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RESEARCH

Developmental Evaluation of the CHOICE+ Champion Training Program

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Context: Mealtimes in residential care homes are important for social engagement and can encourage resident relationships. Yet, training programs to improve mealtime care practices in residential care settings remain limited in learning approaches and scope.
Objectives: To determine whether a one-day Champion Training session would improve participants' knowledge, skills, and confidence to implement a relationship-centred mealtime program (CHOICE+) in their homes.
Methods: The study employed a pre-/post-test design to evaluate a train-the-trainer model using paper-based questionnaires. Thirty-four participants attended the training session; 25 participants completed pre/post training questionnaires based on Kirkpatrick's evaluation model. Training included: 1) program implementation manual, 2) best-practices document, 3) educational resources and evaluation tools, 4) presentation on theory-based implementation strategies and behaviour change techniques, and 5) group discussion on applying strategies and techniques, problem-solving for implementation facilitators and barriers.
Findings: More than half of attendees worked as Food Service Managers or Registered Dietitians. Participants identified several organizational factors that could impact their home's readiness to implement CHOICE+, though they felt training to be acceptable and feasible for their homes. Participants reported increase in knowledge (8.4 ± 1.1), confidence (8.3 ± 1.4), and commitment (8.8 ± 1.4) to implement the relationship-centred mealtime program. There was no association with pre-training readiness, leadership, or home characteristics.
Limitations: Generalizability is limited due to small sample size. Follow-up interviews on results of training could not be conducted due COVID-19 pandemic research restrictions.
Implications: Champion Leader training is an effective and feasible learning approach to up-skill staff on change management and relationship-centred mealtime practices in residential care.

Keywords: residential care; mealtimes; train-the-trainer; leadership; relationship-centred care; evaluation

Background

Culture change is a movement within the residential care sector (i.e., long-term care, nursing homes, assisted living) that embraces the transition away from biomedical models of care towards social models. Relationship-centred care (RCC) is a philosophy that promotes social care through its emphasis on the interdependence and reciprocity between residents, staff, and the greater community (Nolan et al., 2004; Tresolini et al., 1994; Villar et al., 2017). RCC is distinct from person-centred care, which has historically focused on the needs and preferences of the individual; however, it falls short in recognizing the interconnectedness between the resident and their complex social and physical environments. Mealtimes are an aspect of residential care life that act as a medium through which residents, staff, and families can socially connect with one another and reinforce relationships, and thus are an opportune time to embrace RCC practices (Henkusens et al., 2014; Hung & Chaudhury, 2011; Petersen et al., 2016). This can include staff socializing with residents in meaningful ways, resident-to-resident socializing, involving family in meals and special events, offering tailored support to reinforce independent eating, and/or having residents involved in mealtime processes like setting the table or planning a special meal. RCC also encapsulates person-centred care: when social relationships are valued, residents are spoken to in respectful ways and care is offered in such a way that upholds resident dignity and promotes autonomy (e.g., offering an apron to protect clothing vs. automatically enforcing the use of 'bibs'). Despite the noted benefits to residents and staff when social models are used to guide resident care (Huang et al., 2020), most homes maintain a task-focused culture

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that can undermine a resident's autonomy and dignity, as well as the autonomy of those providing care (Lowndes et al., 2017; Sherwin & Winsby, 2011; Shier et al., 2014). Specifically, residential care homes tend to prioritize dining room functionality over homelikeness (Chaudhury et al., 2017) and efficiency over meaningful social interaction (Hung & Chaudhury, 2011; Lowndes et al., 2017). Moving residents into the dining room, taking orders, providing food quickly, and removing residents from their tables in an almost assembly-line fashion, are hallmarks of task-focused mealtime care (Gibbs-Ward & Keller, 2005). This care sector is recognizing that both the physical and social dining environments need improvement, as food service and the mealtime experience are perceived by residents and families as a key marker of the quality of care provided in a home (Watkins et al., 2017).

Up-skilling and training care staff is an on-going process in healthcare. Specifically, staff working in residential care settings have varying levels of training. Health care aides receive anywhere from a few weeks to a year of training, food service managers could have a two-year college diploma, while registered nurses, recreational therapists, and registered dietitians typically have a four-year university degree. Yet, training programs to improve care practices for those who work in residential care settings remains limited in both learning approaches and scope (Berta et al., 2013). For example, education and training for staff often consists of one-off online learning modules or a short information session with a member of their home's leadership. These initiatives often fail to sufficiently account for both individual and contextual factors that can make implementing and sustaining changes particularly challenging, such as limited incentives for staff involvement (Pimentel et al., 2020; Mills et al., 2019), perceived and actual lack of dedicated implementation time (Mills et al., 2019), and constraints due to understaffing (Bowers et al., 2000). Furthermore, improvement initiatives often fail to prepare those in middle and upper management with the skills necessary to implement, monitor, and sustain change efforts in residential care settings (Aloisio et al., 2019; Chen et al., 2020; Lynch et al., 2011), despite some use of learning circles and other participatory implementation examples in this sector (e.g., White-Chu et al., 2009). Within Canadian homes, residents typically eat in a communal dining room that can range in size from approximately space for 20 to 70, or more residents. Food is typically plated in a servery in the dining area, as full-scale kitchens are not usually available within home areas (i.e., "care units"). Although food production varies by province (Vucea et al., 2017), most food is prepared by the home using home recipes. Registered dietitians and food service managers are responsible for overseeing many aspects of mealtime processes, for example, menu planning and food orders, resident nutritional status and needs, as well as managing staff who work exclusively in the dining room plating food (i.e., dietary aids) and in the kitchen. Directors of care and registered nurses oversee staff (i.e., personal support workers / health care aides) who provide most of the mealtime support, which includes assisting residents with seating, taking resident food orders, serving up to three courses, socializing with residents, providing eating assistance, and clearing dishes. Dietary staff are responsible for plating food and may help to serve residents their courses. They also clear dishes and clean the dining room after meals. Mealtimes within Canadian residential care homes have been described as hectic and task-focused compared to those observed in Norway and Germany (Lowndes et al., 2017), which can make it challenging for care staff to change mealtime practices without the proper time, space, and support from leadership. There is an urgent need to prepare those in middle and senior leadership positions to achieve organizational goals through their active involvement, effective communication with stakeholders, and participatory decision-making approaches, so that care staff have the opportunity to create and sustain relationship-centred mealtimes (Backman et al., 2020; MacEachern et al., 2020).

