Difficulties Experienced in Setting and Achieving Goals by Participants of a Falls Prevention Programme: A Mixed-Methods Evaluation

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ABSTRACT

Purpose: To evaluate the ability of participants of a falls prevention programme to set and achieve goals. **Methods:** The study used a prospective longitudinal design and a mixed-methods approach to data collection. Study participants were (1) 220 older adults participating in a 15-week combined exercise and education falls prevention programme and (2) 9 practitioners (3 home-care nurses, 5 community workers, and an exercise physiologist) involved in delivering the programme. Data from goal-setting forms were analyzed, and descriptive statistics were used to determine the number of appropriate goals set and achieved. Data were analyzed according to programme setting (home- or group-based) and whether or not participants were classified as being from a Culturally and Linguistically Diverse (CALD) background in the Australian context. Semi-structured interviews with programme practitioners were thematically analyzed. **Results:** A total of 144 respondents ($n = 75$ CALD group, $n = 41$ non-CALD group, $n = 6$ CALD home, $n = 22$ non-CALD home) set 178 goals. Only 101 (57%) goals could be evaluated according to achievement, because participants set goals that focused on health state instead of behaviour, set goals not relevant to falls prevention, used inappropriate constructs to measure goal achievement, and either did not review their goals or dropped out of the programme before goal review. Of these 101 goals, 64 were achieved. Practitioners described their own difficulties in understanding the process of setting health behaviour goals along with communication, cultural, and logistic difficulties. **Conclusions:** Both CALD and non-CALD participants and those participating in both group- and home-based programmes experienced difficulty in setting and achieving goals to facilitate behaviour change for falls prevention. Data suggest that home-based participants had more difficulty in setting goals than their group-based counterparts and, to a lesser extent, that CALD participants experienced more difficulty in setting goals than their non-CALD counterparts. The use of a guided approach to goal setting and the need for more specific practitioner training and follow-up support regarding goal setting in the context of a falls prevention programme should be considered.

Key Words: accidental falls; culture; exercise; goals; health education.

RÉSUMÉ

Objectif : Évaluer la capacité des participants d'un programme de prévention des chutes d'établir et d'atteindre des buts. **Méthodes :** L'étude a utilisé un concept longitudinal prospectif et une stratégie mixte de collecte de données. Ont participé à l'étude (1) 220 adultes âgés participant à un programme de prévention des chutes combinant exercice et éducation d'une durée de 15 semaines et (2) 9 professionnels (3 infirmières en soins à domicile, 5 travailleuses communautaires et 1 spécialiste de la physiologie de l'exercice) participant à la prestation du programme. On a analysé les données tirées des formulaires d'établissement des buts et utilisé des statistiques descriptives pour déterminer le nombre de buts appropriés fixés et atteints. On a analysé les données en fonction du contexte du programme (à domicile ou en groupe) et du classement des participants comme provenant d'un milieu culturellement et linguistiquement divers (CCLD) dans le contexte australien. Des entrevues semi-structurées avec des professionnels du programme ont été analysées sur le plan thématique. **Résultats :** Au total, 144 répondants ($n = 75$ groupe CCLD, $n = 41$ groupes non CCLD, $n = 6$ soins à domicile CCLD, $n = 22$ soins à domicile non CCLD) ont fixé 178 buts. Il a été possible d'en évaluer 101 (57%) seulement en fonction de l'atteinte parce que les participants ont fixé des buts portant avant tout sur l'état de santé plutôt que sur le comportement, ont fixé des buts qui n'étaient pas pertinents à la prévention

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Competing interests: Terry Haines is the director of Hospital Falls Prevention Solutions Pty Ltd., which provides consultative services to hospitals for the prevention of falls; this is not the topic of the present article. He has also provided expert witness testimony on the subject of falls prevention in hospitals and has received payment to speak at conferences on the same topic.

