

Preparing for aging: Development, feasibility and preliminary results of an educational program for midlife and older based on proactive coping theory

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Abstract

Objectives: This article describes the development, content, feasibility and first results of a short educational program for preparing for aging, based on the process model of proactive coping [Aspinwall LG, Taylor SE. A stitch in time: self regulation and proactive coping. *Psychol Bull* 1997; 121: 417–36]. The aim of the program is to increase proactive competencies and improve proactive orientations and behaviour. The program consists of four-weekly meetings with 8–10 participants and is given by trainers of about the same age as the participants.

Methods: Sixty-eight persons ($M = 61.4$ years) participated in the program. Feasibility included attendance, participants evaluations of the meetings and the applicability of the used techniques. Proactive coping was measured as proactive orientation, behaviour and competencies.

Results: The program received positive evaluations, the attendance rate was very satisfying, and the applicability of the used techniques have been shown. Regarding the technique of mental simulation, improvements were suggested. We found gender differences concerning feasibility: women evaluated the program to be easier and reported to have profited more from mental simulation. Preliminary results of proximal outcome variables showed significant changes in proactive competencies, but no changes in proactive behaviour and proactive orientation.

Conclusions: The educational program “In anticipation of the golden years” is a theoretical based minimal intervention which is highly feasible and effective in improving proactive competencies.

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1. Introduction

Preparation for aging is until now a rarely discussed subject. This lack of attention may reflect doubts about the usefulness and effectiveness of planning for later life. Recently, Lachman and Prenda Firth [2,3] demonstrated that although older adults reported less future planning overall compared with younger age groups, the positive effects of planning on life satisfaction were more pronounced for older adults. They concluded that planning for the future might be an essential management strategy in the context of aging. In the light of demographical changes and decline in the welfare state, future-oriented self-regulation behaviour

becomes more important for the elderly as they are required to take more responsibility for their lives. From this perspective, it may be useful for people to prepare for their old age in the sense that they will better be able to understand what they want, how they can attain their goals, and how they can prevent undesirable developments in their personal lives. Whether people in middle and late adulthood are willing and able to actively prepare for older age has rarely been investigated. A study by Ouweland, De Ridder and Bensing [4,5] showed, however, that middle-aged adults do think about their future plans, that they are able to anticipate potential stressors and that they become active when their goals are threatened.

The question is how people in middle and late adulthood can be stimulated to develop competencies, orientations and behaviours that facilitate future-oriented self-regulation

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processes. We suggest that proactive coping theory [1] provides the adequate theoretical background for an educational program for preparing for aging. Proactive coping consists of efforts undertaken in advance of a potentially stressful event to prevent it or to modify its form before it occurs. In comparison with reactive coping, proactive coping is temporally prior to, and requires different skills and activities from those employed in reactive coping. For proactive coping, skills concerning identification of threatened goals and goal management are essential. In the approach of Greenglass and Schwarzer the goal management approach is further elaborated. These authors [6,7] emphasize that in the perspective of proactive coping, risks and demands in the future are not appraised as threats but rather as personal challenges. In our view the combination of preventing losses and striving for improvement or maintenance provides a useful framework for understanding and promoting successful aging. Throughout the life span the proportion of losses increases and the amount of gains decreases [8]. Thus, a program for preparing for aging should be directed to optimise this balance, i.e. desired states have to be empowered and undesired changes have to be prevented as much as possible. In this study, we investigate whether the developed program can increase proactive competencies, orientations and behaviour. Improvement of these aspects of proactive coping should in the long run influence the balance of gains and losses positively. Until now the proactive coping approach has not been employed in interventions with regard to preparing for aging.

The program “In anticipation of the golden years” attempts to stimulate the switch from a reactive adaptation to a proactive approach in middle and late adulthood. The focus is not on dealing with problematic situations in the here and now, but rather on preparing for the future and exploring possibilities and constrains that play a part in this process. Our approach differs from existing educational interventions for the elderly which are either more reactive in their approach and/or focus on specific types of problems the elderly may already experience; for example, reducing loneliness, depression and physical limitations (e.g. [9,10]), improving physical activation and mobility of sedentary older adults or addressing risk behaviours such as high risk driving, decreasing communication skills, overweight and poor nutrition (e.g. [11–13]). Similarly, in self-management interventions for patients with chronic disease, participants are often elderly patients but the interventions are not specifically developed for this age group [14,15]. All these interventions are in accordance with the paradigm of reactive coping. The interventions were effective in reducing the initial problem or helped participants to cope with the problematic condition. From a proactive perspective, however, we try to prevent the development of age-related problems by scanning the personal situation early enough to influence the process. The programs use similar techniques, but the timing of the program makes the big difference. In contrast to other health promotion programs [16–18], with a

preventive focus, our program aims to strengthen goal setting and goal attainment competencies in personal relevant aging issues instead of the general aging issues which most programs focus on.

