

Development and Use of a Behavior Change Intervention Workbook Aimed at Enhancing the Purpose of Life for Elderly People

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Abstract

"Meaningful activities" refer to activities that are deeply connected to the purpose and meaning of older adults' lives and have a significant impact on their physical health, mental stimulation, social interaction, and emotional well-being. It is known that when older adults continue to engage in "meaningful activities," their sense of purpose in life and life satisfaction are strengthened. The purpose of this study is to develop a behavioral change intervention workbook that can be used at various events in which older adults participate, to encourage the practice of "meaningful activities" that help strengthen the purpose of life for older adults. This report outlines the development process: (1) conducting formative research (preliminary survey: Takenaka, 2008) based on behavior change theory (Health Action Process Approach: Schwarzer, 2011; Schwarzer, Lippke, & Luszczynska, 2011), (2) conducting preliminary counseling: interviews to support the creation of an action plan, (3) developing a prototype behavior change intervention workbook, (4) evaluating the acceptability and feasibility of the prototype behavior change intervention workbook by older adults, and (5) evaluating the feasibility of the prototype behavior change intervention workbook by experts. Going forward, we hope to utilize the behavior change intervention workbook developed in this study in various settings where we interact with older adults and verify its effectiveness.

1. Purpose of this Study

In recent years, the number of elderly people living alone has rapidly increased, raising concerns about the frequent occurrence of various problems, such as social withdrawal, depression, cognitive decline, and frailty. This study aims to develop a behavioral change intervention workbook that can be used at various events involving elderly people to prevent age-related problems, encourage elderly people to engage in "meaningful activities (MA)", and enhance their sense of purpose and life satisfaction.

MA refers to activities that are deeply connected to elderly people's purpose and meaning in life and have a significant impact on their physical health, mental stimulation, social interaction, and emotional well-being. Specific activities range from daily activities such as cooking and cleaning to hobbies such as reading, exercise, gardening, arts and crafts, and singing (National Institute for Health and Care Excellence, 2013; Takenaka, 2022). In Western countries, the psychosocial benefits of MA have been confirmed in the field of occupational therapy for older adults (Eakman, 2013), and it has been shown that even with illness, self-efficacy (a sense of accomplishment) and self-esteem (a sense of self-affirmation) can be enhanced by doing one's own grocery shopping or participating in hobby clubs.

However, because most older adults tend to avoid new activities, it is not easy to get them to practice

and continue MA. Therefore, this study aimed to develop a behavioral change intervention workbook designed to correct cognitive distortions specific to older adults, such as erroneous beliefs that "it's too late now because I'm old" and "it's no use to try something new," increase motivation to participate, and help them develop feasible action plans, thereby resulting in attitude and behavioral change.

While various welfare measures targeting older adults are currently being implemented in society, most of these interventions view older adults as vulnerable and focus on coping, recovery, and improvement. As the number of elderly people living alone is rapidly increasing, this research, which focuses on strengthening their purpose in life and life satisfaction, in addition to directly addressing various issues, could be useful in future policies for the elderly.

2. Components of the Behavior Change Intervention Workbook

The theoretical framework incorporated into this workbook is described as follows. For older adults to go out and subsequently engage in MA, information is needed that clearly defines (1) the elements related to going out (purpose of going out: content of MA; destination; transportation method), (2) the persuasion to engage in the behavior of going out (effective motivational intervention), and (3) the support for continuing to go out (creating an action plan; support for continuing behavior). Regarding (1), we provide MA options so that they can select

from a list, and clarify the destination and transportation methods associated with each activity. Regarding motivation and awareness of benefits for (2), we consider the following components: cognitive restructuring to correct cognitive distortions; the risks associated with persistently neglecting active going out behavior (risk perception); the benefits of continuing MA (expectations of outcomes); and the presentation of low-barrier MA content (enhancing self-efficacy). Furthermore, we aim to help older adults recognize the benefits of continuing to go out and engage in MA, thereby building expectations for the next step. Finally, in (3), specific action plans are established to increase the effectiveness of continuation, and at the same time, an approach based on various behavioral change techniques is used as ongoing support to avoid the risk of relapse.