The CHOICE+ Champion Leadership Training Program

In response to the need to up-skill staff in relationship-centred dining practices, the CHOICE+ Champion Leadership Training Program was created. CHOICE+ supports residential care settings to promote and support relationship-centred mealtime practices using six key principles, with the letter of each principle spelling out the program name: Connecting, Honouring dignity, Offering support, Identity, Creating opportunities, and Enjoyment (**Table 1**) (Keller et al., 2020; Wu et al., 2018). This program was developed over several years of research that identified an incongruence between the social significance of eating with others and the undervaluing of mealtime experiences in residential care settings, in addition to opportunities to vastly improve dining in this sector (Ducak et al., 2015; Gibbs-Ward & Keller, 2005; Keller et al., 2020; Wu et al., 2018). The Knowledge-to-Action Cycle (Straus et al., 2017) guided the development of CHOICE+ to ensure that program components were 'tailorable' to meet the current needs of those who eat and work in a particular dining room (i.e., residents, staff, families, volunteers). An external facilitator model was developed and evaluated (Keller et al., 2020; Wu et al., 2018) and found to be successful at improving mealtimes. However, to scale this innovation, training of Champion Leaders embedded within their own home was considered an efficient and feasible model. The implementation experience with CHOICE+ in four different homes resulted in the development of the CHOICE+ Champion Leadership Training, which included a one-day session and detailed manual and resources. This manuscript describes the developmental evaluation of this model of CHOICE+, and specifically the one-day of training.

The CHOICE+ Champion Leadership Training Program intervention theory based on our learning to date is presented in **Figure 1** using the nursing intervention Structure-Process-Outcomes framework (e.g., Sidani & Braden, 2011). Structure accounts for elements that can influence the program's implementation, mediating factors, and outcomes (Sidani & Braden, 2011). Using a participatory approach, CHOICE+ accounts for the characteristics

Table 1: CHOICE+ Program Components.

Intervention Components	Description
CHOICE+ Key Principles	Key principles are used to guide relationship-centred mealtime improvements: · Connecting: having meaningful conversations and socializing. · Honouring Dignity: Respecting decisions, choices, and preferences. · Offering Support: Supporting residents based on individual needs. · Identity: Knowing and accepting residents as unique individuals. · Creating Opportunities: Supporting active mealtime participation. · Enjoyment: Creating a warm and welcoming dining environment.
Mealtime (MT) Champions	MT Champions are those who lead others by example in their roles that are directly related to meal service, such as care staff or dietary aids. They believe in the importance of making meaningful connections with residents and families during meals. MT champions take on additional responsibilities to implement and sustain the program, such as lead team meetings, promote goals and change efforts, review audit data, identify issues, and encourage collaboration and teamwork. MT champions are either self-selected or nominated by home leadership at the outset of the program.
Participant Engagement	Meetings with leadership, staff, residents, families, and volunteers are important to introduce them to the CHOICE+ Program. In-services for staff provide time to collectively identifying areas of improvement of mealtimes. Informal meetings are held as needed to answer questions and begin discussions around mealtime improvements.
Education Modules	Six online educational videos provide information on the importance of mealtimes in residential care settings and examples of how each of the CHOICE+ principles can be enacted throughout the meal to meet the specific needs of residents.
CHOICE+ Dining Team (CDT)	The CDT is a group of people who take an active leadership role in their home area to implement the CHOICE+ Program through advocating and supporting others with mealtime initiatives. The CDT assists and collaborates with the MT Champions and helps to communicate relevant information to the rest of the home. CDT also includes residents, family members, and volunteers based on their level of interest and self-determined capacity to be involved.
Practice Change Training Sessions	Training sessions for staff provide education and skills on how to make and sustain change using behaviour change principles and methods (e.g., PDSA cycles). Sessions also included voting on priority areas for improvement and brainstorming solutions on how to address barriers as a collective.
Communications Binder	CHOICE+ communications and reference binder provide resources for each home on program components, implementation process, as well as monthly goal and tracking forms.
Goal Setting & Tracking Forms	Planning and tracking documents are used by CDT to work through the change making process by: identifying improvements, steps involved in making improvements, how changes can be sustained, and what role each person plays in supporting this improvement. Goals are selected and revised based on whether the CDT feels they have achieved and sustained the goal, the goal needs to be revised to better address the issue, or a new goal should be identified (i.e., PDSA Cycle).
Continuous Audit & Feedback	CDT and staff use CHOICE+ checklists to document the current state of mealtimes. Champions are provided examples of how improvements can be audited with simple observational techniques and how this data can be tracked over time. Data is recommended to be used as part of PDSA cycles, goal setting, and tracking.
Weekly Huddles with CDT	Weekly huddles are dedicated to discussing CHOICE+ related matters such as: discussing recent audits, progress made on improvements, identify areas for improvement, identify possible solutions, address barriers, and set new monthly goals. MT champions and/or members of the CDT alternate leading the group discussion.
Reminders and Incentives	Reminders in the form of goal posters and verbal reminders from the MT champion and CDT members are used to maintain focus, motivation, and accountability on mealtime processes required to achieve monthly goals. Goals are posted strategically either in the dining room or staff room. Small rewards (e.g., bag of candy, certificate) are given out to those staff who show exemplary efforts to improve an aspect or multiple aspects of the mealtime experience for residents and families.