This article addresses the development and the content of the program, reports various indicators of feasibility and provides preliminary results about the effectiveness of the program. We examined whether the proximal outcomes (proactive competencies, proactive behaviour and proactive orientation) improved after program participation.

2. Development and content of the program “In anticipation of the golden years”

For the development of the program “In anticipation of the golden years” [19,20] we employed the proactive coping model developed by Aspinwall and Taylor [1]. This model comprises five stages: (1) resource accumulation, (2) attention recognition, (3) initial appraisal, (4) preliminary coping and (5) elicit and use of feedback (Fig. 1). The meetings of the program follow this process model. There has been some critique that intervention researchers are not explicit enough over how theories have been applied in the development of the intervention [21,22]. Therefore, in the following paragraph we will discuss the relationship of theory and intervention for our program.

As is shown in Fig. 1, the intervention is not a direct reflection of the theoretical model. Some processes of the theoretical model are subsumed in one session (e.g. warning signals) whereas other processes (e.g. preliminary coping) are spread out over more sessions. The intervention format acknowledges that the theoretical model cannot be directly translated into a compelling and effective educational program. For the theoretical model it is important to qualify meaningful concepts and processes. The theoretical based intervention, however, also has to consider how participants can easily understand and practice the core messages and new skills.

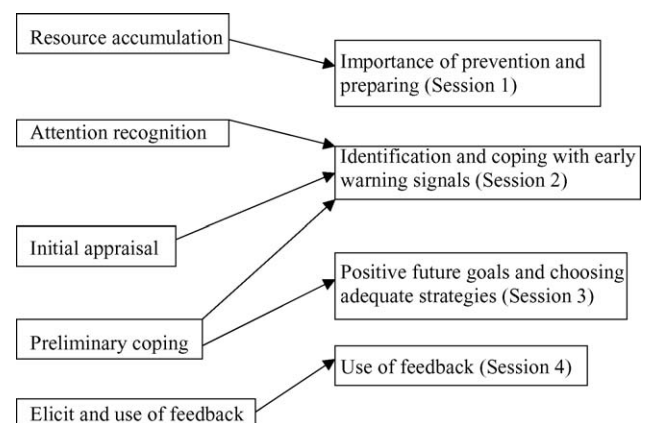


Fig. 1. Relations between the process model of proactive coping and the structure of the program.

The program is a minimal intervention consisting of four meetings (2 h each) and focuses on people between 50 and 75 years of age. It is a group intervention with a standard protocol [23] given by a trainer (also >50) with teaching experience. Due to the fact that aging is not a uniform process but rather multidirectional and multidimensional [24], we included both group discussions and an individual trajectory in which participants work on personal goals. In the first session, the advantages of preparing oneself for the future are identified. Subsequently, participants make an evaluation of their tendency for preparation. In the homework assignment, participants write down signals which warn them that things in their life are going in the wrong direction. The assignment requires them to anticipate which topics they will have regrets about over 5 years if they do not work on them now. The technique of anticipated regret is used in order to stimulate issues high on personal relevance and motivation [25].

In the second session, recognition and handling of early warning signals in the process of aging are discussed and proactive ways of coping with warning signals are identified. Furthermore, one personal future goal is detected from the homework on anticipated regret (the “individual trajectory”). Selection criteria were the relevance for the aging process and the personal importance [26].

In the third meeting, strategies to reach the personal goal are specified by the technique of mental simulation. According to Taylor et al. [27], mental simulation of the initiation and maintenance of problem solving activities produce progress in achieving those goals. In our program, the technique of mental simulation serves as a means for virtually practicing skills that facilitate proactive activities [28]. Via a structured protocol induced by the trainer, alternative ways for attaining the desired state are lived through in the participant’s imagination. After the mental simulation, everyone decided which action he will try out in reality to achieve the personal goal. In the last session, the attempts to reach the individual goals are evaluated and the productive use of feedback is discussed. Participants examine the increase in knowledge about their own potential, the supportive or hindering function of their environment as well as the accessibility of their goals and plans. The program ends with a general evaluation.

3. Methods

3.1. Procedure

The program was delivered by two local institutes that offer interventions and programs for various purposes and target groups. Information about the program and the research project was announced via regional and national newspapers, radio broadcast and leaflets. People between 50 and 75 years of age were invited to participate if they were concerned about their future. We decided not to work with

additional inclusion criteria since the program is designed for everyone who wants to prepare for aging. Detailed analyses showed that the program is attractive to people who are at risk for age related difficulties regarding demographic and social aspects but who have good psychological resources [29].

