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Protocol paper

Does action follow intention with participation in home and group-based falls prevention exercise programs? An exploratory, prospective, observational study

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ABSTRACT

Background: Exercise for falls prevention is effective but of limited uptake in real life. The link between intention and behavior is central to many health-behavior models, but has not been examined in the falls prevention exercise context.
Objective: This study examines this relationship and prospectively identifies factors associated with participation in group and home-based falls prevention exercise.
Design: This was an observational study of community-dwelling adults in Australia >70 years of age with a 12 month follow-up ($n = 394$ commenced baseline assessment, $n = 247$ commenced follow-up).
Methods: Intention, and other potential predictive factors examined, were measured at baseline while participation was measured using self-report at 12 month follow-up.
Results: Between 65% and 72% of our sample at baseline agreed or strongly agreed they would participate in the falls prevention exercise programs. $n = 27$ respondents participated in home-based exercise during follow-up and had intention to do so while $n = 29$ who participated did not have intention. In contrast, $n = 43$ respondents participated in group exercise and had intention to do so compared to 11 who participated but did not intend to at baseline. Perception of personal effectiveness and previous exposure to the exercise intervention were most strongly predictive of future participation.
Conclusion: More people who do not want to participate in home exercise actually participate in home exercise than people who do not want to participate in group exercise that actually do. It may be easier to convince people who do not want to participate in falls prevention exercise to participate in a home program.

1. Introduction

Falls in older people can result in psychological and physical injury, hospital admissions and costly ongoing care and rehabilitation requirements (Carroll, Slattum, & Cox, 2005; Hendrie, Hall, Arena, & Legge, 2004). A range of effective interventions for preventing falls in older people are available, including home- or group-based exercise (Gillespie et al., 2012). Older peoples' intention to participate in falls prevention exercise, however, are low (Yardley et al., 2008) as are participation rates (Gardner, Phty, Robertson, McGee, & Campbell, 2002). A recently surveyed random sample of $n = 5681$ older Australians found that only 5.3% participated in both strength and balance challenging activities twice or more per week (Merom et al., 2012).

Understanding how different factors influence intention and how intention influences participation may be important to

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promoting participation in this field. Much of the intention–behavior research on falls prevention exercise in older people is cross-sectional in design, with the primary outcome being subjects' intention to participate (Wong, Woo, Cheung, & Yeung, 2011; Yardley, Donovan-Hall, Francis, & Todd, 2007). Intention is admittedly an important outcome, given that most models used to understand physical activity suggest that intention is the proximal antecedent of behavioral enactment (Rhodes & Bruijn, 2013). However, it is participation that is the ultimate aim of strategies to enhance engagement in falls prevention strategies and should be considered a more important outcome. In health psychology literature, there are many investigations of factors associated with people being either "actors" and "abstainers" from participation in a health intervention which are yet to be replicated for exercise interventions for the prevention of falls (Rhodes & Bruijn, 2013; Sheeran, 2002). A further limitation of existing research is that home and group-based falls prevention exercise has been examined collectively despite the possibility that older adults may have differing preferences for these two exercise modalities.

In view of these limitations, we conducted a prospective study to identify whether intention to participate in falls prevention exercise amongst older adults was related to subsequent participation over the following year. We also sought to investigate the relationship between other factors drawn largely from the Health Belief Model theoretical framework (Rosenstock, Strecher, & Becker, 1988) with both intention and subsequent participation in falls prevention exercise programs.

2. Methods

2.1. Theoretical framework

The theoretical framework used to explain older people's intentions to participate in home- or group-based falls prevention exercise is presented in Fig. 1. The framework was principally based on the Health Belief Model (Rosenstock et al., 1988), with additional constructs from the Protection Motivation Theory (Taylor & May, 1996) and Theory of Planned Behavior (Madden, Ellen, & Ajzen, 1992). Central to this framework is a conscious decision making process at the individual level to form intentions to participate in falls prevention exercise and subsequently enact these intentions. Intention is broken into three aspects based on whether the individual has participated in the exercise intervention previously, and if so, whether they continue to participate. The intention leads directly to the intended behavior, which for the purpose of this research is also broken into three aspects based on whether exercise is being commenced, recommenced or continued. Also illustrated in this framework are the potential influences of other internal factors (such as ill health), external factors (such as relationships with significant others (Hawley, 2009)) and cues to action that may influence whether an individual's intention translates into behavior.

