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Content analysis of a Participant-Directed Intervention to Optimize Activity Engagement of Older Adult Cancer Survivors

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Abstract

Background: Many older adult cancer survivors reduce their activity level during and after cancer treatment. Occupational therapy interventions need to flexibly address various obstacles to occupational engagement that survivors may face.

Objective: To describe the content of a participant-directed occupational therapy intervention for older adults with cancer.

Methodology: Content analysis was used to describe the treatment session data from the experimental arm of a pilot randomized controlled trial in terms of activities addressed, obstacles reported, and treatment strategies utilized.

Results: Participants predominantly used the intervention to increase exercise engagement or address instrumental activities of daily living. The most common obstacles to occupational engagement included fatigue, finding time, weather, and pain. Regarding treatment strategies, 77% of participants chose to practice the activity with the occupational therapist, 42% requested a piece of equipment, and 11% modified the environment in order to increase activity engagement.

Conclusion: Overall, the participant-directed intervention appears flexible enough to address various activities and obstacles to occupational engagement.

The number of older adults being diagnosed with cancer is projected to grow rapidly in the coming two decades (Parry, Kent, Mariotto, Alfano, & Rowland, 2011). A recent analysis of a registry for older adults with cancer indicated that almost half of older

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Declaration of Conflicting Interests

The authors declare that there is no conflict of interest.

Research Ethics

The study protocol was registered with [ClinicalTrials.gov](https://clinicaltrials.gov) prior to the initiation of participant recruitment (NCT01709344). The study was reviewed and approved by the Committee for the Protection of Human Subjects of Dartmouth College (CPHS# 23556) and was conducted in accordance with the revised (2000) Helsinki Declaration. All participants engaged in informed consent procedures throughout the study and signed a document to affirm their voluntary participation.

adult cancer survivors report reduced activity levels during the first year after a cancer diagnosis (Pergolotti et al., 2017). Reductions in activities and functional abilities are not only associated with lower quality of life (Pergolotti et al., 2017), but can also influence adherence to cancer treatment and even survival (Wildes et al., 2013). It is important, therefore, to develop rehabilitation interventions that help older adult cancer survivors maximize and optimize their activity engagement.

Activity levels are often affected by cancer symptoms and side effects of treatment, such as fatigue or peripheral neuropathy (Rowland & Bellizzi, 2014). However, older adult cancer survivors also indicate that activity levels are affected by other co-morbidities (e.g., arthritis or low vision), changing priorities, or lack of opportunity (Lyons, Lambert, Balan, Hegel, & Bartels, 2013). Rehabilitation interventions, therefore, need to be flexible enough to target any of the various obstacles that could hamper activity engagement in this population.

Our team developed a home-based occupational therapy intervention, designed to help older adult cancer survivors find ways to optimize activity engagement and decrease disability. The intervention was participant-directed, a term used by Gitlin and Czaja to describe behavioral interventions that address needs that are identified and prioritized by participants (Gitlin & Czaja, 2016). As such, the older adults in this intervention could determine what activities to target and what strategies to utilize (i.e., practice with a therapist, utilize adaptive equipment, and/or modify the environment). We conducted a pilot randomized controlled trial (RCT) to explore the feasibility of enrolling and retaining older adults into the study and intervention activities.

Initially, only older adults who had completed curative treatment for cancer were eligible for the RCT. However, when the study opened, referring clinicians indicated that they wanted to enroll patients with metastatic disease, as they may also be dissatisfied with their activity levels and functional abilities (Peoples, Brandt, Wæhrens, & la Cour, 2017). We recognized that people living with curative versus metastatic disease may have different functional abilities and priorities (la Cour, Johannessen, & Josephsson, 2009). For example, one could hypothesize that people living with metastatic disease might prioritize social activities over other activities (Lyons, Orozovic, Davis, & Newman, 2002) or, conversely, they may prioritize exercise as an important strategy to maintain strength in the face of ongoing treatment. While we recognized that enrolling people in different phases of treatment could affect the overall outcomes of the RCT, we felt the participant-directed aspect of our intervention would enable us to address the activity concerns of any cancer survivor. We, therefore, expanded the eligibility criteria to allow us to explore the feasibility of delivering the intervention to older adults who were in treatment for curative or metastatic disease.