Before starting the program, participants received the first questionnaire to complete. Demographic information and the baseline of the proactive measures were collected. Participants’ evaluations of the program were assessed after each meeting. In the post measurement, the proactive questionnaires were administered again and questions were asked with regard to the evaluation of the program.

Trainers from the two institutes who wanted to give the program were selected on the basis of their experience with teaching groups and their age (>50). Trainers were registered nurses and an occupational therapist. They were intensively trained by an individual introduction and by participating in the program as a co-trainer (in total approximately 20 h training). Throughout their first own course, trainers received individual telephone supervision after each session. In subsequent courses, supervision was given after completion of a course. In this supervision, the core elements of the sessions were reviewed and difficult group-situations were discussed.

3.2. Sample

The interest for participation was high. After one announcement wave, all participants signed up for the program; 68 individuals participated in the program. The drop-out rate after the start of the program was low. Five participants ceased for reasons relating to the combination of professional work and the program as well as different expectations.

The mean age of the sample was 61.41 years (51–74 years of age), 64.7% of the participants were female. Fourteen percent were never married, 60% had a partner, 16% was divorced and 7% was widowed. Thirty-two percent of the participants lived alone. In both men and women, people with high educational status were over represented (37% had 14 years or more education). Sixty-five percent of participants evaluated their health situation as very good or good, 34% as moderate and 1% as poor.

3.3. Measures

3.3.1. Feasibility of the program

The feasibility of the program includes attendance, participants evaluations of the meetings and the applicability of the used techniques.

Participants evaluated each meeting on seven items (5 point scale, very bad–very good, respectively easy–difficult) covering the session in general, the content, the presentation and the material of the session. The results were summed up to get an evaluation score per session. The scale showed

good reliabilities for each of the four sessions (Cronbach's $\alpha = .78, .80, .82, .84$). After finishing the whole program, participants gave their opinion about the program in general (1–5, very bad–very good). Next, the duration of the program (number of sessions, weekly sessions, duration per meeting; 1–3, too much/good/too less) were evaluated and participants reported the number of sessions they had attended. This procedure to measure participants' evaluations is adapted from Schreurs et al. [30], who conducted a similar intervention.

With regard to the applicability of the used techniques, i.e. the individual trajectory and the technique of mental simulation, participants reported on which goal they worked on during the program, how important this goal was (1–3, very important/important/less important), whether they were able to formulate the goal concretely (yes/no), its attainability (yes/no), whether they achieved the goal (yes, more or less, no) and whether they continued to strive towards the goal (yes/no). Furthermore, participants were asked whether they used the technique of mental simulation at home (1–3 times, more than three times, no), whether mental simulation helped them to formulate the actions for attaining the goal clearly (yes/no) and whether mental simulation helped them to finally attain their goal (yes/no).

3.3.2. Proactive coping

Proactive orientation was measured with the subscale "Preventive Coping Scale" of the Proactive Coping Inventory [31]. This scale (Cronbach's $\alpha = .84$) deals with anticipation of potential stressors and the initiation of preparation before these stressors fully develop. The original scale contains 10 items; we left out the item on developing job skills as we deemed this question to be irrelevant for our participants. Sample items are: 'I think ahead to avoid dangerous situations' and 'I plan for future eventualities'. The scale was administered in a 6-point frequency response format (I never do so–I do so very often).

In order to elicit the behavioural component of proactive coping we used two subscales (Taking Initiatives and Investment Behaviour, each five items) of the Self Management Ability Scale (SMAS) [32]. These scales ask for the amount of activities people perform in order to attain personal goals. The used subscales showed satisfying reliabilities (Taking Initiatives, Cronbach's $\alpha = .76$; Investment Behaviour, Cronbach's $\alpha = .77$). A sample item for the subscale Taking Initiatives: 'How often do you take the initiative to get in touch with people who are dear to you?'. The subscale Investment Behaviour contains items as: 'Do you ensure that you have enough interests on a regular basis (such as a hobby) to keep you active?'. The described scales were rated on a 6-point frequency response format (I never do so–I do so very often).

In addition to the measurement of proactive orientation and behaviour, we developed the "Proactive Competence Inventory". The items mainly reflect the competencies formulated in the process model of proactive coping [1].

On 22 items, participants have to report whether they are able to recognize first signals of undesired changes, to see their own possibilities and opportunities, to translate wishes in plans, to think about alternatives if one solution does not work, to ask for social support, to learn from setback and to reward themselves. The scale ranges from "1 = not at all able" to "4 = very able". Reliability of the scale is Cronbach's $\alpha = .89$.