3. Research Methods and Results

This study involves the development of a behavior change intervention workbook aimed at improving the life purpose and life satisfaction of older adults through the following five steps: (1) formative research (preliminary survey) based on a behavior change theory (Health Action Process Approach, hereafter abbreviated as HAPA; Schwarzer, 2011; Schwarzer, Lippke, & Luszczynska, 2011; Takenaka, 2008); (2) preliminary counseling: interviews to support the creation of an action plan; (3) prototype development of the behavior change intervention workbook; (4) evaluation of the acceptability and feasibility of the prototype workbook by older adults; and (5) evaluation of the feasibility of the prototype workbook by instructors and supporters working with older adults. The methods and results of each step are described below.

3-1 Conducting Formative Research (Preliminary Survey) Based on the Theory of Behavioral Change (HAPA)

We commissioned an online survey company to conduct a survey of 14,426 older adults aged 65 years or older, including 337 men and 207 women (mean age 70.64 years, $sd=4.64$) who had not been certified as requiring nursing care. The survey included questions about purpose in life, fulfillment, and life satisfaction, frequency of outings, purpose of outings (content of MA), methods used for going out, and factors promoting and inhibiting outings.

Regarding their MA, the online survey collected information from 318 people who responded that they "participate" in "some" or "very" exciting or meaningful activities. The activity details were listed by category according to frequency.

We asked participants to provide open-

ended responses regarding to factors related to motivation and planning for MA. The HAPA, which forms the basis of the survey, consists of two phases: motivational and volitional (Schwarzer, 2011; Schwarzer, Lippke, & Luszczynska, 2011). In the motivational phase, participants are encouraged to strengthen their behavioral intention (in this study, the motivation to engage in MA) by emphasizing three elements: (1) self-efficacy (the feeling that they can do it), (2) risk perception (the risk of not doing it), and (3) outcome expectancy (the expectation of the results they will achieve if they do it).

In the willpower phase, participants are asked to draw up an "action plan" detailing when, where, what, and to what extent they will do something in order to translate their increased motivation into concrete action, contributing to the formation of a habit. At the same time, participants are also asked to anticipate obstacles that may arise when putting this action plan into practice and to draw up "coping plans" with solutions and alternative activities.

In this survey, we asked questions corresponding to the motivational and volitional aspects of HAPA in relation to the practice of MA. As shown in the sample workbook on the last page of this report, examples of motivational aspect variables frequently observed in open-ended responses were provided to help participants select MA with higher self-efficacy. We also included checklists for risk perception and outcome expectations.

3-2 Preliminary Counseling: Interviews to Support Action Plan Creation (Photo: See the Japanese version)

As part of community activities in Tokyo's S Ward, we conducted counseling sessions aimed at strengthening the elderly's sense of purpose in life, and assisted them in developing plans for MA. The participants were nine people (two men and seven women) aged 52-81, with an average age of 69.67 ($sd=10.61$).

At this preliminary counseling session, we asked participants about (1) their definition of MA and their effects, (2) their current frequency of outings, (3) the content and frequency of their current "meaningful activities," (4) their mode of transportation, and (5) the types of activities they engaged in, and then confirmed their awareness of the specific effects and how they persisted in those activities. At the counseling session, we first presented specific content based on MA survey materials, and then participants created an action plan based on variables

related to the activity content. We also helped participants understand that in order to continue MA, it is necessary to resolve barriers and become aware of facilitators. In order to perform MA to strengthen the older adults' sense of purpose in life, it is important to develop an action plan from the initial stages of going out, in addition to encouraging them to continue the actual activity itself. This preliminary counseling session confirmed the importance of formulating an MA action plan. These checks were helpful in prototyping the workbook.