MT champion = mealtime champion; CDT = CHOICE+ dining team; PDSA = Plan-Do-Study-Act.

of those who eat, visit, and work in a specific dining room, including residents, family members, dining room volunteers, direct care workers (e.g., Personal Support Workers, Care Aides), as these factors are known to influence program adoption and sustainment (MacEachern et al., 2020; Wu et al., 2018). Changes to organizational culture, as well as physical and social dining environments are considered necessary in order to support RCC mealtimes (Berta & Laporte, 2010; Chaudhury et al., 2018; Wu et al., 2018). For example, leadership ensuring that staff have the appropriate equipment to play calming music during meals, staff actively including residents in social conversations, or

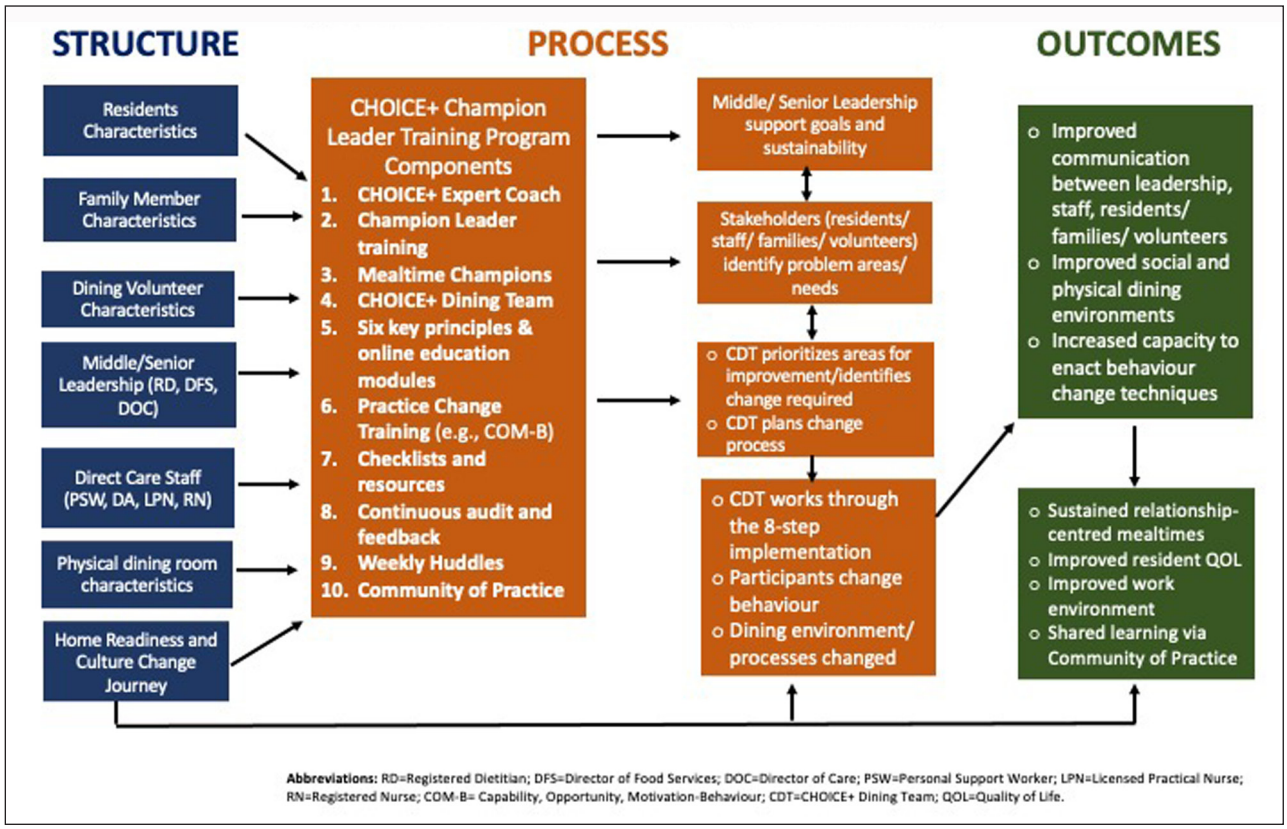

Figure 1: CHOICE+ Champion Leader Training Intervention Theory.

staff using spatulas to remove uneaten food from plates to reduce excess noise during clean up. The dynamics between these stakeholders are influenced by the leadership style of middle and senior management, such as registered dietitians, directors of food service, and the director of care, which is the motivation to provide members of leadership with additional resources to implement this relationship-centred mealtime program (Keller et al., 2020; Wu et al., 2018). A charter or agreement amongst leadership to support direct care workers, residents, and families is encouraged to ensure accountability and sustainability of the program. In addition, the physical environment of a dining space has the ability to influence the mealtime experience by either hindering or facilitating ease of mealtime processes (e.g., serving food) and the social environment (e.g., noise levels, seating arrangements) (Chaudhury et al., 2013). Lastly, at what point a residential care home has embarked on a culture change journey will unduly influence their readiness and capacity as an organization to embrace the necessary mechanisms required to adopt and sustain CHOICE+ (Weiner et al., 2008). These structural elements impact both the process of implementing CHOICE+ in a dining room, as well as the immediate and ultimate outcomes.

Process elements of this framework account for the components of the intervention and their active ingredients, as well as the hypothesized intended changes resulting from the intervention components (Sidani & Braden, 2011). The CHOICE+ Champion Leadership Training Program includes 10 components: (1) a CHOICE+ expert coach external to the home to provide training and support implementation and sustainment; (2) a champion leader at the middle management level; (3) mealtime champions at the direct care level; (4) a dining team composed of direct care workers, champion leader, mealtime champions, and residents, families, and volunteers to guide the dining room improvements; (5) six online staff-directed education modules that explain the six key principles of CHOICE+; (6) behaviour change training and techniques for champion leaders and the CHOICE+ dining team; (7) checklists to conduct self-audits on the social and physical dining environments; (8) regular audit of changes implemented and feedback of results (homes also have the option of contracting professional evaluation by the researchers using validated scales and a detailed report); (9) weekly huddles to communicate challenges and improvements; and (10) a community of practice to provide opportunities for champion leaders across homes to share their experiences and provide support to the sustainment of CHOICE+ (**Table 1**). To implement this program, CHOICE+ uses an eight-step participatory approach that includes identifying priority areas for change and how to make and sustain mealtime improvements that benefit residents, staff, and families: 1) building the reason for change; 2) rallying the champions; 3) finding out what's important to change; 4) picking the priorities; 5) finding the fixes; 6) putting the fixes in place; 7) seeing what worked and tweaking it; and 8) keeping it going. The champion leader guides those who eat and work in the dining room through these eight steps with the support of home leadership and the external CHOICE+ coach and community of practice.

