A randomised clinical trial of a wellness programme for healthy older people

Takashi Yamada,[1] Hironori Kawamata,[2] Norikazu Kobayashi,[3] Gary Kielhofner[4] and Renee R Taylor[5]

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[1] Professor, Master's and Doctoral Programme of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Tokyo, Japan.
[2] Assistant Professor, School of Health Science, Tokyo Metropolitan University, Tokyo, Japan.
[3] Associate Professor, Master's and Doctoral Programme of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Tokyo, Japan.
[4] Formerly Professor, Department of Occupational Therapy, University of Illinois at Chicago, Chicago, Illinois, USA.
[5] Professor, Department of Occupational Therapy, University of Illinois at Chicago, Chicago, Illinois, USA.

Corresponding author: Dr Takashi Yamada, Professor, Master's and Doctoral Programme of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, 7-2-10 Higashi-Ogu, Arakawa-City, Tokyo 116-8551, Japan.
Email: takyama@hs.tmu.ac.jp

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Background: With a growing increase in the population of older people worldwide, there is an undeniable need for efficient and cost-effective service delivery in occupational therapy.

Method: This randomised clinical trial employed a parallel design, with an experimental and a control group and a pre-test and post-test, to evaluate the effectiveness of a wellness programme based on the Model of Human Occupation (MOHO). Participants were 65 years of age or older, community-dwelling Japanese older people. Data were analysed for 30 experimental participants who received a 15-session MOHO programme and 33 controls who received a 15-session standard care, crafts programme. Quality of life and psychological wellbeing were compared between groups using the Japanese versions of the Life Satisfaction Index – Z (LSI-Z) and the World Health Organisation Quality of Life-26 (QOL26), respectively.

Results: The LSI-Z score for the experimental group improved an average of 3.4 points whereas the control group's mean score improved by 0.1 point. The mean change for the experimental group (m.chg = 3.4, SD = 5.8) was significantly different (p = 0.01) from that of the control group (m.chg = 0.1, SD = 4.8) and the effect size (Cohen's d) was 0.62 (95% confidence interval = 0.13-1.11). The psychological domain score (QOL26) improved slightly for the experimental group whereas it declined slightly for the control group. The mean change was significantly different (p = 0.02) between the experimental (m.chg = 0.1, SD = 0.5) and control (m.chg = -0.1, SD = 0.3) groups; effect size (Cohen's d) was 0.49 (95% confidence interval = 0.02-0.96).

Conclusion: The findings support the conclusion that MOHO-based occupational therapy interventions can promote wellness effectively in older people by having an impact on quality of life and sense of wellbeing.

Introduction

Worldwide, the proportion of older people in the overall population is increasing steadily (United Nations 2001). Among healthy older people, the inevitable changes in functional capacity associated with ageing can affect engagement in meaningful occupation (Bonder 1994). Additionally, social role changes, such as those that accompany retirement, can pose occupational challenges that threaten life satisfaction (Jonsson et al 2000, 2001). There is increasing recognition that occupational therapy can make a contribution to the wellness of older people through services that support their engagement in meaningful occupation (Scott et al 2001, Scriven and Atwal 2004, Letts 2008). In the current era of evidence-based practice, it is especially important that the impact of occupational therapy wellness programmes for older people are documented. This study was designed with the objective of contributing to the evidence base concerning the effectiveness of wellness programmes provided by occupational therapists.

Literature review

Although a number of studies have examined the impact of occupational therapy services for community-dwelling older people, most of this research has focused on traditional occupational therapy services (for example, providing assistive devices or training skills or decreasing falls through environmental modification) for populations with impairments (Steultjens et al 2004). Additionally, there is some research on specific interventions directed at maintaining wellness, such as the range of motion dance which combines the use of T'ai Chi, meditation, visualisation and music (Harlowe and Yu 1984, Van Deusen and Harlowe 1988) and programmes that seek to reduce fear of falling and increase activity participation (Peterson et al 1999, Peterson 2003).

More recently, there has been an interest in the development of comprehensive wellness programmes for well older people. Butin and Montgomery (1997) developed a comprehensive wellness programme. This programme included screening and intervention for health risks, nutrition screening and intervention, falls prevention, chronic illness self-management, healthy ageing seminars and a walking club. The programme was designed to provide older people with the opportunity to develop attitudes, acquire information and practise behaviours for managing daily life that promote healthy ageing.

