

Intrinsic motivation explains older adults' active participation in a television exercise program

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Introduction

Sedentary lifestyles are increasing in most Western countries. In order to stimulate physical activity among older adults, the Dutch government introduced a national daily television program in 2000, called "The Netherlands on the Move!-television" (NOM-tv). NOM-tv was designed for adults (mainly targeting people aged 55 and over), to offer them an easily accessible, low-intensity, exercise facility: morning exercises being performed at home in front of the television. Whereas television viewing is typically considered to be a sedentary behavior, active participation in NOM-tv can in fact be a first step towards a reduction of daily sitting time.

Objectives

The main goal of the present study was to explore which underlying motivations were associated with actively participating in NOM-tv. Since providing role models and enhancing self-efficacy and behavioral capability are central goals of NOM-tv, it can be expected that participation in the NOM-tv exercises can lead to an increased sense of competence about being physically active. Therefore, we hypothesized a positive relationship between perceived competence and active participation in NOM-tv. We assessed motivational regulation by means of the Intrinsic Motivation Inventory¹. Based on the Self-Determination Theory, our second hypothesis was that respondents who perceived more intrinsic (autonomous) motives to engage in the NOM-tv exercises, would also participate more often in the NOM-tv exercises.

Methods

Design and procedure. A cross-sectional study was carried out among viewers of NOM-tv via an online questionnaire. The recruitment took place from May 18 until June 30, 2009. Viewers who actively participated in the program and had less than eight missing values on the IMI were included in this study. This brought the total number of respondents in this study to 1,349 people.

Measurement instrument.

Intrinsic Motivation Inventory (IMI)

The Intrinsic Motivation Inventory was used to measure respondents' subjective experience with regard to active participation in the NOM-tv exercises, measured in six dimensions (interest-enjoyment, perceived competence, effort-importance, pressure-tension, perceived choice and value-usefulness). All items were rated on a 7-point Likert scale, ranging from 1 (*not at all true*) to 7 (*very true*).

Active participation in the NOM-tv exercises

The outcome measure in the present study, active participation in the NOM-tv exercises, was measured by asking how often respondents actively participated in the NOM-tv exercises: "occasionally (0)" or "every time / nearly every time (1)".

Analysis. General descriptive statistics were used to describe the characteristics of the respondents and the main findings concerning viewing and participation habits. In order to explore the underlying motivations among viewers of NOM-tv for actively participating in the program's exercises, a logistic regression analysis was performed using SPSS version 15, with the IMI subscales as independent variables, corrected for demographic variables, perceived personal health status, compliance with the Dutch physical activity guidelines and viewing habits.

Results

Participants. Women were clearly overrepresented in the viewer population (83.9%). The mean age was 64.7 years (SD=8.7). Regarding viewing habits, 41.0% indicated that they watched NOM-tv 3 or 4 times a week, whereas 32.5% reported watching 5-7 times a week. One out of four respondents viewed NOM-tv twice a week or less. Approximately three out of four respondents reported actively participating in NOM-tv every time or nearly every time. The others only occasionally participated in the NOM-tv exercises.



Figure 1: The Netherlands on the Move!-television program.

This daily broadcasted program lasts 15 minutes and starts with a general health education message. This is followed by five physical activity blocks in which viewers can actively take part at home: (1) warming-up; (2) arms-legs co-ordination; (3) cardio-fitness; (4) muscular strength; and (5) cooling-down. Two instructors take turns leading the exercises of an exercise group of five persons in the studio. The program ends with a short feature highlighting various physical activities and sports. A popular activity such as line dancing may be introduced, or information is provided about being active when suffering from diseases such as cancer or osteoarthritis, or an upcoming sports event may be announced. The program is supported by a Web page, and DVDs have been released. NOM-tv has shown to be a popular television program, with approximately 137,000 viewers a day.

Is participation in the NOM-tv exercises associated with more intrinsic (autonomous) or more controlling participation motives?

The logistic regression analysis showed that the IMI subscales of enjoying the exercises more (OR=1.38, CI:1.11-1.70), having a higher level of perceived competence to perform the exercises (OR=1.55, CI:1.29-1.86), and being willing to put more effort into the exercises (OR=1.65, CI:1.32-2.07) – thus showing higher levels of intrinsic motivation – were significantly associated with more frequent participation in the NOM-tv exercises. A total of 35% of the variance in NOM-tv exercise participation was explained.

The present study also revealed the characteristics of frequent participants in the NOM-tv exercises versus occasional participants. The results showed that frequent viewers were also more likely to participate, as were people who were more active in their daily lives. Other subgroups of our study population more likely to participate in the NOM-tv exercises included people with a lower BMI, people living in a village and people with a higher educational level.

Discussion

The predictive value of the interest-enjoyment, perceived competence and effort-importance subscales on self-regulation of exercise behavior has also been found in previous studies². With regard to participating in a television exercise program, our study confirmed the importance of enjoying physical activity, feeling competent to perform the activity and being willing to put effort into the activity. With regard to developing future interventions to stimulate people to reduce sedentary behaviors, we would recommend that mass media interventions encourage people's intrinsic orientations towards physical activity in an autonomy-supportive way, in which pressure to engage in the specific physical activity is minimized, intrinsic fun and excitement of exercise is promoted, perceived competence in executing the exercises is supported and people are encouraged to initiate actions based on their personal goals and values³.

References

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