It is anticipated that those in middle and senior management of a residential care home would agree to support

the identified goals and continued efforts to sustain CHOICE+ at the outset of the implementation process. Stakeholders (i.e., residents, direct care workers, families, and volunteers) would engage in a participatory process to identify the main issues in their dining room and relay them to the CHOICE+ dining team, who would then prioritize areas for improvement. This team would propose possible solutions and develop plans to implement these changes. It is theorized that working through the eight steps of implementation, participants would change their behaviour based on new capabilities, opportunities, and motivations (i.e., Michie et al., 2014) to create relationship-centred mealtimes within their dining room.

Lastly, outcomes are the immediate and ultimate effects of the intervention (Sidani & Braden, 2011). Based on the complex intervention and participatory approach to implementation, it is theorized that immediate outcomes of CHOICE+ will include improved communication mechanisms between leadership, direct care staff, residents, families, and volunteers. As well, improvements to the social and dining environments are expected through the adoption of RCC practices, reinforcing opportunities to increase capacity in regard to behaviour change techniques that work best for a specific dining room. Ultimately it is expected that CHOICE+ will help a residential care home sustain relationship-centred mealtimes, resulting in improved resident quality of life, improve the work environment for direct care workers and leadership, and finally create a support network for homes wanting to improve the mealtime experience via a community of practice lead by the CHOICE+ Expert Coach.

The purpose of this study is to evaluate the CHOICE+ Champion Leadership Training delivered to diverse potential champions in residential care homes (i.e., long-term care and retirement). This training by experts in implementation and CHOICE+ is only one component of the 10-component intervention described above (**Figure 1**) and considered an initial step to scalable sustaining of CHOICE+. A detailed manual and resources, which are also components of the intervention, were made available to participants of this training. It was hypothesized that the one-day training would increase: a) knowledge, especially on how to make change, and b) confidence required for participants to apply this relationship-centred mealtime program in their care homes. Associations between role of participant, pre-training readiness and home characteristics with post-training confidence, commitment, and feasibility of CHOICE+ were explored.

Methods

CHOICE+ Champion Leader Training

The CHOICE+ Champion Leader Training session was intended to educate participants on: i) CHOICE+ principles, educational tools and resources, and how to use these to enhance mealtimes; ii) how to use a participatory process to elicit improvement ideas and work as a team to develop solutions; iii) the importance of developing and sustaining communication channels for residents and staff on mealtime improvements; iv) the basics of a behaviour change (i.e., Behaviour Change Wheel [Michie et al., 2014]); and v) how to use Plan-Do-Study-Act (PDSA) Cycles and audits of practice and data to drive practice change. The six-hour training session was held at the Research Institute for Aging in Waterloo, Ontario, on November 7, 2019, and led by one of the CHOICE+ creators, who has expertise in complex intervention implementation (HHK). The Research Institute for Aging is a charitable organization and sector leader with the mandate of research and knowledge translation to support the care and health and well-being of older adults, especially those living in residences. Research is supported by several university-based research chairs and knowledge translation with a team of communication experts and coaches. An organizational website is used to translate tools to the sector, some freely available, while others have a fee for service. Enrollment for this training was free for participants.

Each participant was provided: i) a CHOICE+ Program manual with step-by-step instructions on how to implement and sustain CHOICE+ in a residential care setting; ii) a best-practices document on ways to create more relationship-centred mealtimes; and iii) a resource pack of hard copy and online education and evaluation tools and techniques for staff and leadership to track progress within their homes. Emphasis was placed on training and preparing champions on *how* to implement and sustain change within their own residential care contexts. First, the essential components of CHOICE+ were reviewed with participants to understand the full scope of the program. Next, training focused on the role of a champion leader and the impact they have in leading and supporting change-making efforts in their homes. Participants engaged in group discussions throughout the session to think through implementation scenarios and identify facilitators and barriers to making change. The eight steps to implement CHOICE+ were reviewed in detail, including behaviour change theories (e.g., Behaviour Change Wheel, Michie et al., 2014) that have helped guide the development and implementation of CHOICE+. Finally, the importance of using data to track change was discussed and ideas on how to measure and present data with diverse stakeholders was shared.

Participants

Participants were recruited through advertising on the Research Institute for Aging website and e-newsletters. Interested participants signed up for the course online, providing their email for contact purposes. Recruitment materials targeted those involved in food and meal service and was limited to 35 attendees (maximum of 1–2 per organization).

Research Design and Measures

Kirkpatrick's model to evaluate training (Kirkpatrick, 1976) within an organization was used as a guiding framework for the current evaluation study. While all evaluation models have their strengths and limitations, Kirkpatrick's model is one of the few that provides a simple and systematic way to examine multiple measures of training effectiveness for employees (Bates, 2004; Heydari et al., 2019). This model has proven effective as a means to evaluating

the impact of education and training interventions in diverse health care settings, such as geriatric nursing, paediatric home-care services, and volunteer first aid training (Jones et al., 2018; Lewis et al., 2018; Vizeshfar et al., 2017). In this model, four 'levels' of criteria from a training program are expected: i) reaction (training is engaging and relevant); ii) learning (acquisition of intended knowledge, skills, confidence, commitment to training); iii) behaviour (application of learnings to organization); and iv) results (targeted outcomes resulting from training) (Bates, 2004). Evaluation methods using the Kirkpatrick model most often include post-test self-administered questionnaires, specifically for levels i through iii (La Duke, 2017). A pre-test questionnaire was also included in this study to understand the participants' care home context and readiness for change. This knowledge was used to explore potential differences in responses to the post-training evaluation questionnaire. The post-test questionnaire was developed using example content from Kirkpatrick, while the pre-test questionnaire was based on similar questions used by the Research Institute for Aging in their culture change training program. Questionnaires were reviewed by the researchers, trainees and the knowledge translation team, who had diverse experience, to ensure clarity of questions.