As part of our intervention development and evaluation process, we conducted this secondary analysis of treatment session data to answer the following descriptive research questions: What activities did participants choose to work on during the sessions? What obstacles were making the activities difficult? What strategies did they use to increase their ability to perform or enjoy the activity? Were there differences in how participants with

curative disease utilized the intervention compared to participants with metastatic disease? The answers to these questions will be used to refine the intervention for larger studies.

Methods

Design

This study presents a secondary analysis of data collected from a pilot RCT comparing an occupational therapy intervention for older adults with cancer to usual care. The study was approved by the Committee for the Protection of Human Subjects at Dartmouth College and informed consent was obtained from participants. Descriptive statistics were compiled on data from the occupational therapist's documentation of the treatment sessions. As such, this analysis includes only the participants who were randomized to the experimental group and engaged in weekly activity planning as part of the intervention ($n = 26$). Outcomes from the RCT are currently being analyzed.

Eligibility Criteria

A research assistant used the following criteria to screen patients at the outpatient clinic of a National Cancer Center-designated comprehensive cancer center in the Northeastern United States. Patients were eligible if they were: (1) 65 years old; (2) Experiencing disability as indicated by a score of 3 on the Vulnerable Elders Survey (Saliba et al., 2001) or an answer of "yes" to the question "Do health problems interfere with your ability to carry out your social or day-to-day activities?" (Deimling, Sterns, Bowman, & Kahana, 2007); (3) Either: a. Diagnosed with any solid or hematological cancer, undergoing treatment for curative intent or within six months of completion of therapy with absence of disease recurrence; or b. Diagnosed with metastatic breast cancer or chronic hematologic malignancies with a life expectancy of 2 years. Participants were ineligible if they had (1) Moderate or worse cognitive impairment¹ as indicated by a score of three or less on the Callahan six-item cognitive screening tool (Callahan, Unverzagt, Hui, Perkins, & Hendrie, 2002); or (2) Medical record documentation of severe mental illness (i.e., schizophrenia or bipolar disorder), active suicidal ideation, or active substance misuse.

The Health Through Activity (HTA) Intervention

The HTA intervention was designed to help cancer survivors find ways to engage in valued activities. It is heavily influenced by Behavioral Activation (Hopko, Lejuez, Ruggiero, & Eifert, 2003) and Problem-solving Treatment for Primary Care (Hegel & Arean, 2003), which teach people to systematically overcome obstacles to engage in valued life roles and activities. The defining features of HTA include: (1) it is participant-directed (i.e., the participant chooses the activities to address, the criteria by which the activity engagement will be seen as satisfactory, and whether to use practice, environmental modification, or equipment provision); and (2) it includes goal setting and detailed action planning for

¹This screener was developed as a brief tool that researchers could use to identify moderate to severe cognitive impairment (e.g., dementia) that would make it difficult to meaningfully provide self-reports or participate in an intervention. The screener was not developed to identify the more subtle cognitive deficits that are reported by many cancer survivors and we were not attempting to identify or exclude survivors with cancer-related cognitive dysfunction. Of the 104 people who were ineligible for the study, only 1 of them was ineligible because of an inability to pass the cognitive screener.

activities that participants practice between sessions. HTA is similar to self-management interventions (Howell, Harth, Brown, Bennett, & Boyko, 2017) in that it is tailored to participant needs, facilitates self-efficacy and uptake of healthy behaviors, and teaches goal setting, action planning, and problem-solving skills. However, HTA does not include content regarding communication with care providers or managing disease and treatment effects, which are important aspects of self-management programs (Howell, Harth, Brown, Bennett, & Boyko, 2017). The particular focus of HTA is upon helping participants fill their days with a balance of activities that promote the health of their body, mind, and spirit

In the first session, the occupational therapist (KDL or JW) explained the purpose of the study and the relationship of activity engagement to health and well-being. The therapist asked the participant to discuss his or her daily routine and the ways in which cancer and its treatment and other factors (e.g., co-morbid conditions or social relationships) are affecting his or her activities. The session ended with the participant setting goals regarding the activities that he or she would like to address within the intervention.

