

THE IMPACT OF HEALTH LITERACY ON HEALTH BEHAVIOURS IN CARDIAC REHABILITATION

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INTRODUCTION

Cardiovascular disease, along with other non-communicable diseases, is one of the biggest health challenges of the 21st century. Described recently by the World Health Organisation as socially communicable conditions, they are a complex issue, with interlinked behavioural determinants, which in turn are affected by social and structural determinants [1]. Once diagnosed, patients are often required to make significant behavioural changes, which are known to be challenging. A possible mediator for effective behaviour change is health literacy.

Health Literacy refers to an individual's knowledge, motivation and competences to access, understand, appraise and apply health information [2]. A recent European survey found that almost 1 in 2 people had inadequate health literacy [3], and that there is a significant association between lower levels of health literacy and long term illness - particularly so for those with cardiovascular disease. [4] Health literacy has been identified as a major tool in both primary and secondary prevention of cardiovascular disease, and is considered a key element of healthcare policy at both national and global levels. [1]

Research into health literacy interventions is in its infancy, with much research to date focusing on defining health literacy and identifying its prevalence and correlations [5]. Research into cardiac populations is even smaller [6, 7], yet it is known that patients with cardiovascular disease find it harder to understand health information or engage with providers, and that health literacy predicts both initial cardiac knowledge and gains in knowledge following rehabilitation [8].

This PhD will examine the effectiveness of health literacy interventions, map the health literacy profile of cardiovascular patients in the NHS Highlands region and finally explore patient and staff perspectives to identify potential future areas of intervention.

STUDY ONE

A systematic review [9] was conducted to establish whether health literacy interventions are effective for improving health literacy, with secondary aims to assess the impact of health literacy interventions on health behaviours and identify research conducted with cardiac patients. 13 databases were searched and 2127 papers assessed. 22 studies were included in the full review which included 10,997 participants from nine countries. The review showed that health literacy interventions were effective at improving health literacy in 15 out of 22 cases. 8 studies measured health behaviour and in 7/8

cases a health literacy intervention improved health behaviour. Only 2 studies were carried out within cardiovascular populations (both were effective at improving health literacy).

STUDY TWO

The second study set out to map the health literacy of cardiac rehabilitation patients from NHS Highlands region [10]. A cross-sectional postal survey of a year of cardiac rehabilitation referrals was conducted. A total of 282 participants responded (45.7%). Hierarchical cluster analysis was used to group respondents based on their responses to the Health Literacy Questionnaire. This measured 9 different dimensions of health literacy including healthcare provider support, social support, active engagement, ability to navigate the healthcare system and understanding health information. Five health literacy clusters emerged with different profiles of health (self-assessed health, BMI, morbidities, and functional limitations), health behaviours (physical activity) and psychological measures (self-efficacy and motivation for physical activity and illness perceptions). Cardiac rehabilitation attendance did not differ by health literacy cluster, but those with more restricted health literacy were less likely to be aware of the referral.

STUDY THREE

The final study is underway and is a qualitative analysis of patient and staff perceptions of health literacy. This study will explore patient responses to the HLQ, and present fictional patients created from the responses to study two to explore ideas around future interventions to improve the capacity of patients to actively manage their health through cardiac rehabilitation.

REFERENCES

- [1] Jakab (*et al.*), WHO regional office for Europe, 2018
- [2] Sorensen (*et al.*), BMC Public Health 12: 80, 2012
- [3] Sorensen (*et al.*), HLS-EU 25: 1053 -1058. 2015
- [4] Friis (*et al.*), BMJ Open, 6: p. e009627. 2016
- [5] Geboers (*et al.*), International Journal of Environmental Research and Public Health, 15: 1268. 2018
- [6] Albus, SAGE publications, 934-935. 2018
- [7] Santos, European Journal of Preventive Cardiology, 24: 1878-1879, 2017
- [8] Mattson (*et al.*), Health Education Journal, 74: 96 - 102, 2014
- [9] Walters (*et al.*), BMC Public Health, 20: 1040 – 1057, 2020
- [10] Walters (*et al.*), International Journal of Environmental Research and Public Health, 17: 8641 – 8657, 2020