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Adherence to physical activity– Psychological aspects in “Prescribed Exercise” and “Motivational counselling”

Introduction: In several countries, *prescribed exercise* is used to facilitate physical activity in a sedentary population, which is at risk of developing lifestyle diseases. Since long-term effect of *prescribed exercise* to some degree fails to happen when people participate in *prescribed exercise* interventions, it is necessary to introduce other ways of thinking. Health psychological theory can contribute with important knowledge on bio-psycho-social factors important for behaviour change.

In Denmark a *prescribed exercise* intervention called “Exercise on Prescription” (EoP) was divided into two central parts: a high-intense EoP scheme (Treatment Group) and a lower-intense counselling scheme (Prevention Group).

It is important to clarify to what extent differences in *stages of change*, *self-efficacy* and social relations before, during and after the Treatment Group and the Prevention Group are influencing motivation and adherence towards a physically active lifestyle. An analysis of these factors will be able to contribute with important knowledge important to the individual’s health behaviour and ability to change behaviour.

Hypotheses and aim: 1) Participation in the TG and the PG will lead to changes in level of *self-efficacy* towards barriers, *stages of change*, and physical activity 2) The initial level of *self-efficacy* toward barriers and *stages of change* will be different for the Treatment Group (TG) and the Prevention Group (PG). 3) The participants’ initial level of *self-efficacy* towards barriers and *stages of change* before the intervention is important for adherence to a physically active lifestyle. 4) Social relations are important for the participants’ adherence to physical activity during and after EoP. The aim of this study is to test these hypotheses at baseline, as well as after 4, 10 and 16 months.

Methods: The analyses are performed as a triangulation of methods via a combination of questionnaires semi-structured interviews and research literature.

Results and discussion: The results of the quantitative analysis show a statistically significant increase in the level of physical activity and *stages of change* from baseline to 16 month. No change was observed for *self-efficacy*. However, the results suggest that the change in these features was indistinguishable between participants in the Treatment Group and the Prevention Group. The results also suggest that other factors characterising the participants may be better predictors of the change in outcome than *self-efficacy* and *stages of change*. The results in the qualitative study suggest that participants in the Treatment Group and the Prevention Group have similar initial *stages of change*. Furthermore, the study indicates, as do the quantitative study, that the precondition in *stages of change* is not decisive for long-term development in the level of physical activity and that *self-efficacy* towards overcoming barriers did not change in either group. The results show a fundamental difference between major and moderate barriers between the groups. This could possibly provide some explanation for the difference (indicated in the qualitative study) between the groups in terms of staying physically active at long-term. Furthermore, a positive attitude towards or interest in physical activity seems to be a stronger predictor of adherence to physical activity than *stages of change* and *self-efficacy*. Social relations as family, friends, the exercise specialist and other participants in the intervention were mentioned as important.

Conclusions: Given that no differences could be found between the groups in the above mentioned factors, other explanatory parameters may be relevant to explore to a greater extent in future research. The results emphasise that future research should explore the interaction between the participant, family, friends and the exercise specialist, but also the other participants in the intervention. However, when interpreting the results the possible bias in the two studies must be taken in to account. Further evaluation of EoP-interventions could be based on a more rigid design. But moreover, future research should recognise the interactional basis of behavioural change and to a greater degree try to take into account the influence from social network and its influence on the individuals' lifestyle, coping, health behaviour and reactions to illness and disease.

Perspectives: To enhance people's adherence to a physically active lifestyle after *prescribed exercise* it is important to incorporate a health psychological understanding of behaviour change in order to generate a better milieu for change. A way of improving life-long motivation for exercise and physical activity could be to develop a model for understanding of participation in exercise and physical activity that shifts the emphasis away from a focus on treatment, health and behaviour change and towards motivation, satisfaction and enjoyment. This could be done e.g. through the

development of psychological skills, physical skills, and social skills. A reconceptualising of participation in physical activity in this way could possibly enhance adherence to physical activity in later life and moreover, possibly influence those who are in greatest need.