Lifestyle Redesign® is an occupational therapy wellness programme that includes both individual and group interventions (Jackson et al 1998). The programme includes discussion of the power of occupations, ageing, health and occupation, transportation, safety, social relationships, cultural awareness, finances and an integrative summary. The focus of the programme is to educate older people about the impact of everyday occupations and enable them to organise a healthy and meaningful pattern of activities.

Research on the outcomes of comprehensive occupational therapy health promotion programmes for healthy older people is still in its infancy. Two pilot studies and one large randomised clinical trial have been reported in the literature to date. Matuska et al (2003) evaluated an occupational therapy wellness programme designed to teach American older people the importance of participation in meaningful social and community occupations. In a pilot study of 39 older adults in senior apartment complexes, the authors found that participants improved over the course of the intervention in three areas of quality of life: vitality, social functioning and overall mental health.

Clark et al (1997) studied the Lifestyle Redesign® programme using a randomised clinical trial (RCT) design, which included 361 older adults. The occupational therapy group displayed significant benefits across the majority of domains for health and quality of life, and experienced improvement, or fewer declines, on the outcome measures in comparison with the control group. Specifically, those in the well elderly programme had better scores on measures of quality of life, life satisfaction, health perception and health status (that is, bodily pain, physical functioning, role limitations attributable to health problems, vitality, social functioning, role limitations attributable to emotional limitations and general mental health).

Mountain et al (2008) conducted a feasibility study of an 8-month occupation-based health-promoting intervention, Lifestyle Matters, for community-living older people in the United Kingdom (UK). This programme was an adaptation of the Lifestyle Redesign® programme to fit the UK context. This feasibility study asked whether an occupation-based health-promoting intervention for community-living older people could be delivered successfully. The study also sought to provide information to guide future effectiveness research. Twenty-eight participants enrolled in the 8-month programme and 26 completed it. Participants were interviewed qualitatively before and after the 8-month programme. Measures of cognition, depression, functional dependency and quality of life were obtained from each participant before and after the intervention.

The interviews revealed that participants saw a number of benefits to the programme, with greater self-efficacy being a significant theme. Participants show improvement on all dimensions of quality of life. Measures of cognition, depression and dependency were useful for screening and identifying people at risk, but they did not show improvement. This study indicated that it was feasible to deliver the programme in the UK context and that it appeared beneficial. However, the author noted a need for further research to test the intervention rigorously and to explore applicability in a range of settings.

Together, these three studies provide support for the premise that occupation-focused wellness programmes are feasible and are likely to have positive effects such as increased quality of life/life satisfaction and psychological wellbeing (for example, vitality, overall mental health and emotional wellbeing). They also suggest that wellness programmes need to be designed to resonate with the social and cultural features of the context. To date, the development and study of wellness programmes for older people has taken place within Western cultures. Until recently, no wellness programme for older people has been studied in the Eastern context.

To address this gap, two of the present authors developed an occupational therapy wellness programme based on the Model of Human Occupation (MOHO, Kielhofner 2008) for Japanese older people (Kawamata and Yamada 2008). This programme was designed to help older people to search for and engage in meaningful occupation through a lecture and seminar about MOHO that emphasised the motivation for occupation, roles and habits, occupational performance and the influence of the environment. Yamada and Kobayashi (2008) examined a pilot of this programme with healthy older people entering housing for older people in Japan. The initial findings indicated that the programme improved participants' life satisfaction and psychological sense of wellbeing. The purpose of the present study was further to examine the effectiveness of this programme using a randomised clinical trial.

Method

Study design

This study was a randomised clinical trial that employed a parallel design, using an experimental and a control group and a pre-test and post-test. The dependent variables in the study were chosen to reflect the two outcomes that have consistently been found in occupational therapy wellness programmes (quality of life/life satisfaction and psychological wellbeing). This study was supported by intramural research funds provided by Tokyo Metropolitan University; beyond providing funding, the funding agency played no role in the study. This study was approved by the Study Security and Ethical Review Board of Arakawa Campus, Tokyo Metropolitan University (number 08021).

