PUBLIC HEALTH 158 (2018) 37–46

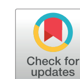
Available online at www.sciencedirect.com

Public Health

journal homepage: www.elsevier.com/puhe

Original Research

Mothers and teenage daughters walking to health: using the behaviour change wheel to develop an intervention to improve adolescent girls' physical activity



E.M. Murtagh [a,*], A.T. Barnes [b], J. McMullen [c], P.J. Morgan [b]

[a] Department of Arts Education & Physical Education, Mary Immaculate College, University of Limerick, Limerick, Ireland

[b] Priority Research Centre in Physical Activity and Nutrition, University of Newcastle, Callaghan, Australia

[c] School of Sport and Exercise Science, University of Northern Colorado, Greeley, CO 80639, USA

ARTICLE INFO

Article history:
Received 28 September 2017
Received in revised form
20 December 2017
Accepted 18 January 2018

Keywords:
Physical activity
Behaviour change wheel
Intervention development
Adolescent
Parenting

ABSTRACT

Objectives: The majority of adolescent girls fail to meet public health guidelines for physical activity. Engaging mothers in the promotion of physical activity for their daughters may be an important strategy to facilitate behaviour change. The aim of this study was to use the behaviour change wheel (BCW) framework to design the components of an intervention to improve adolescent girls' physical activity.

Study design: Cross-sectional study to inform intervention development.

Methods: The BCW framework was used to (1) understand the behaviour, (2) identify intervention functions and (3) select content and implementation options. A circular development process was undertaken by the research team to collectively design the intervention in accordance with the steps recommended by the BCW.

Results: The BCW design process resulted in the selection of six intervention functions (education, persuasion, incentivization, training, modelling, enablement) and 18 behaviour change techniques delivered via group-based, face-to-face mode. Behaviour change technique groupings include: goals and planning; feedback and monitoring; social support; shaping knowledge; natural consequences; comparison of behaviour; associations; comparison of outcomes; reward and threat; identity; and, self-belief.

Conclusions: The BCW process allowed an in-depth consideration of the target behaviours and provided a systematic framework for developing the intervention. The feasibility and preliminary efficacy of the programme will be examined.

© 2018 The Royal Society for Public Health. Published by Elsevier Ltd. All rights reserved.

* *Corresponding author*. Mary Immaculate College, University of Limerick, South Circular Road, Limerick, Ireland. Tel.: +353 61 204569.
E-mail address: elaine.murtagh@mic.ul.ie (E.M. Murtagh).

https://doi.org/10.1016/j.puhe.2018.01.012

0033-3506/© 2018 The Royal Society for Public Health. Published by Elsevier Ltd. All rights reserved.

Introduction

Physical inactivity is the 4th leading cause of death worldwide.[1] In addition to mortality, it also leads to the development of many non-communicable diseases such as diabetes, metabolic syndrome, obesity, hypertension and hypercholesterolaemia.[2] Of particular concern is the prevalence of inactivity among youth, with 80% of adolescents failing to meet recommended physical activity guidelines for health.[3] The decline in physical activity during adolescence is pervasive, particularly for girls.[4] However, as adolescence is a critical time for the maintenance and promotion of positive health behaviours, it is considered a decisive period for intervention. The World Health Organisation defines 'adolescents' as individuals aged 10–19 years.[5] The beginning of adolescence is generally considered to be synonymous with the onset of physiologically normal puberty.[6] During this sensitive developmental period, puberty and rapid brain maturation lead to new sets of behaviours and capacities that trigger or enable transitions in health behaviours; and these transitions modify childhood trajectories towards health and well-being.[7]