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des chutes, ont utilisé des postulats inappropriés pour mesurer l'atteinte des buts et n'ont pas revu leurs buts ou ont abandonné le programme avant l'examen des buts. Sur ces 101 buts, 64 ont été atteints. Les professionnels ont décrit leur propre difficulté à comprendre le processus d'établissement de buts liés aux comportements santé, ainsi que des difficultés sur les plans de la communication, de la culture et de la logistique. **Conclusions :** Les participants CCLD et non CCLD et ceux qui participaient à des programmes en groupe et à domicile ont eu de la difficulté à établir et atteindre des buts pour faciliter le changement de comportement en vue de la prévention des chutes. Les données indiquent que les participants à domicile ont eu plus de difficulté à établir des buts que leurs homologues qui ont travaillé en groupe et, à un degré moindre, que les participants du groupe CCLD ont eu plus de difficulté à établir des buts que leurs homologues des autres groupes. Il faudra envisager d'utiliser une stratégie guidée d'établissement des buts, le besoin d'une formation plus précise des professionnels et de soutien en suivi pour ce qui est de l'établissement des buts dans le contexte d'un programme de prévention des chutes.

Falls among older adults are a major and growing public health issue. In any given year, approximately one third of community-dwelling adults aged 65 years and over experience a fall.^{1,2} Falls are a significant cause of morbidity and mortality among older adults, with fatality rates ranging from 36.8 to 94 per 100,000 people in developed countries such as the United States, Finland, Canada, and Australia.^{3,4} Unless the incidence of falls can be reduced and treatment costs can be lowered, the financial costs associated with falls can be expected to rise dramatically.^{5,6}

Systematic reviews have demonstrated that various falls prevention interventions—including exercise programmes, multifactorial interventions, home safety interventions, interventions targeting medication, cataract surgery, pacemaker insertion, and vitamin D supplementation—can reduce the rate and/or risk of falls, some in all older adults and others in particular subgroups.^{7,8} Because many of these efficacious interventions rely on the active participation of older adults, they are effective in practice only if they are adhered to for the duration of the intervention and often on an ongoing basis. Therefore, the effectiveness of falls prevention programmes may be compromised by older people's reluctance to participate in or continue with these interventions.⁹

Previous research has suggested that in clinical trials, it is possible that only half of community-dwelling older people are adhering to falls prevention interventions after 12 months.¹⁰ A systematic review of patient perspectives on participation in falls prevention interventions found that factors facilitating participation included social support, low-intensity exercise, greater participant education, involvement in decision making, and a perception that the programmes were relevant and life-enhancing.¹¹ Most of these 24 reviewed studies examined beliefs and attitudes rather than actual behaviour, and only one study assessed the intervention's effectiveness in promoting acceptance of falls prevention strategies. Also, few of the studies described the theoretical foundation behind programme components. Many possible theoretical models can be applied in designing this type of programme; an example is the Information–Motivation–Behavioural Skills (IMB) Model of health behaviour change,¹² which postulates that health-related information, motivation, and behavioural skills are important determinants of whether or not a health behaviour is performed. This model of

health behaviour change underpins the intervention used in this study. More research that evaluates the effect of strategies designed to promote falls prevention behaviour change while also describing the theoretical underpinnings of the programme being evaluated is needed.

Psychological theory and research suggest that giving people an active role in setting goals increases their motivation and self-efficacy (defined as confidence in the ability to carry out a behaviour), which in turn promotes adherence.^{13,14} Goal setting is an accepted strategy for promoting behavioural change¹⁵ and has become integral to client-centred practice¹⁶ and rehabilitation.^{17,18} Six out of eight studies evaluated in one literature review demonstrated that goal setting was effective in promoting physical activity behaviour change in adults.¹⁹ Goal setting has also been advocated in the field of falls prevention,^{20,21} despite a lack of research in this area.

Previous research demonstrating the effectiveness of goal setting in facilitating behavioural change and adherence to health care recommendations is not specific to falls prevention programmes and is often limited to English-speaking participants.^{19,22,23} Many people in developed countries are from Culturally and Linguistically Diverse (CALD) backgrounds, especially among older adults.^{24,25} In the Australian context, the term *CALD background* is used to describe people whose primary language is not English and/or who were born into a culture significantly different from the dominant Australian culture.²⁶ Client communication deficits, a philosophy of medical paternalism among clients, and time constraints have been identified as difficulties in implementing client-directed goal setting in the clinical rehabilitation setting.²⁷ It is possible that CALD participants may experience greater difficulty with the goal-setting process due to language issues and a lack of understanding of client-centred care. There is a need to evaluate the use of goal setting for promoting participation in falls prevention health behaviours in real-life circumstances.