The investigators have previously conducted work on factors affecting participation that were related to how the exercise programs may be provided (McPhate, Simek, & Haines, 2013; Simek, McPhate, & Haines, 2012), thus the focus of the present

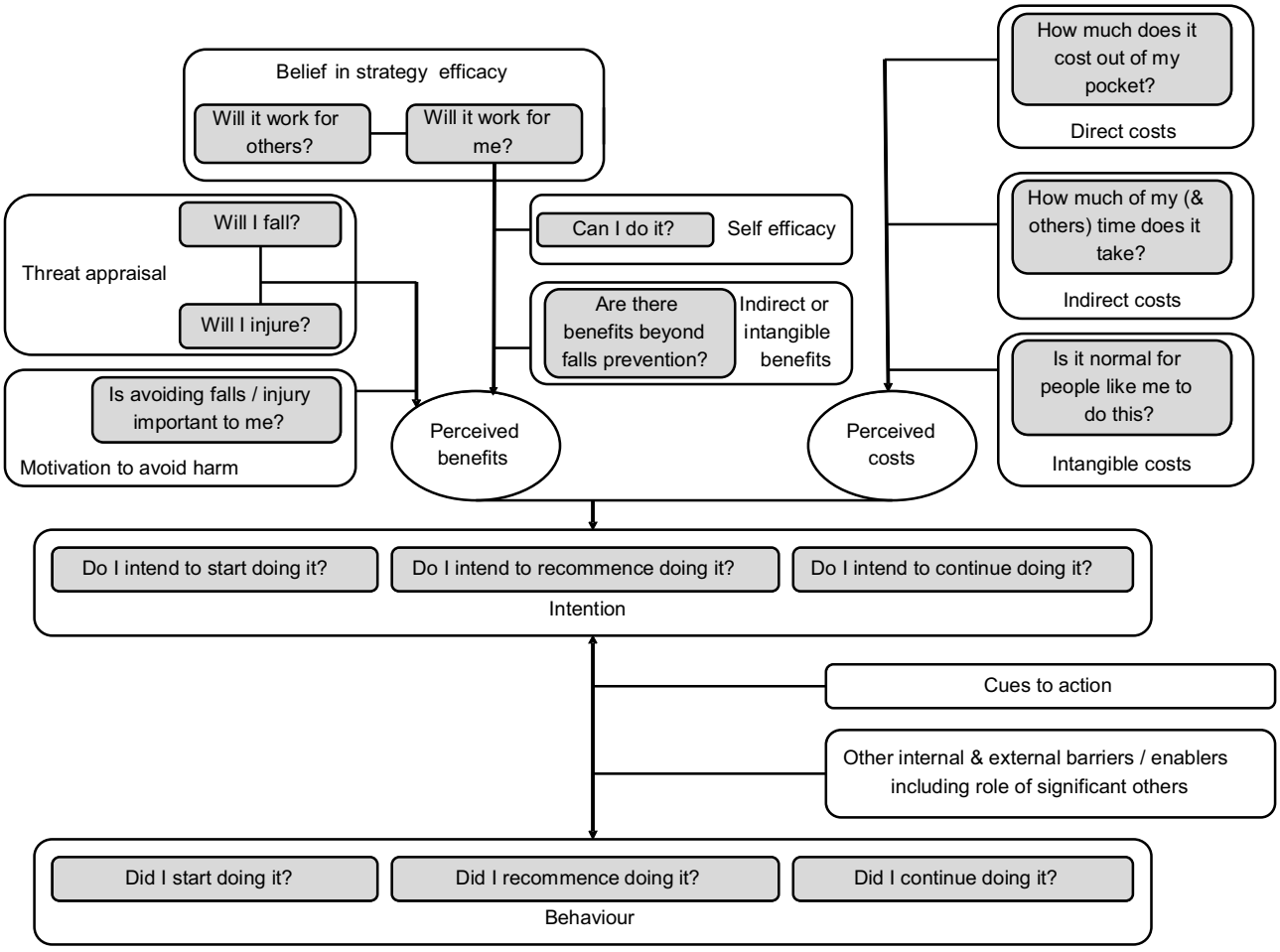

Fig. 1. Theoretical framework guiding development of items.