4. Results

4.1. Feasibility of the program

4.1.1. Attendance

The attendance rate was very satisfying. Seventy-three percent of participants attended all four meetings, 24% participated three times and only two individuals missed two sessions. There were no associations with either age or gender nor with the content of the individual trajectory.

4.1.2. Participants' evaluation of the program

We found good general evaluations of the program ($M = 4$ on a scale from 1 to 5), independent of age or gender of participants. The content of the goal worked on in the program has no significant associations with the general evaluation. With regard to the duration of the program, more than half of the participants suggested a longer program and 45% would appreciate meetings longer than 2 h. Participants agreed with weekly sessions. These evaluations were not associated with age or gender. In order to check whether participants experienced the program as (too) difficult we computed a sum variable over the four sessions, including participants' evaluations of the session, understanding of the content, appropriateness of the presentation and the materials. The clear majority experienced the program as easy ($M = 4.28$, S.D. = 0.7, 1 = difficult, 5 = easy). No significant differences were found for age or level of education. We revealed considerable differences between men and women. Men experienced the program as more difficult than women did (men: $M = 3.9$, S.D. = 0.80, women: $M = 4.5$, S.D. = 0.54; $F(36, 1) = 7.1$, $p = .011$). All sessions separately are evaluated as good to very good (S1 = 4.3, S2 = 4.3, S3 = 4.3, S4 = 4.4, range 1 (very bad)–5 (very good)). No differences with regard to age, gender and education were found.

Table 1
Individual trajectories in the program in percentage participants

Goals	%
Hobbies and sports	26.2
Practical goals inside and outside the house	21.3
Time management	19.7
Preparatory activities	13.1
Social contacts	11.5
Other goals	3.3
No goal	4.9

Table 2
Means and standard deviations for outcome variables at pre- and post-test

	Pre-test measurement mean (S.D.), <i>N</i>	Post-test measurement mean (S.D.), <i>N</i>	Paired <i>t</i> -tests
Proactive competencies	2.76 (.35), 49	3.06 (.32), 49	$p < 0.001$
Proactive behaviour			
Taking Initiatives	20.20 (3.53), 59	20.08 (3.57), 59	$p = 0.655$
Investment Behaviour	20.95 (3.74), 61	21.28 (4.11), 61	$p = 0.352$
Proactive orientation	33.89 (7.2), 55	33.93 (5.53), 55	$p = 0.951$

4.1.3. Applicability of the used techniques

With regard to the individual trajectory, 95% of participants worked in the program on a personally important goal.

Many of the participants (26%) chose an individual trajectory in the domain of hobby and sports (see Table 1); they worked for example on improvement in video and computer skills, strived to sport more or realize a hobby. About one-fifth of the participants worked on practical goals inside and outside the house. These activities may appear trivial, but in the experience of elderly participants it was very important to begin with these activities at present since a good physical condition is needed. Another 20% worked on time management. These people were searching for meaningful activities to fill their days or were experimenting with different day structures. Thirteen percent focused on preparatory activities, such as searching for information on euthanasia, renewing their last will or informing about early-retirement possibilities. Social contacts formed the individual trajectory for 12% of participants. These subjects wanted to improve their social skills or wished to intensify the contact with another person. The category “other goals” (3%) entails goals such as searching for paid work. For 5% of the participants it was not possible to formulate a concrete and attainable goal to work on.

Twenty-five percent clearly achieved their goal during the program and 60% attained it more or less. Most of these persons reported that they need some more time to carry out their plans. Ninety-two percent of these had the intention to maintain their goal striving. There were no significant differences with regard to age, gender or educational level. However, we found significant differences in goal attainment related to the content of the goal ($\chi^2(60, 12) = 23.91$, $p = .021$). Participants with practical goals achieved their goals significantly more often (adj. stand. residual = 2.0). The striving for social contacts ended up more often with the qualification “more or less achieved” (adj. stand. residual = 2.4) and people with trajectories classified as “other goals” (Table 1) significantly often did not reach their goals (adj. stand. residual = 3.2).

Sixty percent of the participants reported that the technique of mental simulation helped them to formulate the goal and the actions for attaining the goal, 46% thought that the technique supported goal attainment and 70% of the participants reported that they used the technique at home for at least one time. These results did not differ for age

group, education or content of the individual trajectories. With regard to gender, women felt significantly more supported by mental simulation in formulating their goals and finding fitting actions ($\chi^2(59, 1) = 4.48$, $p = .034$).