Our purpose in this study was to apply and evaluate a client-directed goal-setting approach with participants of a combined exercise and education falls prevention programme, the SEHCP Inc. Making a Move programme (2011 iteration), in Victoria, Australia. Our primary goal was to measure participants' ability to set goals that promoted falls prevention behaviour change. In addition, we aimed to ascertain whether programme participants were

able to adhere to the goals they set and to gain insights from the perspectives of health practitioners on the practical issues involved in implementing this approach in the context of their programme. Our study also investigated the impact of participant CALD status and programme setting (group- or home-based) on these outcomes.

All investigators entered this study with experience in leading fall prevention programmes. Two investigators (WM and TH) had been involved in the development of the programme, but neither physically implemented it. Before the study began, we anticipated that participants would rely on practitioners to set appropriate goals and that the process would be time-consuming. We expected that the goals set would reflect the educational messages of the programme and that CALD participants would experience greater difficulty with goal setting than non-CALD participants.

METHODS

Study design

Our investigation used a mixed-methods data-collection approach, combining a prospective longitudinal study with face-to-face individual and group interviews. Quantitative data were derived from participant goal-setting forms, while semi-structured interviews with practitioners yielded qualitative data. We adopted a convergent parallel mixed-methods design whereby quantitative and qualitative data were collected in parallel, analyzed separately, and finally merged.²⁸

Participants and setting

Participants were (1) 220 older adults enrolled in the group- ($n = 150$) and home-based ($n = 70$) SEHCP Inc. Making a Move programme and (2) 9 practitioners involved in programme delivery. This programme was run in the City of Greater Dandenong, a municipality in southeastern Melbourne that has one of the most culturally diverse populations in Victoria: people from more than 150 nationalities live in the area, and 55% are from non-English-speaking backgrounds.²⁹ Programme participants came from a variety of cultural and ethnic backgrounds and countries, including but not limited to Vietnam, Cambodia, Sri Lanka, Russia, Poland, Serbia, and China. Programme practitioners were exercise physiologists, community workers, and home care nurses with support from professional interpreters, volunteer staff, and facility care workers (where the group programme was held in supported residential facilities).

The home-based participants were older adults (usually aged >80 years) who had been assessed as eligible for Home and Community Care funding by the local council's home-based nursing agency. This funding is offered to frail older adults whose capacity for independent living is at risk or to those whose chance of admission to long-term residential care may be postponed by additional home services.³⁰ Participants of the group-based programmes were recruited through senior citizens'

groups (2 groups), supported residential facilities (2), and a local migrant centre (4). The group-based programme was offered to adults aged >65 years, but discretion was applied so as not to separate members of pre-existing groups recruited from senior citizens' groups or supported residential facilities. Five of the eight group programmes targeted specific CALD communities (Chinese, Vietnamese, Cambodian, Sri Lankan, and Eastern European) and were held in the relevant language(s). The remaining three non-CALD groups were conducted in English.

Due to the pragmatic nature of the study, we made no attempt to control for potential selection bias. At programme commencement, all participants were deemed able to participate from a physical and cognitive perspective. The home-based participants received the falls prevention programme individually in their own homes, while group programmes were held at community locations or supported residential facilities.

Intervention

The intervention we investigated was the goal-setting approach used by the SEHCP Inc. Making a Move programme (2011 iteration), a falls prevention initiative for older adults that consists of a 15-week exercise and educational programme held once per week for 1 hour in either a group or a home setting. The programme was funded by the Victorian state government, Department of Health, Aged Care Branch and implemented by SEHCP Inc. The 2009 iteration of this programme has been described previously.³¹ To facilitate participation in health behaviours to prevent falls, the educational component of the 2011 iteration of this programme used a goal-directed facilitated discussion approach for all participants, as opposed to the previously used didactic approach. In addition, goal setting, "the process of agreeing on goals,"^{32(p.273)} also took place between each participant and a practitioner in both group- and home-based settings. All practitioners had been trained in client-centred practice, goal setting, self-management, and motivational interviewing as part of their involvement in a previous project.³³ Goal setting occurred as part of a collaborative discussion between each participant and practitioner during week 8 of the 15-week programme; the timing ensured that participants would have the opportunity to learn about falls prevention behaviour changes during the educational component before setting their goals.

