to be more representative of the genuine impact of exercise referral. Future schemes could benefit from developing specific protocols to capture all the aspects of the concept of success which were discovered by the present research. . This context specific evidence should aid the application of the present findings to future practice and research. Furthermore, evidence has been added to the current evidence base regarding the value of exercise referral for public health.