3-3 Prototype Development of the Behavior Change Intervention Workbook

The final page of this report presents a prototype of the behavior change intervention workbook developed through 3-1 Formative Research and 3-2 Preliminary Counseling. Based on the results of the formative research, the workbook includes a description of the MA and an introduction to the activities on the cover, followed by checklists for risk perception and outcome expectations, and then individual MA action plans, tips to aid persistence, and the creation of coping plans. Each page was developed based on the results of a survey incorporating the HAPA concept and confirmation during preliminary counseling.

3-4 Evaluation of Acceptability and Feasibility of a Prototype Behavior Change Intervention Workbook by Older Adults

A prototype behavior change intervention workbook was distributed to elderly participants in exercise classes, frailty prevention classes, and dementia prevention classes in M and S Wards in Tokyo, H City in Saitama Prefecture, and K City in Hyogo Prefecture, and the importance and content of MA were explained to them. The elderly participants were 63 in total, including 17 men and 46 women, aged 51-94 years. The mean age was 74.02 years ($sd=8.34$). None of them had been certified as requiring nursing care. Following the explanation, participants were asked to fill out the workbook one by one and then evaluate its acceptability and feasibility.

Fig. 1 (Results of the Acceptability and Feasibility Survey by Older Adults: See the Japanese version) shows the evaluation results of the workbook by 63 elderly people. Following the acceptability and feasibility checklists used by Shimazaki et al. (2013a,b) and Takenaka et al. (2022), participants were asked to rate the following items on a scale from "not at all" (1) to "very much" (5) for volume of views, self-efficacy, behavioral intention, ease of understanding, familiarity, perceived benefits, usefulness, and

suitability.

As a result, all average scores were above 3, indicating high ratings for acceptability and feasibility. Comparing the average scores by gender, women showed significantly higher scores than men only for usefulness ($t=-2.29$, $df=61$, $p<.05$, $d=.57$).

3-5 Feasibility Evaluation of a Behavior Change Intervention Workbook Prototype by Experts

A total of 20 experts (physiotherapists, licensed psychologists, and fitness instructors) in the fields of elderly frailty prevention, dementia prevention, and exercise instruction, consisting of 12 men and 8 women (average age 24-78 years, mean age 50.75 years ($sd=16.57$), were asked to rate the feasibility of the workbook on a scale from "not at all" (1) to "very much" (5) based on Bowen et al.'s (2009) concepts of feasibility (acceptability, desirability, implementability, practicality, adaptability, integrability, and scalability). The results are shown in Fig. 2 (Results of the Feasibility Survey by Experts: See the Japanese version) shows the average scores.

Applicability ("Do you think support using this booklet would still work even if it was targeted at older people with different characteristics or if it was modified to be implemented in a new format?") had an average score of 3.55, which was slightly lower than the other questions. The other questions received high scores overall, with practicality ("Do you think support using this booklet could be used in existing seminars or events that have traditionally been held for older people?") receiving a particularly high score of 4.05. Although experts have praised the practicality of interventions using this workbook, it is believed that it is necessary to deepen understanding of the condition of the target older people before implementing it.

4. Future Activities

The benefits of going out for older adults go beyond maintaining physical health. They also have significant positive effects on mental well-being, such as fostering curiosity and social contact. However, communicating such knowledge to older adults does not necessarily increase their outings. Therefore, correcting

misconceptions and ways of thinking is necessary, as well as providing motivational interventions such as presenting and encouraging goals, destinations, and activities that older adults find appealing. In this study, we developed a behavior change workbook based on a multi-component approach to encourage older adults to go out

and guide them in the practice of MA. Based on the results of this study, we plan to write a paper outlining the development process and submit it to an academic journal. Furthermore, we hope to utilize the behavior change intervention workbook developed in this study in various settings where we interact with older adults and verify its effectiveness.