Theoretical foundation of the intervention

The structure of the intervention was based on the Information–Motivation–Behavioural (IMB) Skills Model of health behaviour change. According to this model, health interventions should focus on (1) dispersing effective health information that is relevant to the target health behaviour and specific to a population, (2) increasing personal motivation and social support, and (3) increasing self-efficacy for performing a health behavior

through skills training.³⁴ Therefore, the SEHCP Inc. Making a Move programme focused on (1) providing culturally specific education on falls risk, effective behavioural changes for falls prevention, and consequences of action or inaction; (2) using goal setting to increase motivation and self-efficacy; and (3) providing exercise skills training. Social support was also provided by groups in the group-based programmes and by regular practitioner contact in the home-based programmes.

Measurements

During week 8 of the 15-week programme, each participant, together with a practitioner, was asked to identify and record at least one goal focusing on a health behaviour that would reduce their risk of falling on the goal-setting form provided (see Appendix 1 online). The ability to set goals was assessed based on the SMART acronym:³⁵ goals needed to be *specific*, *measurable*, *achievable*, *relevant*, and *time-limited*.

A goal was considered appropriate if it was both *specific* and *relevant* to the context of falls prevention. Goals were classified as *specific* if they related specifically to a health behaviour as opposed to a health state; health-behaviour goals included actions taken to maintain or achieve a particular health state (e.g., participating in exercise is a health behaviour taken to achieve a health state of improved balance or the ability to walk to the shops). Goals that focused on behaviour that could reduce falls risk, such as exercise participation or the use of prescription lenses, were classified as *relevant*. A goal was considered *measurable* if it described an appropriate construct by which to measure goal attainment; for example, frequency of exercise participation is an appropriate construct for measuring achievement of the goal "participate in exercises regularly" but not for measuring achievement of the goal "eat more foods rich in calcium." Instead of assessing whether goals were *achievable*, as per the SMART acronym, we assessed goals in terms of *achievement* at programme completion. All goals set in this context were considered to be *time-limited*, since they were to be re-evaluated during the final week of the programme.

At programme completion (week 15), participants reviewed goal achievement together with practitioners. Only goals deemed specific, relevant, and measurable were rated in terms of achievement. Goal achievement was coded as one of three outcomes: (a) achieved, (b) not achieved, or (c) unknown due to absence of goal review (insufficient follow-up data). Participant drop-out from the programme was also recorded.

Semi-structured interviews with nine practitioners from the SEHCP Inc. Making a Move programme provided qualitative data. Each telephone interview followed a semi-structured schedule, format, and content (see Appendix 2 online). Since these interviews were conducted as part of a comprehensive programme evalua-

tion, interview topics covered all aspects of the programme; only information regarding the goal-setting process will be presented here.

Procedure

We obtained approval to conduct this study from the Monash University Human Research Ethics Committee (Reference Number CF12/3675-2012001769). A waiver of consent was granted under Section 2.3.6 of the National Statement on Ethical Conduct in Human Research.³⁶ The study conforms to the Human and Animal Rights requirements of the February 2006 International Committee of Medical Journal Editors' Uniform Requirements for Manuscripts Submitted to Biomedical Journals. Each programme participant was asked to complete a goal-setting form as part of usual practice of the programme, and all forms were sent to the investigators for analysis at programme completion; the number of received forms was cross-checked against enrolment numbers to ascertain a response rate.

The programme was implemented by five different service providers or organizations, not all of which provided the programme in both group- and home-based settings to both CALD and non-CALD participants (Table 1). We used a purposive sampling strategy to ensure that we interviewed at least one practitioner (exercise physiologist, home-care nurse, or community worker) responsible for running the programme from each service provider in each of the settings and participant subgroups in which the programme was provided. SEHCP Inc. provided us with a contact list of all service providers involved in programme provision, and one investigator (RH) contacted each service provider to determine the most appropriate practitioner(s) to interview. We asked each service provider to identify the practitioner(s) whose responsibility it was to run the programme in each setting and with each participant subgroup. Where this responsibility was shared between practitioners or where different practitioners were responsible for running the programme with different participant groups or settings, more than one practitioner was interviewed. The investigator then contacted the practitioners, gained consent, and organized interview times. All interviews were conducted by one investigator (RH) and digitally recorded for analysis.