The study was designed to test two hypotheses:

1. Participants who receive the MOHO-based intervention will show greater improvement in quality of life than participants who receive a control intervention.
2. Participants who receive the MOHO-based intervention will show greater improvement in psychological wellbeing than participants who receive a control intervention.

Participants

The inclusion criteria were that participants had to be 65 years of age or older, community dwelling and not currently undergoing medical rehabilitation.

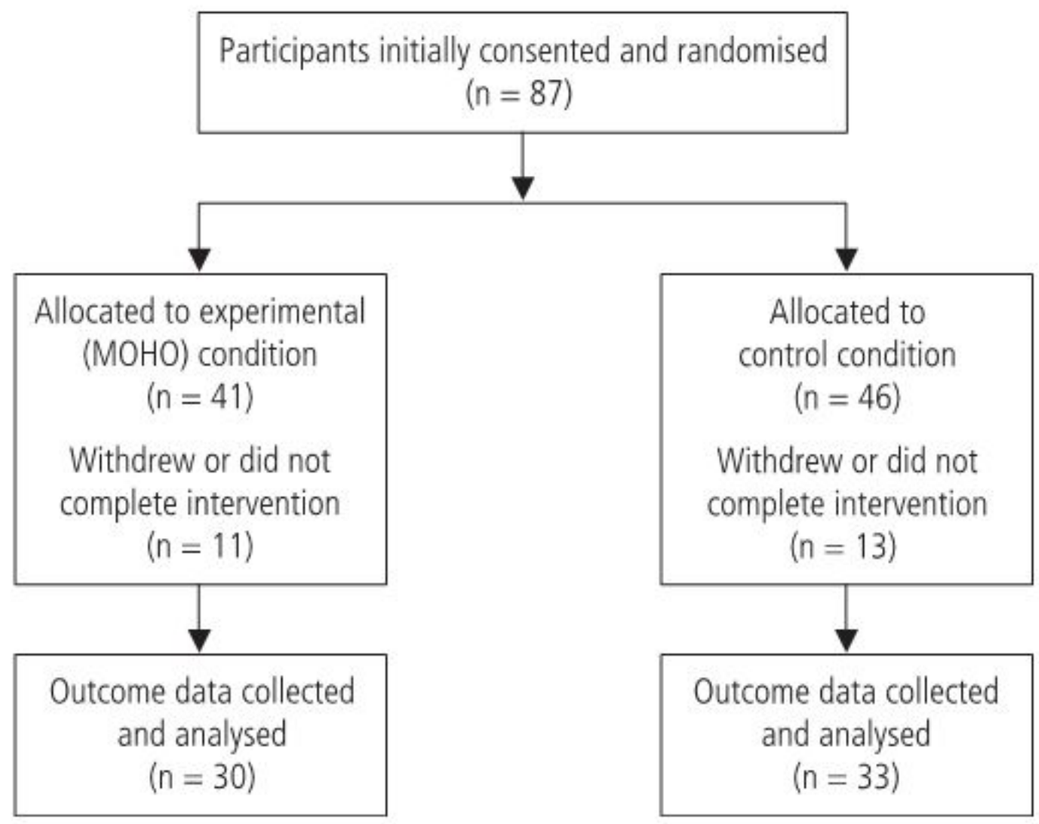
Procedures

Healthy older adults were recruited through local newspaper advertisements from the Arakawa and Toshima wards of Tokyo and from the Chuo ward in Kobe City. The advertisements provided a brief description of the study, its purpose and what participants would be asked to do as part of the study. They were given a telephone number to ring in order to learn more about the study.

When potential participants telephoned, the second or third author explained the study in more detail, including the location and timeframe of the programme sessions. Verbal consent to participate in the study was obtained over the phone. Once consent was obtained, simple randomisation through rolling of a dice was used to allocate the person to one of the two groups. In this way, allocation was unknown to either the participant or the person making the allocation until after the participant gave consent. Given the nature of the experimental and control interventions, it was not possible fully to blind the therapists or the participants to whether they were in the experimental or control group. Informed consent required that participants knew that two different approaches to wellness services were being compared. However, they were not aware whether the intervention they received was expected to produce better results.

Following this, the participant was provided with information about his or her group assignment and given the time and location of the first session of the experimental or control group to which he or she was assigned. During the first session, the informed consent information was reviewed again and written consent obtained.