Pre-Training Questionnaire

The pre-training questionnaire included participant demographics (age, gender) and current position (job title, length of employment in the home). Part A asked respondents about barriers to their home's culture change journey (9 items), such as high leadership and staff turnover. This provided a measure of 'readiness' on the part of the home to undertake CHOICE+. In Part B, respondents were asked to rate their agreement on a Likert-scale (5 *Always* to 1 *Never*) on aspects of their organization's ability to implement culture change initiatives (10 items; max score of 50), such as a willingness to try new ways of delivering resident care. Part C, which was unique to this evaluation, asked attendees to indicate their individual experiences using implementation processes related to making change (6 items), such as PDSA Cycles. Open-ended responses allowed for additional contextual details regarding challenges (Part A) and experiences (Part C). Participants had the option to complete the pre-training questionnaire two weeks prior to the training via email or on the morning of the training session.

Post-Training Questionnaire

A post-training paper-based questionnaire was administered after the training had been delivered. The questionnaire focused on reaction (3 questions), learning (8 questions), and behaviour (2 questions), based on examples from the Kirkpatrick model. Respondents rated their level of understanding (1 *Low* to 10 *High*), feasibility (1 *Not Feasible* to 5 *Very Feasible*), confidence in application (1 *Not Confident* to 10 *Very Confident*), commitment to application (1 *Not Committed* to 10 *Totally Committed*), and usefulness of materials (1 *Not Useful* to 10 *Very Useful*). Seven open-ended questions gave respondents opportunity to elaborate on their ratings, and one question asked how the training could be improved. Evaluation interviews to further address Kirkpatrick's level 3 and 4 evaluation criteria (e.g., Behaviour and Results of training) were scheduled for April/May 2020; however, interviews could not be conducted due to research restrictions resulting from the COVID-19 pandemic in residential care homes. An attempt was made to contact participants to determine capacity for an interview, but too few responded to this request. It is believed that pandemic safety procedures (e.g., residents eating in rooms, temperature checks, training new staff, responding to the changing rules) resulted in participants having other priorities other than implementing CHOICE+ in the home.

Analysis

Identification numbers were used to match pre- and post-questionnaires by participant. SAS® Studio Version 3.8 (SAS Institute Inc., 2016) was used for analyses. Descriptive statistics characterized the sample. Continuous variables were expressed using their mean, standard deviation (SD), and 95% confidence level; categorical variables were expressed using percentages. Fisher's Exact tests and t-tests were run to determine associations and differences in pre-training questionnaire responses on the readiness ratings with post-training confidence and commitment to implement CHOICE+. Exact Wilcoxon Signed-Rank tests were used to compare the pre-training responses on characteristics of their home to the ratings of feasibility provided on the post-training questionnaire. An alpha level of 0.05 was used for all tests. Open-ended, qualitative responses to the questionnaires were grouped by theme.

Results

A total of 34 participants attended the CHOICE+ Champion Training session. Twenty-five participants completed the evaluation. Nine participants did not complete the questionnaires as they were corporate-level employees of LTC home chains and thus were not affiliated with individual homes. Participants' mean age was 46 (±8.5) years, and 88% were female. On average, participants had worked in their current residential care home for 9.6 ± 7.3 years. Half of attendees worked as a Food Service Manager (FSM) or Registered Dietitian (RD) (52%).

Table 2 provides the proportion of participants identifying various organizational characteristics that could impact readiness to implement CHOICE+; the mean total score for Part B (34.5 ± 4.9) indicates that participants' homes faced organizational challenges to improving care. For example, almost 75% of respondents indicated high turnover among leadership personnel and staff, and almost half had citations (e.g., an indication of divergence from desired practice) from a Canadian provincial ministry responsible for overseeing the administration and delivery of health care services. Only 16% of respondents reported changes made to mealtime practices in the past year, indicating opportunity for change with CHOICE+. Challenges with success in making and sustaining improvements were noted, as well as barriers and facilitators to new initiatives like CHOICE+. For example,

Table 2: Champion Training Pre-Questionnaire Responses (N = 25).

Questionnaire Item	Percentage (n)	Open-Ended Responses (n)
Part A: Has your organization/home...		
Lost leaders in the past year?	72.0 (18)	
Had challenges with staff turnover in the past year?	72.0 (18)	
Had citations from the Ministry of Health in the past year?	48.0 (12)	
Had challenges with unions or other authorities in the past year?	36.0 (9)	
Tried to make care improvements in another area (not dining)?	84.0 (21)	
Started on a culture change journey?	80.0 (20)	
Started any other initiatives that require a lot of effort right now?	80.0 (20)	
Made recent changes to the physical dining environment?	40.0 (10)	***Changes made to dining room:*** · New layout (2) · New equipment (3) · New decorations (4) · New relaxed atmosphere (1)
Made recent changes to mealtime practices (e.g., flexible breakfast)	16.0 (4)	***Changes to practices:*** · Additional food options (2) · New food presentation (1) · Additional dining environment options (1)
Part B: Organizational Culture/Readiness		
Our team members like to try new ways of delivering resident care.		
Always, %	20.0 (5)	
Usually, %	16.0 (4)	
Sometimes, %	40.0 (10)	
Rarely/Never, %	24.0 (6)	
Our team members are comfortable with doing things the way they have always been done.[a]		
Always, %	20.0 (5)	
Usually, %	64.0 (16)	
Sometimes, %	12.0 (3)	
Rarely/Never, %	0.0 (0)	
We have had success with improvements that required change in team member practice.		
Always, %	8.0 (2)	
Usually, %	36.0 (9)	
Sometimes, %	44.0 (11)	
Rarely/Never, %	8.0 (2)	
We have had success with sustaining improvements in team member practice.		
Always, %	4.0 (1)	
Usually, %	44.0 (11)	
Sometimes, %	40.0 (10)	
Rarely/ever, %	8.0 (2)	

(Contd.)

