

Efficacy of an online planning intervention to reduce cardiovascular risk behavior in Germany and the Netherlands

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Introduction

Cardiovascular diseases (CVD) are a major health problem in western countries and cause 30% of the global death [1]. A healthy diet and sufficient physical activity can reduce the risk for CVD [2]. Computer tailored interventions that address self regulation strategies (e.g. planning) have been shown to be effective in increasing physical activity as well as fruit and vegetable consumption [3]. The aim of this study is to support people with an online intervention to adopt and maintain a healthy lifestyle and to investigate country differences in effectiveness.

Method

Sample

At baseline we recruited 875 participants ($N=450$ Dutch) with a mean age of 50.4 years ($SD=12.85$, $Range=19-77$), 53.5% of which were currently employed.

Procedure

Based on the Health Action Process Approach (HAPA) [4] an 8-week eHealth planning intervention was developed and implemented between 2013 and 2014 in Germany and the Netherlands. The 8 week-intervention encouraged participants to define individual health goals as well as action, and coping plans with regard to fruit and vegetable consumption and physical activity [6]. Measures included portions a day [8] and minutes of vigorous, moderate or walking activity per week [7] respectively. The effectiveness of the program was compared using analysis of variances to determine group and country dependent differences in behavior change.

Results

At baseline, the majority of the participants ($n=596$) reported behavior below the recommended levels: 83% did not eat 5 portions fruit and vegetable a day and 39.6% did not meet the recommendation to be physical active for at least 30min/day at 5 days. Dutch people were significantly more active than Germans a baseline ($F(1,808)=35.70$, $p<.001$). Levels of action ($F(1,162)=68.84$, $p<.001$) as well as coping planning ($F(1,163)=60.23$, $p<.001$) significantly increased during the 8 week intervention for PA.

The intervention also lead to an increase in both fruit and vegetable consumption and physical activity in both countries, however non significantly. In the national comparison, Dutch participants could increase their daily fruit and vegetable consumption significantly better compared to the Germans ($F(1,188)=12.7$, $p<.001$). German increased their physical activity levels more compared to the Dutch, however showing significant differences in the walking category only ($F(1,174)=7.10$, $p=.008$).

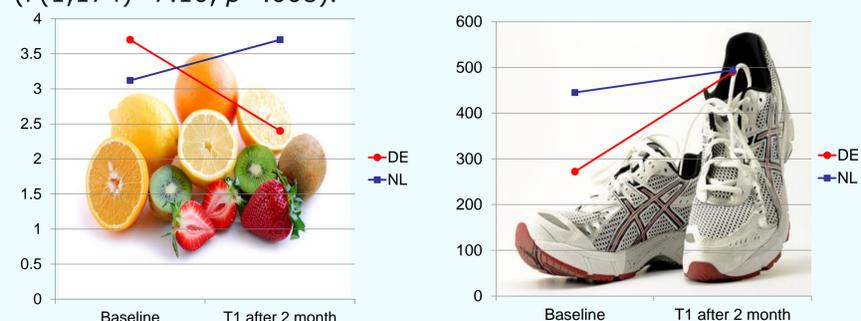


Figure 1: Intervention effects for fruit & vegetable intake (pieces/day) and physical activity (min/day)

Conclusion

Our planning intervention is helpful in improving peoples' diet and physical activity levels. We found country specific differences in health behavior change which need to be determined in future studies.

References

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