Fig. 1. Study flow diagram.



The experimental and control groups were implemented in three separate research locations (the Arakawa and Toshima wards of Tokyo and the Chuo ward in Kobe City). Each of the first three authors conducted the experimental and control groups in his or her respective location and collected baseline and outcome data. A programme manual was developed together by these authors to ensure that the experimental and control conditions were all implemented in a uniform manner across study sites; it is available from the first author.

A target of 45 participants (15 in each location) was sought for each of the experimental and control groups. Recruitment continued until adequate numbers were obtained for the control and experimental groups in each of the three sites. The number of people recruited to the study was determined by the amount of funding available to conduct the investigation. Fig. 1 provides a flow diagram of the study. Of the 41 originally enrolled in the experimental group, 11 (27%) withdrew or were unable to complete the programme. Of the 46 enrolled in the control groups, 13 (28%) withdrew or were unable to complete the programme. There were no differences in the location, demographic characteristics or baseline scores of those who withdrew from those who completed the study. There were no observed negative consequences or harm to participants in either the control or experimental conditions.

Baseline data were collected during the first session and outcome data were collected at the end of the final session. Since the measures were self-report instruments, therapists who administered these outcome measures were not blinded to the participant's condition. The occupational therapist who conducted the experimental or control groups provided the self-administered assessments to the participants, read instructions and answered any questions concerning how the instruments were to be completed. Both the experimental and control groups met twice monthly for 2 hours over an

8-month period for a total of 15 sessions. The groups and data collection took place in sites used for older people's programmes in the neighbourhoods of the participants. Recruitment and implementation of the groups took place between June 2008 and April 2009.

Control group

The control group was designed to reflect standard care in health promotion in Japan. In existing health promotion programmes for older people, craft activities are widely used. The idea behind the use of crafts is that engagement in activities of meaning has a health-promoting impact. Thus, in each session of the control group, older people were provided with materials and allowed to choose from crafts that are common to Japanese older people (for example, origami and macramé). The occupational therapist offered guidance to help each member of the group to choose a craft to undertake during the session and then provided instruction and coaching to assure that each participant could complete the craft activity successfully during the session.

The groups were structured as parallel groups in which each client engaged in a craft of his or her choice alongside other older people who did the same. Conversation was informal during these sessions and focused on the craft activities and casual conversation. Each of the 15 sessions was conducted in this manner. The duration and timing of the control groups were the same as for the experimental groups.

Experimental group

Those in the experimental group participated in the MOHO-based programme. MOHO was chosen as the conceptual framework for this intervention for the following reasons. First, this model has been used to conceptualise and study the relationship of occupation and wellbeing in older people (Elliott and Barris 1987, Shimp 1990, Jonsson et al 1997, Peterson et al 1999, Jonsson et al 2000, 2001, Bjorklund and Henriksson 2003, Howie et al 2004, Cipriani 2007). Moreover, MOHO has also been used as a framework for developing services for older people (Burton 1989a, 1989b, Levine and Gitlin 1993, Corcoran and Gitlin 2001, Gitlin et al 2003, Roitman and Ziv 2004). Finally, MOHO has been shown to be a useful framework for developing services for people in Eastern cultures (Liu and Ng 2008, Nakamura-Thomas and Yamada 2008).

The aim of the MOHO-based programme was to provide the older people with opportunities to reflect on their own occupational lives using concepts from MOHO and collaboratively to discuss and enact ways that they could better meet their own occupational needs. Each session consisted of a lecture followed by group discussion and activity. Lectures introduced the participants to MOHO (Kielhofner 2008) concepts (that is, values, interests, sense of capacity, role, habits and environmental influences) in language that was appropriate to lay people. Session one focused on the general relevance of occupation to health. The following sessions focused sequentially on each of the MOHO concepts, with two sessions being devoted to each concept. The format of the two-session sequence was as follows. In the first session, participants were introduced to the concept and shown how the concept related to their everyday lives during a one-hour lecture and discussion session given by the occupational therapist. In the second part of the 2-hour session, they participated in exercises that helped them to use the MOHO concept to reflect on their own lives and collaboratively to problem solve how to meet their needs.