Questionnaire Item	Percentage (n)	Open-Ended Responses (n)
Leadership is available to support changes in practice during and after implementation.		
Always, %	36.0 (9)	
Usually, %	48.0 (12)	
Sometimes, %	16.0 (4)	
Rarely/Never, %	0.0 (0)	
Team members are available to support changes in practice during and after implementation.		
Always, %	16.0 (4)	
Usually, %	68.0 (17)	
Sometimes, %	16.0 (4)	
Rarely/Never, %	0.0 (0)	
There is good communication between leadership and team members.		
Always, %	8.0 (2)	
Usually, %	60.0 (15)	
Sometimes, %	32.0 (8)	
Rarely/Never, %	0.0 (0)	
There is good communication between team members.		
Always, %	8.0 (2)	
Usually, %	44.0 (11)	
Sometimes, %	48.0 (12)	
Rarely/Never, %	0.0 (0)	
Team members meet regularly (e.g., huddles) on ways to improve care.		
Always, %	12.0 (3)	
Usually, %	56.0 (14)	
Sometimes, %	16.0 (4)	
Rarely/Never, %	16.0 (4)	
Team members work as a collective rather than a group of individuals.		
Always, %	8.0 (2)	
Usually, %	48.0 (12)	
Sometimes, %	40.0 (10)	
Rarely/Never, %	4.0 (1)	
[b] **Total Score for Part B (max 46 points)**	34.5 (SD = 4.9)	
Part C: "Your Experience with Making Change. Do you..."		
Know of the PDSA Cycle?	32.0 (8)	***Familiar with PDSA through:*** · Previous employment (1) · Used by current organization (3) · Heard about in literature (1)
Have experience using a PDSA Cycle to make change?	24.0 (6)	***Apply PDSA Cycles to:*** · Flexible dining services (1)

(Contd.)

Questionnaire Item	Percentage (n)	Open-Ended Responses (n)
Work with care teams to determine how to make improvements?	88.0 (22)	***Experience working with care teams on improvements:*** · Team meetings to improve resident care (6) · Team meetings to improve dining experience (1) · Team meetings for general brainstorming (2)
Did not know of the COM-B Model?	100.0 (0)	
Use QI methods in past to make changes?	76.0 (19)	***Used QI for:*** · Huddles/team meetings (1) · Audits/education (1) · QI is a top-down process (2) · Forms (1) · Snack carts between meals (1)
Have had training to become a better leader?	52.0 (13)	***Types of training received:*** · Improving mealtimes (1) · Resident first aid training (2) · University/college courses/webinars (3) · Staff training (3)

Team members are equivalent to care staff. PDSA = Plan-Do-Study-Act. COM-B = Capability, Opportunity, Motivation – Behaviour. QI = quality improvement. SD = standard deviation. Responses to items "Not Applicable/I don't know" or items with no response provided are not reported in the table. Reponses "Never" and "Rarely" have been combined.

[a] The values for question 6b were reverse coded due to the negative wording compared to questions 6a and 6c–j. As a result, this item could not be included in the bivariate analysis as there were 0 values in one category when dichotomized.

[b] A higher total score indicates that the homes/organizations are more supportive of older adults during mealtimes.

almost half (48%) of respondents noted organizational leadership being 'Usually' available to support changes in practice, and 68% noted staff 'Usually' available to support practice changes.

When asked about their experience with making change, only 24% responded as having experience using PDSA cycles (**Table 2**). None of the participants were familiar with the Behaviour Change Wheel (Michie et al., 2014). However, most respondents reported working with care teams to make improvements (88%), such as changes to resident care, and using quality improvement methods (76%). Just over half of respondents reported receiving past training to become a better leader (52%).

Participants reported improved knowledge and confidence as a result of training (**Table 3**). For example, participants reported that they knew how to change staff behaviour (8.1 ± 1.3) and the steps required to plan for improvements (8.4 ± 1.1). Respondents felt training would help their organizations make improvements (9.0 ± 0.9) and that they would be able to use what they learned immediately (8.2 ± 1.6). Feasibility of CHOICE+ components were variable with highest ratings for engaging residents and families (4.0 ± 0.7), forming a CHOICE+ Dining Team (3.8 ± 0.9), and engaging their care team (3.8 ± 0.6); 60% indicated they were ready to implement CHOICE+. Respondents felt confident in their ability to apply their training to their organizations (8.3 ± 1.4), and that organizational buy-in from leadership and staff would help increase their confidence further. Participants felt committed to apply their CHOICE+ training to their workplace (8.8 ± 1.4). Almost all (96%) reported that they would recommend the CHOICE+ Champion Leader Training to a colleague. In open-ended responses, participants noted that success with introduction of CHOICE+ would depend on leadership and team support.

There were no significant differences in individual items or the total score from Part B of the pre-training questionnaire (organizational characteristics affecting readiness) and post-training respondents' perceived level of readiness ($p = 0.8$), confidence ($p = 0.3$), or commitment to implementing CHOICE+ ($p = 0.7$). The only significant association identified was feasibility of developing a CHOICE+ dining team post-training, which was significantly higher among respondents who answered that there was 'Always/Usually' good communication between team members and staff as compared to those who reported worse communication ($p = 0.04$). There were no differences identified by participant type (e.g., food service manager/registered dietitian vs. other).