Quantitative analysis process

Completed goal-setting tools were sent to the investigators for analysis. Data were entered and analyzed using MS Excel (Microsoft Corp., Redmond, WA, USA). One investigator (RH) coded each subset of data. To determine CALD status, data pertaining to the following three variables were collected: country of birth, main language spoken at home, and proficiency in spoken English.³⁷ Participants were classified as CALD if any two of the following three variables applied to them: country of birth other than Australia, main language other than English

Table 1 Service Provider, Programme Setting, and Participant CALD Status of Practitioners Interviewed

Interview number	Interview duration	Practitioner role	Service provider*	Programme setting	Participant CALD status
1	51:40	Community worker (Chinese speaking)	1	Group 1	CALD
2	29:10	Community worker	1	Groups 1, 2	CALD
3	57:00	Home care nurse	2	Home	CALD and non-CALD
3	57:00	Home care nurse	2	Home	CALD and non-CALD
3	57:00	Home care nurse	3	Home	CALD and non-CALD
4	43:47	Community worker	3	Group 4	Non-CALD
5	76:51	Community worker	4	Groups 5, 6, 7, 8	CALD
5	76:51	Community worker	4	Groups 5, 6, 7, 8	CALD
6	55:11	Exercise physiologist	4 and 5	Groups 1, 2, 3	CALD and non-CALD

*Service Provider refers to the organization or agency that implemented the programme. Therefore, the exercise physiologist who was interviewed in Interview Number 6 was employed by two different service providers.

spoken at home, and limited proficiency in spoken English. Goals were coded according to whether or not they were (a) *specific* in that they identified a health behaviour as opposed to a health state, (b) *relevant* to falls prevention, (c) *measured* using an appropriate construct, and (d) *achieved*. Goals were given multiple codes if more than one element was identified.

Coding was reviewed by a second investigator (TH). Agreement between the investigators was 100% with respect to specificity, measurement, and achievement, but disagreement arose in 7 cases (4%) as to whether walking was a relevant goal for falls prevention. After further discussion, the two investigators decided that, for the purpose of this study, walking would be considered relevant, since regular participation in moderate physical activity (including walking) has been advocated as integral to good health and maintaining independence, contributing to lowering falls risk and fall-related injuries,³ and because programme participants could not reasonably be expected to know that walking has not been found to be an evidence-based means of reducing falls.⁸

Qualitative analysis process

We used a framework approach to analyze the semi-structured interviews³⁸ using NVivo version 9 (QSR International, Doncaster, Victoria, Australia) to facilitate the coding, charting, and mapping of data. Data codes were mapped by one investigator (RH) and developed according to themes. We asked two practitioners (one from each programme setting) to review the transcripts and codes derived from their interviews; both agreed with our interpretations. Data codes and themes were reviewed and modified by a second investigator (TH). The original thematic framework was modified based on discussions between the two investigators and was then presented to other members of the Allied Health Research Unit who were not involved in this research; we made further refinements based on their feedback.

RESULTS

Quantitative results

Of the 220 participants (150 group-based, 70 home-based) enrolled in the programme, 144 completed a goal-setting tool. Of 76 non-responders, 69 (92%) were participants who dropped out after enrolment; the remaining 7 were home-based programme participants (2 CALD, 5 non-CALD) who completed the programme but did not set a goal.

Participant characteristics for those who completed the goal-setting forms are summarized in Table 2 together with the number of goal elements coded, goals that could be evaluated for achievement, and goals achieved for each subgroup. Of 144 respondents, 81 (56%) were classified as CALD, although 125 respondents (87%) were born outside Australia, with representatives originating from Afghanistan (1 respondent), Australia (19), Bosnia (2), Cambodia (16), China (12), Croatia (1), El Salvador (1), England (7), Georgia (1), Germany (2), Greece (1), Holland (1), Hungary (3), India (9), Ireland (1), Italy (2), Latvia (1), Mauritius (3), Poland (3), Russia (10), Serbia (1), Seychelles (1), Siberia (1), Sri Lanka (21), Ukraine (1), Vietnam (16), Wales (1), and Yugoslavia (3). Two participants did not specify their country of origin.

The 144 respondents set a total of 178 goals. Figure 1 shows the types of goals set. Of the 178 goals coded, 112 (63%) were deemed appropriate, but only 101 (57%)—all related to physical activity participation—could be evaluated in terms of achievement. The remainder of goals were measured using an inappropriate construct and/or were not reviewed.