Participants were then given homework exercises to complete and bring to the following session. The first part of the session focused on reporting and discussing the results of the homework assignment. For example, in the session that focused on values, the lecture focused on how values are viewed in MOHO and how engaging in activities of value is related to wellbeing. Participants were given a homework assignment to reflect on their own values. In the subsequent session, they engaged in a group discussion about values and they decided together on a group activity that they would do later in the programme that would enable them to enact their values.

The second part of this session had a group activity component that followed up on some issue that had arisen in an earlier session. For example, as part of the environmental session, one group decided that they wanted to know more about resources provided by the welfare department in the district where they lived. Thus, they planned and made a visit to the department where they invited an expert from the welfare system to speak to them.

Over the course of the programme, participants learned MOHO concepts and reflected on how these applied in their lives. They used this knowledge and reflection to decide upon and enact activities individually and in groups that allowed them to apply their learning in their lives. Through this process, participants gradually deepened their insight about their own occupational lives and gained a greater sense of control over decisions about engaging in occupation. The programme supported them individually and collectively to identify actions that they wanted to take to improve their occupational lives.

Measures

Outcomes were measured by administering the Japanese versions of the Life Satisfaction Index – Z (LSI-Z) and the World Health Organisation (WHO) Quality of Life-26 (QOL26) pre-intervention and post-intervention.

Life satisfaction

Life satisfaction was measured by the Japanese version (Nakazato 1992) of the LSI-Z (Wood et al 1969). The LSI-Z was originally developed as part of a 5-year study of healthy ageing in the United States. Items on the instrument reflect zest for life, resolution and fortitude, congruence between desired and achieved goals, positive self-concept and optimistic mood. It has been used extensively for more than four decades in studies of life satisfaction in older people. Higher scores on the instrument indicate higher life satisfaction (Nakazato 1992).

Psychological wellbeing

To measure psychological wellbeing, the Japanese version of the WHO Quality of Life-26 (QOL26) (Tazaki and Nakane 1997) was used. The QOL26 is a short version of the WHO Quality of Life Scale (WHOQOL) (WHO 1995). It is a self-rated instrument that assesses individuals' perceptions of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards and concerns. The Japanese version of the WHOQOL is widely used in Japan in studies of health-related status and outcomes of intervention and is considered a gold standard for assessing quality of life and wellbeing. The QOL26 has 26 items with five subscales. In this study, scores on the psychological subscale, which measures cognitive and affective state, were compared, since this subscale most closely targeted what the programme was designed to impact. The psychological domain of QOL26 asks respondents to rate items that pertain to feelings of affirmation, satisfaction, joy and pleasure. It also asks them to rate how they feel about themselves and whether their lives have meaning. Higher scores on the subscale indicate higher levels of psychological quality of life or wellbeing.

Table 1. Demographic characteristics (mean and frequency data) for experimental and control group participants

	Experimental group (n = 30)	Control group (n = 33)
Age (mean ± SD)	72.3 ± 4.7	72.6 ± 4.3
Gender		
Male	5	6
Female	25	27
Number of participants living with a spouse	15	15
Number of participants hospitalised in the past year	0	1
Chronic conditions		
Hypertension	10	11
Cerebrovascular accident	0	0
Heart disorder	1	1
Diabetes mellitus	1	2
Joint disease	9	12

Data collection

Both the LSI-Z and the QOL26 were administered at baseline and at the end of the intervention. All baseline data were collected during the first two sessions and final data were collected in the final session. Additionally, demographic data were collected (that is, age, sex, marital status, hospitalisation in the previous year and presence of chronic health conditions).

Data analysis

Chi-square tests, t-tests, Mann-Whitney U-tests and Wilcoxon signed rank tests were used to test for differences between the two groups, depending on sample distribution and variable characteristics. First, it was examined whether participants differed on key demographic characteristics at baseline. Then, the mean differences of the participants that completed the study, from pre-test to post-test on the two outcome variables, were compared to test whether they were different for the control and experimental groups.

Results

Sixty-three older people participated in the study; each was present for his or her respective group sessions at least 9 of 15 times (60%). Their demographic characteristics are shown in Table 1. Thirty participants were in the experimental group; their mean age was 72.3 (SD = 4.7). This group included 5 men and 25 women. Thirty-three participants were in the control group; their mean age was 72.6 (SD = 4.3). Six were men and 27 were women. In both groups, approximately half were living with a spouse. Only one participant had been hospitalised in the past year. Approximately a third of each group had either hypertension or a joint disorder. None had experienced a cerebrovascular accident (CVA), two had a cardiac disorder and three had diabetes mellitus. There were no significant differences between the two groups on any of the baseline demographic variables.