Respondents were asked about ways to improve the training session. Several requested more examples of RCC mealtimes (n = 6) and further discussion around improvement strategies (n = 2). Creating a community of practice to share data and ideas was important to participants (n = 5), as well as additional tools to track mealtime changes (n = 1). Promoting CHOICE+ through social media and in-person expert visits were suggested as ways to increase interest in making improvements (n = 2). One participant requested future training to support the implementation process in their homes, with a formal CHOICE+ certificate at the end of the process (n = 1).

Discussion

CHOICE+ is a unique concept and program that has been shown to improve mealtime environments in residential care (Keller et al., 2020). To scale this program, a Champion

Table 3: CHOICE+ Champion Leader Training "Post-Training" Questionnaire (N = 25).

Questionnaire Items	Mean (SD)	95% Confidence Level	Open-Ended Responses (n)
Kirkpatrick's Model: Reaction			
This training was worthwhile and will help my team make improvements. [a]	9.0 (±0.9)	8.7–9.4	
I will be able to use what I learned immediately. [a]	8.2 (±1.6)	7.6–8.9	
Was this training an effective use of your time? [b]	9.2 (±1.0)	8.8–9.6	
Would you recommend this training to a colleague?			***Why or why not recommend?***
Yes, % (n)	96.0 (24)		· Helps understand dining issues/barriers (2) · Highlights importance of mealtimes and strategies for improvement (13) · Encourages teamwork (1) · Helps with quality improvement (2) · Helps with buy-in (1) · Opportunity for multi-disciplinary knowledge exchange (1)
Kirkpatrick's Model: Learning			
Rate your understanding of the following steps to making change: [c]			
- *How to engage stakeholders*	8.3 (±1.1)	7.9–8.8	
- *How to change team behaviour*	8.1 (±1.3)	7.6–8.7	
- *How to plan for improvement*	8.4 (±1.1)	7.9–8.9	
- *How to collect data to track changes*	8.2 (±1.2)	7.7–8.7	
What were the most meaningful things you learned today?			· CHOICE+ materials (5) · Importance of team engagement (3) · Importance of communication (2) · Importance of interdisciplinary team (3) · How to build successful teams (1) · How to determine organizational readiness for change (1) · How to make/apply changes (10) · Identifying opportunities for change (10) · Ideas for improvements (1) · Concept of relationship-centred care (3)
Rate how feasible it is to implement the following key components of CHOICE+ in your home: [d]			
- *Forming a CHOICE+ Dining Team*	3.8 (±0.9)	3.4–4.1	
- *Staff completing CHOICE+ education modules*	3.4 (±0.9)	3.0–3.8	
- *Recruiting CHOICE+ Champions*	3.5 (±0.8)	3.1–3.8	
- *Completing CHOICE+ checklists*	3.7 (±0.9)	3.3–4.1	
- *Engaging family/residents*	4.0 (±0.7)	3.8–4.3	
- *Engaging care team/staff*	3.8 (±0.6)	3.6–4.1	
- *Collecting data*	3.6 (±0.7)	3.3–3.9	
- *Analyzing data*	3.8 (±0.7)	3.5–4.0	
- *Meeting time to implement change*	3.4 (±0.7)	3.2–3.7	

(Contd.)

Questionnaire Items	Mean (SD)	95% Confidence Level	Open-Ended Responses (n)
Do you think your home is ready to take on CHOICE+?		-	***Why is home ready/not ready/unsure?***
Yes, % (n)	60.0 (15)		***Ready:***
No, % (n)	4.0 (1)		· Motivation from staff, residents, families (8) · Practicing learnings (1) · Interested to try to improve (2) · Stakeholder buy-in (2)
Not sure, % (n)	36.0 (9)		***Not Ready:*** · Need to develop culture change first (1) ***Not Sure:*** · Difficult balancing Ministry of Health standards and resident-centred approach (1) · Hard to get staff buy-in (4) · Staff turn-over (1) · Finances (1) · Competing priorities (3)
How confident are you in applying what you learned today in your work? [e]	8.3 (±1.4)	7.8–8.9	***What would increase confidence?*** · Review CHOICE+ manual (6) · Practicing learnings (1) · Staff/leadership/organization buy-in (6) · Communication amongst staff (3) · Establishing CHOICE+ Champions (2) · Follow-up training (2) · Extra time dedicated to meal service (1) · Data/ideas from other homes (1)
How committed are you in applying what you learned today in your work? [f]	8.8 (±1.4)	8.2–9.4	***What would increase commitment?*** · More time (5) · Staff/leadership/organization buy-in (7) · Team meetings/huddles (1) · Establishing CHOICE+ Champions (1) · Practicing learnings (1) · More information (1)
Kirkpatrick's Model: Behaviour			
What is already available in your home to help you succeed with making improvements to mealtimes?			· Staff/leadership/organization wants or supports change (18) · Equipment for mealtimes (1) · Plan outline (1) · Success in the past (1)
What kind of help would you need from external sources to support you in making mealtime improvements?			· Additional training (6) · Additional staff to complete training · Network of support (5) · CHOICE+ facilitator (3) · Follow-up interviews (1) · Support from leadership (2) · Funding for training (1) · More time (1)

[a] Questions were rated by participants using a scale of 1 (Strongly Disagree) to 10 (Strongly Agree).
[b] Questions were rated by participants using a scale of 1 (Not Useful) to 10 (Very Useful).
[c] Questions were rated by participants using a scale of 1 (Low) to 10 (High).
[d] Questions were rated by participants using a scale of 1 (Not Feasible) to 5 (Very Feasible).
[e] Questions were rated by participants using a scale of 1 (Not Confident) to 10 (Very Confident).
[f] Questions were rated by participants using a scale of 1 (Not Committed) to 10 (Totally Committed).