Of 101 appropriately measured and documented goals, 64 (63%) were achieved. Of those not achieved, 86% (32/37) were set by participants who did not complete the programme: 23/75 CALD group-based participants (31%), 8/41 non-CALD group-based participants (20%), and 1/22 non-CALD home-based participants

Table 2 Goal Setting and Achievement According to Respondents

	Respondents	Group CALD	Group non-CALD	Home CALD	Home non-CALD
Total, no.	144	75	41	6	22
Female, no. (%)	49 (34) 1 missing	16 (22) 1 missing	11 (27)	5 (83)	17 (77)
Age, median (min, max) y	81 (54, 97) 13 missing	73 (58, 95) 7 missing	82 (54, 96) 2 missing	88 (81, 92) 1 missing	85.5 (80, 97) 3 missing
Fallen in last 6 mo, no. (%) yes	28 (20) 8 missing	13 (18) 3 missing	11 (27.5) 1 missing	2 (33) 2 missing	4 (16) 2 missing
Goals coded, no. (% health behaviour)	178 (71)	82 (88)	53 (73.5)	8 (37.5)	35 (40)
Goals able to be evaluated for achievement, no. (% goals)	101 (57)	58 (71)	31 (58)	1 (12.5)	11 (31)
Goals achieved, no. (% evaluated for achievement)	64 (63)	32 (55)	21 (68)	1 (100)	10 (91)
Attrition after week 8, no. (%)	32 (22)	23 (31)	8 (20)	0 (0)	1 (5)

CALD = Culturally and Linguistically Diverse.

(5%) dropped out of the SEHCP Inc. Making a Move programme after week 8. For those who identified why they dropped out, reasons given were sickness (5 participants), pain (1), falls (2), moving out of the area (3), being unable to access an appropriate interpreter (1), and dementia (2).

Qualitative results

All practitioners whom we approached to be interviewed consented. We conducted six interviews with nine practitioners from all five service providers involved in delivering the SEHCP Inc. Making a Move programme (see Table 1); interviews varied in duration from 29 to 77 minutes (median 53 minutes).

Several themes emerged from our analysis of the semi-structured interviews, which we summarized as programme benefits, exercises, professional involvement, service provider relationship with CALD communities, workload issues, goal-setting difficulties, education, and sustainability.³⁹ Only the goal-setting difficulties theme will be presented here. Communication, cultural, and logistical difficulties, as well as practitioner difficulties, were described as goal-setting difficulties by practitioners involved in the goal-setting process.

Communication issues

Asking participants to set goals was not an easy task. Practitioners found it difficult to explain what a goal was in a way that participants could understand. This difficulty was compounded when an interpreter was needed to communicate with participants:

It was difficult to explain in terms they [participants] could understand. We didn't actually say it was a goal. We worded it in a different way about how do you think you can improve or what do you want at the end of that. It was spoken in terms that were easier to understand. So I guess it was some suggestions on how things have changed since they started and probably talking about what changes have you noticed so far. (Practitioner 6)

Cultural issues

An apparent belief in medical paternalism among older adults in general and among some cultural communities made eliciting goals that reflected the participant's individual thoughts challenging:

For the CALD community, very difficult. Because they didn't really understand what a goal was. Like if you talk to someone in English it's quite easy to explain what a goal is. In other cultures, it's quite difficult and especially in the Chinese community because they see us as an authority figure. They sort of think well whatever we think their goal should be, their goal will be. They're not the type to have their own personal goals, I've found. And also the older generation, they think well whatever my doctor tells me to do, I'll do, that will be my goal. We're putting the control back on them, just asking, "What are you coming here for?" "Well, I'm just coming here because my doctor is telling me to or my husband is." You know, it's quite difficult. (Participant 9)

Logistical difficulties

Because of time constraints and difficulties in organizing an interpreter, the goal-setting forms were often completed in a group setting, which led to many group participants' setting similar goals:

We found there was a lot of copy. So a lot of the goal-setting tools were exactly the same. And I think that was again, just not understanding what the purpose of setting goals was. The goal setting was also done in a group environment. If you had had one-on-one you would have had completely different responses. And also I know there was facility staff involvement so whether that actually contributed to any bias I'm not quite sure? (Participant 2)

Some participants also resisted completing the goal-setting forms: "They really wanted to go there for exercise but they hated the paperwork" (Participant 9).

Figure 1 Goal types.