The results of the pre-test and post-test of life satisfaction and psychological wellbeing are shown in Table 2. The mean LSI-Z score for the experimental group improved an average of 3.4 points whereas the mean score for the control group improved by 0.1 point. The mean change was significantly different between the two groups (p = 0.01). Effect size (Cohen's d) was 0.62 (95% confidence interval = 0.13-1.11).

Table 2. Comparison of pre-test and post-test mean and change scores on the LSI-Z and QOL26 for the control and experimental groups

	Experimental group (n = 30)			Control group (n = 33)			Comparison of mean change
	Pre-test mean (SD)	Post-test mean (SD)	Change mean (SD)	Pre-test mean (SD)	Post-test mean (SD)	Change mean (SD)	p value
LSI-Z	16.4 (6.3)	19.8 (4.1)	3.4 (5.8)	16.3 (4.1)	16.4 (4.1)	0.1 (4.8)	0.01*
WHO QOL26 psychological domain	3.6 (0.5)	3.7 (0.6)	0.1 (0.5)	3.6 (0.6)	3.5 (0.6)	-0.1 (0.3)	0.02**

*Mann-Whitney's U test, **t-test.

LSI-Z = Life Satisfaction Index – Z; WHO QOL26 = World Health Organisation Quality of Life-26.

When comparing the pre-test and post-test results for the psychological domain score (QOL26), the score improved slightly for the experimental group whereas it declined slightly for the control group. The mean change was significantly different between the two groups ($p = 0.02$). Effect size (Cohen's d) was 0.49 (95% confidence interval = 0.02-0.96) The p-values for both outcome variables were lower than $p = 0.025$, which is the more conservative criterion that adjusts for the fact that two significance tests were performed.

Discussion

The results of this study indicate that the MOHO programme had a positive impact on both quality of life and psychological wellbeing. The effect size for life satisfaction was medium and the effect size for psychological wellbeing was between medium and high, as defined by Cohen (1988). Given that this was a time limited and low intensity intervention (2 hours bi-monthly over 15 weeks), the effect sizes obtained in this study are encouraging.

The study findings suggest that a lecture and seminar format that teaches occupational therapy (MOHO) concepts in order to enhance clients' understanding of their own occupational lives and that enables older people to discuss, plan and take action can have an impact on their occupational engagement (that is, what they do and how they feel about it). This programme was innovative in the sense that it gave participants access to professional knowledge and thereby empowered them. Teaching MOHO concepts to clients is recommended in order to achieve client-centred practice (Kielhofner 2008) and is frequently done by therapists who use this practice model (Lee et al 2008).

The programme gave participants an opportunity to see their occupation through the lenses of MOHO concepts and tools. For example, clients learned how participating in activities that were of interest to them could influence their mood positively. They learned about their own interests during a group activity that required them to complete the Japanese Interest Checklist for the Elderly (Nakamura-Thomas and Yamada 2008). Then, they were given the opportunity to plan and participate in the occupations that reflected their interests. Anecdotal observations indicate that this type of learning enabled the older people to be more aware of how their own occupational behaviour influenced their wellness and to make choices about how to improve their occupational lives. Future research on this type of intervention should examine the extent to which older people do change their activity patterns. The observed differences between the experimental and control groups on the LSI-Z and the QOL26 indicated that the programme had a positive impact on participants' sense of satisfaction, joy, pleasure and meaning; it would be interesting to examine what kinds of change in occupation paralleled these psychological effects.

It has been suggested that concepts from MOHO that emanate from a Western perspective and that emphasise construction of a self apart from the environment may have limited relevance to an Eastern context, which emphasises the social collective (Iwama 2004). Liu (2008) examined this argument in light of experiences using MOHO in Hong Kong and concluded that MOHO can be used effectively in the context of Chinese culture. Moreover, there is much anecdotal evidence that MOHO is relevant and widely used in Japanese culture. A recent text on theory use highlights a Japanese therapist who uses MOHO and provides detailed case examples of the application of MOHO with Japanese older people (Kielhofner 2008). Although issues of cultural relativity are important to consider, the WHO (2001) emphasised the importance of identifying rehabilitation services that facilitate participation and that work across national and cultural boundaries. This study provided evidence that MOHO can be used as a framework for developing interventions for Japanese individuals and that such interventions are effective. As such, it provides additional evidence that MOHO is relevant and effective in the Asian context.