Leadership Training program was developed (**Figure 1**) and is the first known training program focused on RCC and mealtimes. As an initial step towards implementing this intervention more widely, this developmental evaluation focused on determining the reaction, learning and intended behaviour change as a result of a single training session for champion leaders. This training was found to be useful, and almost all participants would recommend the training to others. Commitment and confidence to use the training were also high; however, behaviour change and results from this training (Kirkpatrick, 1976) were not assessed. Although participants had some train-

ing in leadership and quality improvement, behaviour change theory was new to participants. Champion training provided them with confidence to support changing their team's behaviour (8.1 rating). Pre-training organizational and participant characteristics and readiness were not associated with post-training confidence and commitment, although leadership and staff support were noted as important for success. Readiness assessments, although recommended (Shea et al., 2014), may not be sufficient for predicting success with implementation and recognizing that leadership needs to be on board with any new change is essential for uptake (von Treuer et al., 2018). However, lack of statistically significant associations between pre- and post-assessment may also be due to the small sample size.

Feasibility of CHOICE+ intervention components (e.g., developing a CHOICE+ Dining Team) were rated from 3.4 to 4.0 out of a possible 5. Lowest ratings were for time dedicated to implement changes and having staff complete CHOICE+ education modules. Residential care can be characterized as environments in constant flux, such as changes to day-to-day operations, understaffing, equipment malfunction, and unforeseen events with resident care (Cammer et al., 2013; Bowers et al., 2000; Lowndes et al., 2017; Watkins et al., 2017). This can make it challenging, if not impossible, to implement and sustain improvement initiatives if home leadership does not protect the time and space required for staff to receive proper education, training, and support (Cammer et al., 2013). For these reasons, organizational support is absolutely essential to implementation of any new practice (Cloutier et al., 2016). As noted by others (Tyler et al., 2014; Rodriguez et al., 2015), good team communication is needed to support unit level changes like CHOICE+. Participants that rated developing a team as feasible, also reported good communication with care staff. To further support CHOICE+ implementation, participants recommended further training, as well as a network of support such as a community of practice and follow-up with CHOICE+ experts would be beneficial, strategies previously chosen to support sustained change (Dearing et al., 2017). The authors view the addition of a community of practice as an essential component to the further development of CHOICE+ and have incorporated this component into the intervention theory (**Figure 1**). This and comments for improvement suggest that the one-day Champion Training was necessary but not sufficient to successfully implement CHOICE+. As noted in the intervention theory, more than this training is required for successful uptake.

Scores related to the application of the training materials indicate that while participants are very committed to applying their learnings, there were hesitations around their organization's readiness to adopt the CHOICE+ Program. Organizational context and culture, specifically turnover of managers and lack of leadership engagement at the outset of implementation, as well as minimum mentorship for staff to take on leadership roles have been cited as negatively influencing efforts to improve care practice (Brodtkorb et al., 2019; Tappen et al., 2017). Turnover among care staff can have equally devastating effects on innovation uptake, where instability and feelings of disempowerment result in lack of ownership of initiatives, further reducing morale and slowing adoption (Backman et al., 2020; Chamberlain et al., 2017). Special consideration should be given to the readiness of a home before undertaking multidimensional, targeted culture change initiative, such as the CHOICE+ Program (von Treuer et al., 2020; Keller et al., 2020; Wu et al., 2018). This is a noted structure component in the intervention theory. As residential care homes continue to weather the COVID-19 pandemic, there is an even greater need to provide ongoing training to empower leadership and staff in ways that emphasize and protect relationships and social connections within these communities (Cammer et al., 2013; Evardsson et al., 2020; Estabrooks et al., 2020).

Limitations

This initial offering of the CHOICE+ Champion Leadership Training had limitations. First, the evaluation should be considered developmental, as only the training session itself was evaluated. As questionnaires were based on prior questions and examples, pre-testing was not completed. A pre-test of the questionnaires may have elucidated better ways of ascertaining the desired information. Future work will focus on implementing all components of the intervention and determining immediate and ultimate outcomes as per the intervention theory. The number of participants was restricted to promote a rich learning experience, but this resulted in a small number for detailed analyses; nine attendees declined participation in the evaluation as they were corporate leads rather than embedded within a specific home. Thus, their capacity to report on readiness and commitment to change would not be as meaningful as participants who completed the pre- and post-test questionnaires. The single significant association found between pre- and post-test could have been spurious and other potentially important associations were not identified due to the homogeneity of the group and/or the small sample size. The planned follow-up interviews that would have evaluated Kirkpatrick's third and fourth levels of evaluation (i.e., behaviour and results) were not possible due to the pandemic.

Conclusion

CHOICE+ provides an opportunity for residential care homes to begin or continue along their culture change journey, specifically how to incorporate RCC practices into the dining room. This one-day training for champion leaders was found to be useful by participants. CHOICE+ Champion Leadership Training will be adapted considering this evaluation and recommendations from participants, including continual training (e.g., online), mentorship, and COVID-19-related relationship-centred mealtime strategies. Future work will focus on implementing and evaluating the full 10-component intervention, using the learning from this developmental evaluation.

Ethics and Consent

This study received ethics clearance from the University of Waterloo Office of Research Ethics (ORE# 40247). All participants provided written informed consent.

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Author Contributions

The primary investigator, SAW, assisted in the development of the CHOICE+ Champion Leadership Training program. SAW developed the initial draft of this manuscript. The principal investigator, HHK, conceived the development of the CHOICE+ Champion Leadership Training and the evaluation tools. HHK made substantial intellectual contributions to the analysis and co-wrote the manuscript. Co-Investigator RD made substantial intellectual contributions in the form of analysis and presentation of data, as well as critically reviewed early and final drafts of the manuscript. Co-investigators EL and HDR assisted in the development and delivery of the CHOICE+ Champion Leadership Training program and evaluation tools, and critically reviewed early and final drafts of the manuscript. All authors reviewed and provided final approval of this manuscript. All authors agree to be accountable for all aspects of this work.

Competing Interests

The authors have no competing interests to declare.

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