4.2. Preliminary results of effectiveness

Participants' proactive coping competencies increased significantly after the program (see Table 2). With regard to proactive behaviour and proactive orientation no changes were observed at the post test after finishing the program.

5. Discussion and conclusion

Preparing for aging came out as an attractive issue. The announcement of the program evoked many positive reactions in the media, interest in mental health care institutions and, most important, in people who wanted to participate in the program. Presenting aging with a positive and future-oriented connotation obviously did not arouse negative stereotypes about aging and reactions of distancing; rather it stimulated interest in the own process of aging and the willingness to plan for the future.

We used the process model of proactive coping to develop the intervention. This model turned out to be a suitable basis for a program for preparing for aging. It offers the necessary steps for working with a proactive perspective and is concurrently open enough for individual trajectories. The variance in the individual trajectories showed that preparing for aging is not the same for all participants. This supports our assumption that aging is a multidimensional process and that a program for preparing for aging has to take this into account. The high commitment of participants might be directly associated with the individual trajectory. Earlier experiences with more pre-structured goals in a self-management intervention for patients with chronic diseases showed somewhat lower attendance rates [30].

People in the target group found the program appealing, regardless of age. We, nevertheless, saw a clear age distribution in participation that is centred around retirement age. More women than men signed up for the program. Other educational interventions for seniors that were open for men and women report similar results (63% [16]) or even higher percentages of women (70% [12], 80% [18], 93% [33]). It seems unrealistic to expect a gender distribution

according to the general population of the target group. The results concerning the feasibility of the program are very supportive. Evaluations were positive, attendance rate was high and drop-out rate was very low (for a comparison see [30,32,34]).

One of our goals was to design an easily accessible program for the preparation of aging. The “minimal format” of four sessions was one way to reach many people because they did not have to commit themselves to a long period of time. To meet participants needs for a longer program we suggest a follow-up program after a couple of weeks. Another solution would be two-weekly sessions, although a disadvantage may be the longer period of commitment. On the other hand, a stretched program would give the participants more time to carry out their plans, and in the case of social goals, this would probably lead to more goal attainment. Practical goals, however, were achievable for the majority in the minimal format of our program. These considerations about the optimal number of sessions and the best period between the meetings will be tested in an implementation project.

The applicability of the techniques used also showed positive results. Nearly everyone in the program worked on a personally important goal. Participants reached their goals or at least expressed the intention to maintain their goal striving. We can conclude that the combination of group meetings with an individual trajectory is a successful format. The technique of mental simulation, however, only worked well for about half of the participants. Since this technique is an important part of the program, efforts to improve the presentation and use will be effective.

It is remarkable that feasibility for women was partly higher than for men. Women experienced the program as easier and reported more profit from mental simulation. A reason may lie in the circumstance that both developer and trainer were women and that the program, therefore, might have a female bias. It is also possible that male participants were less used to think about themselves and their personal future. This future oriented self-reflection may, therefore, be more difficult for men than for women. Whether the experience of men and women is predictive for the individual improvement will be revealed in an effect study. While the evaluations appear quite positive, we must also recognize that all evaluations came from self-reports and are, therefore, sensitive to influences of social desirability. In addition, the evaluations might also partly reflect the atmosphere in the group.

In order to give a first impression of the outcomes related to proactive coping, the preliminary results of short-time effectiveness were presented. Results revealed that proactive coping competencies improved between the pre-test and the post-test measurement. The time between the first two measurement points was only 4 weeks so that it is very pleasing that the changes appeared directly after participation. We will observe with a follow up measurement whether the changes in competencies will stabilize and whether they

will stimulate a change in proactive behaviour and orientation. Between pre- and post-test no changes on scales that measured orientation and behaviour could be reported. These results can mean that the program was not able to change proactive behaviour and orientation, but it can also reflect that a longer time and practice is needed for change. With regard to the behavioural measure, the used scales might have described behaviour that was too far from the individual trajectories worked on in the program. Future research should take this point into account. The differences in effectiveness might also be explained by an over-estimation of participants' increase in competencies, as subjects dealt intensively for 4 weeks with these concepts.

In this study, we presented the proximal outcome measures of the evaluation research. We believe that in the long run an increase in proactive coping (competencies, behaviour and orientation) will support successful aging. Therefore, we plan an additional study on distal outcomes that will concentrate on long term improvements in the personal experience of aging as well as subjective and psychological well-being.

To conclude, the educational program “In anticipation of the golden years” is a theoretical based minimal intervention which is highly feasible and effective in improving proactive competencies. Follow-up measurements will reveal the stability of the presented results and will clarify the relationship with indicators of successful aging.

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