Anecdotal evidence gleaned by the first three authors who implemented the programme also indicated that MOHO concepts are useful in Japanese culture. Japanese older people readily understood such concepts as values, interests, roles and habits. They were initially hesitant to talk about these things with reference to themselves in front of a group, because this is not a common form of discourse in Japanese culture. However, through the process of individual disclosure and group discussion, participants were able to relate their personal circumstances and needs to the community's experiences and perspectives. This was a very affirming process for them and participants commented on how valuable it was.

The present observations about the use of MOHO in the Asian context resonate with Liu's (2008) observations that MOHO concepts allow Asian people to reflect upon and analyse their own situations in a systemic way and reach their own conclusions about their lives. MOHO provides a framework that is useful for helping clients better to understand their own circumstances and become active agents of change in their own lives. This study indicates that this process is relevant and effective in an Eastern context.

In addition, there was an important dynamic interplay of individual participants' thoughts and feelings with the collective perspectives of the group members in this programme. This dynamic interplay paralleled the systems concepts in MOHO, which emphasise how an individual's volition, habituation and performance are shaped through interaction with the social context (Kielhofner 2008). This dynamic process was an important part of the present programme and it is likely that it accounts for the observed salutatory effects on life satisfaction and psychological wellbeing.

The MOHO-based programme investigated in this study had both similarities and differences to the Lifestyle Redesign® programme, which is currently the most rigorously studied occupational therapy wellness intervention for older people. Both programmes focus on achieving wellness through addressing occupation in the life of the older person and

both focus on helping the older person to increase knowledge, become aware of personal attitudes and change behaviour.

The present programme differs from the Lifestyle Redesign® programme on the following characteristics. First, while the former is based on concepts of occupational science (Zemke and Clark 1996), the present programme is based on a specific occupational therapy conceptual practice model (MOHO); it is designed to teach older people that model as a means of self-understanding and lifestyle management. Second, it is designed to be delivered as a less intensive intervention. In contrast to the Lifestyle Redesign® programme which took place over 9 months and included 2 hours of weekly group interventions and 9 hours of individual treatment, this programme was implemented over 8 months for a total of 15 bi-monthly, 2-hour group sessions. Thus, the intensity of the intervention was substantially less.

In the context of limited health resources, it is important to determine the necessary dosage of interventions to achieve a desirable effect. This study found an effect on life satisfaction and psychological wellbeing from a non-intensive intervention. It remains to be seen through future research whether this effect is sustained over time and related to other important health outcomes.

Limitations of the study

Outcome data were collected at the end of the intervention. Thus it is impossible to conclude from this study whether the observed changes in psychological wellbeing and life satisfaction were sustained after the intervention was terminated. Future research should include follow-up data collection to determine whether the observed effects endure. Future research with long-term follow-up data will be important in determining whether the wellness programme can be implemented as a one-time intervention with lasting results, whether it should be an ongoing programme of wellness promotion or whether periodic boosters are needed to sustain the effects.

The sample was of individuals from three urban locations, who self-identified as interested in the study; it did not consist of a random selection of well older people. Thus, generalisation of the findings to other Japanese older people, such as those living outside an urban context, should be made with caution. Moreover, approximately a quarter of those enrolled in the study did not complete either condition. While this is a limitation of the study, it is important to note that such attrition is difficult to avoid and is not unusual for community-based research (Henderson et al 1997).

Although this study had a number of limitations, it is important to recognise that the aim of the study was to examine the effectiveness of a community-based wellness programme. There is an important distinction between the goal of evaluating intervention efficacy and effectiveness (Flay 1986). Efficacy studies stress the internal validity of a study and seek to achieve good control over all confounding variables. Effectiveness studies stress external validity and seek to produce findings generalisable to real life populations and treatment circumstances. Often investigators are faced with the difficulty, if not impossibility, of optimising the aims of each type of research. There has been a strong emphasis on efficacy research because the rigour of such research allows one to draw clearer conclusions about the impact of a service. However, because efficacy studies often require testing services under ideal circumstances, there is frequently a lack of relevance and, thus, translation of such research to practice (Glasgow et al 2003). An overemphasis on efficacy research has 'often led to interventions that have low probability of success in real-world settings' (Glasgow et al 2003, p1261).