In the second session, the occupational therapist presented a workbook describing the activity planning structure that included a) articulating motivation for the **activity**; b) identifying the **obstacles** that could make it difficult to engage in the activity in the next seven days; c) setting a seven-day goal that is behavioral, achievable, and observable; and d) creating an action plan that detailed *who* would be involved, *where* and *when* the activity would occur, and *how* the activity would be performed. The workbook also contained author-developed **educational handouts** that used the “who, where, when, and how” headings of the action planning step to demonstrate how to use those features to adapt a challenging activity, get regular exercise, sleep better, and manage energy. The therapist reviewed the activity adaptation handout with each participant during the second session; the other handouts were discussed if they appeared relevant when the participant described specific obstacles to activity engagement.

In sessions two through five, participants selected at least one activity and used the activity planning worksheet to set a goal and an action plan for engaging in the activity during the coming week. After establishing the goal and the action plan, participants were encouraged to **practice** the activity with the occupational therapist or to identify if a piece of **equipment** (e.g., a reacher) or **environmental modification** (e.g., repositioning a table lamp to improve lighting) would increase the ease or enjoyment of the activity. The activity planning worksheets included a chart to document activity engagement and goal attainment during the week. The chart was reviewed at the start of the following session.

Both the therapist and the participant used the activity planning worksheet to document each step of activity planning during the treatment sessions. The words of the participants were used to describe the motivation and obstacles. The occupational therapist transcribed the information from the worksheet into a database after each session.

Analysis

Data Categorization

The first author manually reviewed each paper worksheet to confirm that all data documented within the session were included in the database. This content analysis includes six variables: activities (free text), obstacles (free text), education (yes/no for whether an educational handout was used), practice (yes/no for whether a session included practice with the occupational therapist), equipment (yes/no for whether equipment was provided, and a description of the type of equipment), and environmental modifications (yes/no for modifications done within a session, and a description of the nature of the modifications).

The first step in the analysis was to group the activities and obstacles into descriptive categories. The types of **activities** were categorized using a scheme developed for previous studies of a similar intervention (Lyons, Erickson, & Hegel, 2012; Lyons, Svensborn, Kornblith, & Hegel, 2015). In those studies, we found high interrater reliability using operational definitions to code the type of activity the participant wanted to address in a session (e.g., aerobic exercise, leisure, stress management).

Three authors (KDL, RN and AMA) considered various theories and categorization schemes that would allow us to summarize the **obstacles**. A previously published scheme offered the best fit for describing the nature of the obstacles (Adachi-Mejia & Schifferdecker, 2016). The first author created operational definitions and the three authors noted above independently placed the 31 obstacles into one of five categories: physical, psychological, time, environmental, and social obstacles. There was perfect agreement among the three raters on 24 obstacles. The remaining seven obstacles were placed in the category that was chosen by two of the three raters.

Data Summarization

The frequency of each of the six variables during a session was counted and the proportion was described using the participant as the unit of analysis. The activity and practice variables were also counted using the goal as the unit of analysis.

Exploration of Variation Within the Sample

The counts and proportions were visually inspected to explore any stark differences noted between participants with curative versus metastatic disease in terms of the activities targeted, obstacles noted, or the use of treatment strategies (i.e., practice, equipment, or environmental modification). When discrepancies were noted, the worksheets and field notes were consulted to generate hypotheses regarding potential explanations. This exploratory analysis was done to gather any preliminary data that would suggest that people with metastatic disease could be utilizing the intervention differently than people with curative disease, as that could indicate a need to modify the intervention procedures to better meet the needs of certain subgroups of cancer survivors.

Results

Participants

Thirty participants were randomized to the intervention arm of the study. Two participants withdrew from the study before completing the intervention or setting any weekly goals. Another two completed the intervention by reviewing the educational content of the intervention and discussing how it applied to them, but they did not set weekly goals. The dataset for these analyses consists of the remaining 26 participants who set weekly goals and completed the intervention. The sample was primarily female ($n = 18$; 69%). Twelve participants were in treatment for metastatic cancer and fourteen participants were receiving ($n = 5$) or had completed treatment ($n = 9$) with curative intent. Participant characteristics are listed in Table 1.