Practitioner difficulties with goal setting

Practitioners also acknowledged that they experienced difficulties in understanding and explaining the goal-setting process, specifically with respect to differentiating between health behaviour goals and health state goals: “Even we couldn’t get our heads around [the goal-setting form], we couldn’t imagine how you could answer it, and we’re busy asking them through an interpreter!” (Participant 7)

DISCUSSION

The falls prevention programme in this study used a client-directed goal-setting approach to promote behavioural change for falls prevention. Programme providers experienced many difficulties in using this approach with participants in both group- and home-based settings. The data from the goal-setting forms demonstrate that the anticipated collaborative process between practitioners and participants was not entirely successful in setting, monitoring, and achieving appropriate behavioural goals for falls prevention in older adults. Potential reasons for this lack of success identified by practitioners

included communication, cultural and logistical issues, as well as practitioners’ difficulty in understanding the goal-setting process in this context. While all of these are previously documented barriers to collaborative goal setting,²⁷ it is also possible that low functional health literacy among older adults⁴⁰ and among those from certain cultural backgrounds⁴¹ may have had an impact on the success of goal setting in this context.

Despite the difficulties experienced in using goal setting to promote behavioural change, the majority of appropriately set and measured goals were achieved; all of these goals related to physical activity participation, which suggests that physical activity participation for falls prevention is a valid goal and that the SEHCP Inc. Making a Move programme was effective in facilitating participation in physical activity for falls prevention in the short term. The exercise component of this programme used factors—such as accessibility, transport, convenience, a social dimension, and individually tailored exercise—that have been proposed to improve adherence to exercise programmes for falls prevention.¹¹ However, the rate of adherence observed in this study was lower than

that of other programmes,¹⁰ possibly due to the inclusive enrolment criteria used for the group-based programme.

Our study did not identify appropriate falls prevention behaviours other than physical activity participation in the goals set by programme participants. This may be explained by the programme's disproportionate focus on exercise compared to other behavioural changes. Exercise skill training took place each week for the duration of the SEHCP Inc. Making a Move programme; although participants received education on other methods of behavioural change for falls prevention, such as the use of appropriate footwear and prescriptive lenses, no skills training in these areas was provided. According to the IMB model of health behaviour change,³⁴ this lack of skills training may help explain why we found no instances of goals related to these other health behaviour changes. Another possible explanation for this finding is that the educational component of the SEHCP Inc. Making a Move programme was unsuccessful in helping participants to identify health behaviour goals other than exercise for falls prevention. Further research is recommended to identify optimal means of providing falls prevention information to older adults and to those from CALD communities.

The practitioner's ability to facilitate collaborative goal setting in these contexts may be another potential problem with the goal-setting process used in this study. Previous research suggests that a 50-minute interactive session of educating rehabilitation clinicians in goal setting and providing follow-up support for 3 months improves allied health clinicians' SMART goal-writing skills.⁴² Although previous training in goal setting was provided to the practitioners in this study, no follow-up support was provided, and the training provided was not in the context of falls prevention. It is possible that more specific training regarding the goal-setting process in the context of a group- and home-based falls prevention programme and the provision of follow-up support may have improved the outcomes of this study.

We observed greater differences in goal setting and monitoring between group- and home-based participants than between CALD and non-CALD participants. Home-based participants seemed to experience more difficulty in setting and monitoring appropriate goals than their group-based counterparts. This finding is counter intuitive, since a home-based setting is by nature more individualized than a group setting and allows for more opportunity to set appropriate goals that are individually meaningful. It is possible, however, that the 63 group-based participants in our study (all from one service provider, 49 CALD) who were observed to document the same exercise-based goal—"Participate in the falls prevention programme to increase strength, balance, and overall well-being"—may have overestimated the ability of group-based participants to appropriately set and monitor goals. Documenting the exact same goal suggests that the process of goal setting in this sub-

group was not individually tailored. Possible reasons for these observed similarities may be that the goal-setting form was completed as a group instead of individually, that participants collaborated during goal setting, or that by helping participants complete the goal-setting tool, practitioners introduced a degree of bias. Although the programme advocated a collaborative goal-setting approach between participants and practitioners, it is possible that, in practice, an assigned or guided approach to goal setting was used. While an assigned approach to goal setting may foster paternalism,²⁷ the goal-setting approach used in this programme could potentially benefit from guided goal setting, that is, the use of multiple goal choices from which the participant chooses. This approach has been proposed for use with adolescents to eliminate the possibility of inappropriate goals while maintaining participant autonomy;¹⁹ in light of the difficulties we observed in this study, this approach warrants further attention in the use of goal setting to promote falls prevention behavioural change in older adults.