The causes of adolescent physical inactivity are thought to lie in a combination of individual, societal and environmental factors. Several programmes at school and community levels have attempted to address this widespread inactivity,[8] however the practical significance of interventions has generally been low.[9] More recently, the key role of the family has been considered.[10] Studies highlight the importance of relationship-based intervention strategies to enhance and maintain healthy regular physical activity among adolescents.[10,11] The term 'parenting for physical activity' has been coined to describe the parenting practices and styles that parents can adopt to best encourage their child to lead physically active lifestyles. Parenting behaviours or practices have been described as what parents do, e.g. reprimand or praise, while parenting style describes how parents do it, e.g. with warmth or hostility.[12] Both parenting elements have been shown to be related to child physical activity. Parenting practices which may influence a child's physical activity levels include encouragement, social support, involvement, restriction of physical activity, facilitation such as provision of transportation and sport enrolment, and role modelling.[13] In relation to parenting style, adolescent girls who reported that their mother had an authoritative parenting style—one that provides the structure and support needed for children to internalize and maintain positive behaviours[14]—reported higher levels of physical activity.[15] A growing body of research indicates that this approach to physical activity promotion and obesity prevention is worthwhile,[16,17] however evidence from programmes specifically involving adolescents is sparse.

Best practice guidelines for the design of interventions suggest that the first step should involve identification of the evidence base and appropriate theory.[18] The use of theory in intervention development should result in interventions that are more likely to be successful, and when evaluated can elucidate why and how different components of an intervention contribute to overall effectiveness.[19] While there are many theories and frameworks to choose from, in recent years, the behaviour change wheel (BCW) has become an increasingly popular choice for researchers seeking a guide for intervention design.[20] The BCW is a synthesis of 19 frameworks of behaviour change found in the research literature and overcomes shortcomings of existing frameworks by addressing the key criteria of comprehensiveness, coherence and a clear link to an overarching model of behaviour[20] (see Fig. 1). At the centre of the framework is the COM-B system, which suggests that capability, opportunity and motivation (COM) interact to generate behaviour (B). Surrounding the COM-B hub of the BCW are nine intervention functions aimed at addressing deficits in one of more of these conditions; and around this are seven categories of policy that could enable those interventions to occur.[20] The BCW has been used successfully to inform the design of many interventions which target a variety of health-related issues such as attentive eating,[21] hearing-aid use,[19] physically active teaching methods,[22] obesity prevention[23] and stroke rehabilitation.[24]

The National Institute for Health and Clinical Excellence[25] recommend working in partnership with the target audience to plan interventions and programmes to change health-related behaviour. Involving users in the design and conduct of evaluations is ethically preferable, potentially yields better recruitment and retention, and may also contribute to a better understanding of the process by which change is achieved.[18] The BCW provides a structure for gathering key insights from the target group in the design phase and to scaffold the formative research for the design of an intervention to improve the health of teenage girls and engage mothers to support their daughters. The aim of this paper is therefore to use BCW framework to determine intervention design and functions that will improve adolescent girls' physical activity and mothers' parenting for physical activity.

Methods

The BCW outlines eight steps that guide the successful design of interventions[26] (see Fig. 2). In steps 1–3, researchers identify the specific behaviour to change to bring about the desired outcome. The need to promote physical activity in adolescent girls is well established in the existing literature and is the focus of the present intervention. Therefore, as noted by previous intervention designers using the BCW,[27] it was not necessary to complete steps one to three of the BCW. Walking was chosen as the mode of physical activity as it is more likely to circumvent frequently cited barriers by adolescent girls—such as feeling of poor sport competence,[28] not liking sport, and lack of time[29]—than traditional forms of activity since it does not require special equipment, facilities or travel to a particular site. Therefore the behaviours of interest are (1) adolescent girls' regular walking, and (2) mothers' parenting for physical activity.

In steps 4 to 8, researchers are guided to identify the content of the intervention and implementation options. As the research team in the present study does not have access to policy levers, step 6 is not relevant and has not been undertaken.

Download English Version:

https://daneshyari.com/en/article/7525647

Download Persian Version:

https://daneshyari.com/article/7525647

Daneshyari.com