Activities Targeted Within the Health Through Activity Intervention

The 26 participants set a total of 160 one-week goals during the intervention, often setting two (or, rarely, three) goals during one session. The types of activities targeted with one-week goals are displayed in Table 2. Participants were most frequently finding ways to incorporate aerobic or strengthening exercises into their daily routines (88% and 50% of participants set at least one aerobic or strengthening exercise goal, respectively). Exercise was the focus of 68% of the goals that were set (47% of goals addressed aerobic exercise and 21% of goals addressed strengthening exercise).

Almost half of the participants (46%) worked on an instrumental activity of daily living (IADL). The IADL goals addressed home management, particularly cleaning or organizing the home. Thirty-one percent of participants worked on leisure activities that were sedentary in nature (reading, drawing, knitting, sewing, watching a movie, and playing an instrument). Few participants targeted social activities (12%), stress management activities (8%) or sleep (4%).

Approximately equal numbers of participants with curative versus metastatic disease chose to work on each type of activity, except for leisure activities. Seven of the eight participants who chose to work on a leisure activity had curative disease. Of those seven, only one was still receiving treatment.

Perceived Obstacles to Activity Engagement

The obstacles to activity engagement are displayed in Table 3. Most of the obstacles related to a physical symptom or impairment (13 obstacles) or a psychological issue related to mood, attitudes, preferences, or mental state (11 obstacles). Fewer obstacles were related to the environment (4 obstacles), time management (2 obstacles) or social issues (1 obstacle).

The most commonly reported physical obstacles were fatigue and pain, reported by 62% of the curative and 38% of the malignant sample. More people in the curative sample reported fatigue (10; 71%) than did people with metastatic disease (6; 50%). The location of pain included the back, shoulder, and knee. Many participants reported that pain was related to a pre-existing condition.

While no psychological barrier was reported by more than 15% of the sample, many participants reported one of the 11 psychological barriers. Four of the psychological barriers involved needing to push oneself to initiate and complete an activity (having enough motivation, inertia, self-reported “laziness,” and having enough willpower). These obstacles were reported by 42% of the participants, many of whom indicated that the cancer treatment had “slowed” them down, affecting both the pace and number of activities they did each day. These four obstacles were reported by slightly more participants with curative disease ($n = 8$) than by participants with metastatic disease ($n = 3$).

Weather and one’s living environment (lack of storage space in home, hilly neighborhood, etc.) were reported as obstacles by 46% and 23% of the total sample, respectively. Being too busy to find time for an activity was reported by 62% of the total sample.

Treatment Strategies

Educational Handout Use.—As per protocol, all participants received education regarding how to adapt activities as part of the second session. Sixteen participants reviewed an educational handout within a session; two of those 16 participants reviewed two different handouts. Of those 16 participants, 10 had metastatic disease and six had curative disease. The following educational handouts were reviewed during the treatment sessions: considerations for incorporating exercise into routines ($n = 7$ participants), energy management principles ($n = 7$), sleep hygiene principles ($n = 1$), and how to manage tremors ($n = 1$; created expressly for one participant with that issue).

Practice.—Twenty participants (nine with metastatic disease and 11 with curative disease) practiced an activity with the therapist during at least one session. Of those 20, six participants practiced more than one type of activity with the therapist (three of them had metastatic disease and three had curative disease). For those 20 participants, the number of their sessions that included practice ranged from one to four, with a mean of 2.7 sessions ($sd = 1.0$).

The activities that were practiced are displayed in Table 2. Almost three-quarters of the sample (70%) took at least one walk for exercise with the occupational therapist. About one-third of participants (35%) performed some strengthening exercises during the session. Other activities being practiced during the session involved organizing closets/supplies or playing a musical instrument.

Equipment.—Eleven participants (six in the metastatic arm and five in the curative arm) were interested in a piece of equipment to facilitate participation in an activity. The following pieces of equipment were provided to participants: reacher (two participants), pedometer (2 participants), accordion straps (to replace a rope he had been using), magnifying lenses (to increase ease of doing a daily crossword puzzle from the newspaper), theraband, theraputty, 1-pound free weights, storage bins, a non-skid placemat, and audiorecordings of a relaxation program or music.