Previous research suggests that cultural diversity affects older adults' acceptance of falls prevention interventions.⁴³ Two of our findings lend support to the hypothesis that CALD participants may experience more difficulty than their non-CALD counterparts in setting goals to promote falls prevention behavioural changes. First, among home-based participants, more non-CALD participants (31%) than CALD participants (13%) set and measured goals appropriately. Second, 68% (21/31) of non-CALD group-based participants who appropriately set and measured goal achievement successfully achieved their goals, compared to 55% (32/58) of CALD group-based participants, possibly because of the greater rate of attrition observed among the latter. These differences are small, but because the programme in this study was delivered in a culturally specific manner, it may be that unidentified cultural beliefs exist in some of the cultural groups observed in our study that possibly limit participation in falls prevention activities. For example, members of the Vietnamese culture value respect for authority and avoidance of conflict,⁴⁴ values which may be associated with a paternalistic attitude to health care; a preference for activities that develop the human essence, such as philosophy, poetry, and meditation, as opposed to goal-oriented activities, has also been documented in Vietnamese culture.⁴⁵ It is therefore plausible that goal setting may not be useful for promoting falls prevention behavioural change in Vietnamese older adults.

Our study has several limitations. First, we did not seek to standardize the implementation of the goal-setting process, as we wanted to allow for flexibility in the method of implementation depending on cultural background, individual characteristics of participants and practitioners, and previous exposure to goal-setting approaches for behavioural change. Second, while the practitioners had been trained in goal setting, the participants' goal-setting process may have been completed with the

assistance of support staff who had not been trained. Future research could attempt to standardize both the goal-setting process and the requirements for those implementing it, as this could potentially improve the application of goal setting in clinical practice.

Third, although our study attempted to include all 220 participants in the 2011 SEHCP Inc. Making a Move programme, 76 participants did not complete the goal-setting process, 69 of them because they had dropped out of the programme before week 8. Unfortunately, reasons for dropout were not documented, which makes selection bias difficult to judge. It is known, however, that the cultural backgrounds of the groups sampled in this study are consistent with the cultural makeup of this region.⁴⁴

Because of the unequal numbers sampled, the heterogeneity of the CALD participants, and the lack of standardization in the goal-setting process, care should be taken in comparing the ability of participants in the sub-groups of this study (CALD and non-CALD participants in group- and home-based contexts) to set appropriate health behaviour goals for falls prevention.

Care should also be taken in generalizing these results to other settings and cultures. These results include participants from a range of cultural backgrounds represented in Melbourne, Australia, but do not adequately represent other common cultural groups in Australia, such as Greek and Italian communities. In addition, these results represent findings from a group- and home-based falls prevention programme provided primarily by exercise physiologists, home care nurses, and community workers with support from professional interpreters, facility care workers, and volunteers; they cannot be extrapolated to programmes provided with more intensive health professional input.

CONCLUSIONS

Use of goal setting to facilitate falls prevention behaviour change was hindered by participants' ability to set goals specific to health behaviour and relevant to falls prevention; the use of inappropriate constructs by which to measure goal achievement; and inadequate goal review, mainly due to participant attrition. Practitioners described their own difficulties in understanding goal setting in this context together with communication, cultural, and logistic difficulties. Data suggest home-based participants experienced more difficulty setting goals than their group-based counterparts and that, to a lesser extent, CALD participants experienced more difficulty setting and achieving goals than their non-CALD counterparts, despite the culturally specific manner in which the programme was delivered. Notwithstanding these challenges, the SEHCP Inc. Making a Move programme was effective in facilitating the achievement of most of the exercise-related goals that participants set. Practitioners using such an approach in the future should consider adopting a guided approach to goal setting and implementing

specific practitioner training and follow-up support regarding goal setting to promote behavioural change for falls prevention.

KEY MESSAGES

What is already known on this topic

Falls are a significant public health problem in older adults. Goal setting is an accepted practice to increase motivation, and adherence to rehabilitation and its application to falls prevention has been advocated.

What this study adds

This study highlights the difficulties experienced in setting and achieving SMART goals by CALD and non-CALD participants of a group- and home-based falls prevention programme. Home care nurses, community workers, and an exercise physiologist also experienced difficulties in facilitating the client-directed goal-setting approach used in this study.

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