Given the limited amount of research on services to enhance wellness in older people and the necessity of delivering such services in a community context, it was decided to conduct a study that emphasised *effectiveness*. The aim of this study was to examine the effectiveness of the wellness programme by maximising the external validity of the study. That is, participants were recruited and the study was implemented under conditions that are likely to characterise wellness programmes offered in any Japanese community.

Conclusion

The purpose of this study was to contribute further evidence about the effectiveness of occupational therapy interventions to promote wellness among healthy older people. This study provided evidence that a MOHO-based wellness programme of modest intensity and duration significantly improved the life satisfaction and psychological wellbeing of Japanese older people. The medium to strong effect sizes were encouraging given that the programme was neither costly nor demanding. Approximately three-quarters of those originally enrolled in the programme remained in the programme. Since participation was voluntary, the rate of older people's sustained participation in both the control and experimental groups suggests that they feel generally positive about any programme that provides an opportunity for activity, learning and/or socialisation. Anecdotal data suggest that the reasons for dropping the programme were not linked to the content or process of the programme itself; they included the interference of health problems, competition of other activity opportunities and lack of energy for participation. Overall, the study indicates that the MOHO-based wellness programme was well received by Japanese older people, sustained their interest and participation, and produced significant increases in psychological wellbeing and life satisfaction.

The findings of this study do support the conclusion that occupational therapy interventions can promote wellness in older people effectively by having an impact on quality of life and sense of wellbeing. For investigators who are interested in replicating the study, there is a manual which details the intervention protocol, which may be obtained

from the first author. Previous research in the United Kingdom and the United States has indicated that occupational therapy can contribute to wellness among older people. This was the first study to provide evidence of the effectiveness of such a programme in an Eastern culture. It was also the first study to examine the impact of a wellness programme for older people based on MOHO. Although previous publications have used MOHO as a framework for studying ageing and for developing and studying interventions aimed at older people with disabilities, this was the first study to provide evidence of the effectiveness of a wellness programme for healthy older people.

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Conflict of interest: None.

Key findings

- The MOHO wellness programme influenced positively the quality of life and psychological wellbeing of its participants.
- MOHO is a relevant framework for use in providing effective interventions in an Asian context.

What the study has added

This study was the first to investigate the effectiveness of a MOHO-based wellness programme for older people. The results suggest that the programme is an effective intervention for this population.

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Call for papers

Special issue: Promoting physical activity to enhance quality of life

The Editorial Board of the *British Journal of Occupational Therapy* will publish a special issue in 2011 on the topic of physical activity and its central role in rehabilitation and in enhancing health-related quality of life. There is mounting evidence of the contribution of physical activity to physical and mental health across the lifespan and in a range of client groups; as a consequence, its role is increasingly recognised and promoted as a central element of clinical guidelines and of health care strategies.

This special issue provides a forum to present contemporary research findings and debate relating to physical activity in health and disease, to showcase the unique role of occupational therapy and to examine the relevance of physical activity to contemporary professional practice. The special issue will be guest edited by Professor David Baxter, Professor and Dean, School of Physiotherapy, University of Otago, and Dr Alison Porter-Armstrong, Senior Lecturer in Rehabilitation Sciences, Health and Rehabilitation Sciences Research Institute, University of Ulster at Jordanstown.

Submissions are welcome within any of the categories published in the *revised* author's guide (http://www.cot.co.uk/Homepage/Library_and_Publications/British_Journal_of_Occupational_Therapy_(BJOT)/Submit_BJOT_articles_online/); however, we are particularly interested in receiving research papers that have a direct impact on practice. Papers should be submitted in the normal manner (http://mc.manuscriptcentral.com/bjot) and will be considered for publication using the journal's usual peer review process.

Authors should indicate clearly in their covering letter and at the end of the abstract that they wish the paper to be considered for inclusion in the physical activity special issue.

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