5. Publication of Research Results

The results of this study were presented on the following occasions.

Takenaka, K., Uechi, H., & Miura, K. (2025). A preliminary study on outing support and "meaningful activities" aimed at enhancing the purpose of life for older adults. The 23rd Annual Conference of the Japanese Society for Stress Management. Wink Aichi, June 7.

Takenaka, K., Uechi, H., & Miura, K. (2025). Preliminary study for the development of a behavioral change intervention workbook aimed at enhancing the purpose of life for older adults. The 39th Annual Conference of the European Health Psychology Society, Groningen, Netherlands, August 26-29.

Takenaka, K. (2025). Creating a purpose in life for older adults. Symposium: Utilizing health psychology findings in the real world - Promoting the physical and mental health of older adults - The 38th Annual Conference of the Japanese Society of Health Psychology, J. F. Oberlin University, Shinjuku Campus, September 21.

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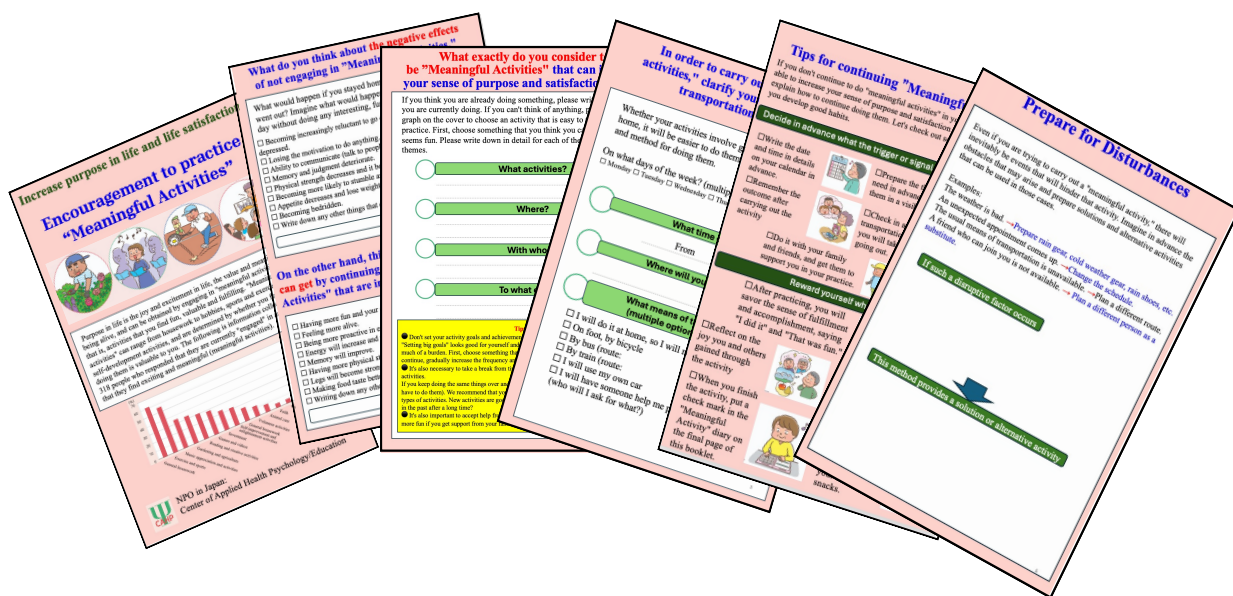
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Takenaka, K., Shimazaki, T., and Miura, K. (2022). Development of Health Promotion Materials Based on Formative Research: Small-Change Health Promotion for Couples. *Journal of Health Psychology Research*, 35, 91-99.

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The electronic version of the Behavior Change Intervention Workbook can be found at the following URL:
<https://saas.actibookone.com/content/detail?param=eyJjb250ZW50TnVtIjo2MTg1MjN9&detailFlg=1&pNo=1>