Environmental modification.—Three participants wanted to change their environment to facilitate participation for an activity. Two women with curative disease asked for help

to clean closets or workplaces to make cooking, laundry, or leisure activities easier. One woman with metastatic disease decided to bring a stool out to the garden and set up fans to reduce heat in the summer.

Discussion

The goal of this analysis was to explore the activities addressed, obstacles identified, and strategies used by participants in a pilot RCT of an occupational therapy intervention to promote activity engagement in older adults with cancer. The participants predominantly chose to work on getting more aerobic and strengthening exercise into their daily routines. They were generally receptive to the idea that exercise could be used to reduce fatigue (Scott & Posmontier, 2017) and many verbalized the importance of needing to build strength to face future cancer treatment or challenges of aging. Over one-third of participants took advantage of the opportunity to exercise with the occupational therapist. This finding suggests that participants may be interested in modifying the intervention to include a formal occupational or physical therapy evaluation to offer a tailored exercise prescription and assess its safe execution.

Participants reported a wide range of obstacles to activity engagement. The obstacles reported by the greatest proportions of participants involved fatigue and finding the time for activity, followed by weather issues (i.e., snow in winter or high temperature in summer) and pain. These obstacles were reported for both self-identified “chores” (e.g., exercise or home management) as well as enjoyable activities (e.g., leisure or socialization). The results mirror other studies in both the general population (Adachi-Mejia & Schifferdecker, 2016) as well as with cancer survivors (Yang et al., 2017) that suggest people need to actively prioritize efforts for physical activity and other activities in the midst of health issues or other competing demands for time. This may be particularly important in the context of cancer survivorship where disability more often occurs as an insidious process as opposed to an acute onset with a definitive cause (Cheville, Kornblith, & Basford, 2011).

The reported obstacles also confirm that while physical impairments are frequent obstacles to activity engagement, therapists also need to attend to the psychological, environmental, and practical aspects of activity engagement to fully understand and address disability. This suggests that although impairment-driven models for cancer rehabilitation may be an important starting point (Silver, Baima, & Mayer, 2013), occupational therapists need to emphasize the necessity of a multifactorial approach to reducing disability. In particular, some of the psychological obstacles noted by participants could be manifestations of depression or cognitive impairments. While participants in this study rarely mentioned negative mood or cognitive issues it would be helpful to formally assess those conditions in future studies of this intervention.

While most participants took advantage of the opportunity to practice an activity with the occupational therapist, none of the participants practiced the activity during every session. Additionally, only three participants wanted to engage in environmental modification to overcome obstacles to activity engagement. Taken together, these findings suggest that a hybrid intervention consisting of home-based sessions interspersed with telephone-sessions,

may be an option to maximize the feasibility of the intervention in terms of staffing and therapist time.

Overall, there were not dramatic differences between the activities, obstacles, and strategies seen in the participants with metastatic disease versus those with curative disease. That said, the occupational therapist reviewed the educational handouts with a slightly greater proportion of participants with metastatic disease compared to those with curative disease. It is plausible that people living with metastatic disease may be more interested in education regarding activity adaptation as they anticipate more functional challenges with disease progression and treatment. Conversely, a slightly greater proportion of participants with curative disease a) cited fatigue as an obstacle to activity engagement, b) reported needing to explicitly summon will or energy to engage in an activity, and c) chose to set a goal related to a leisure activity. Participants in this and another study by our team (Lyons et al., 2013) reported that their oncology providers have told them it would take approximately one year to regain their strength and vitality after completing cancer treatment. Obstacles of fatigue and the need to push oneself to initiate even enjoyable leisure activities demonstrate the ways in which cancer treatment can reduce activity levels and suggest that some survivors may need support and encouragement to consciously increase activity level after cancer treatment.

Study findings should be interpreted cautiously, as this descriptive study utilized a small convenience sample of primarily female participants, most of whom were highly educated, and all of whom were exposed to the HTA intervention. The sample's characteristics were heterogeneous in terms of the cancer diagnosis, stage, and treatment status and regimen, yet were homogeneous regarding race and ethnicity. As such, the experiences of this small sample cannot be assumed to reflect the experiences of the diverse population of cancer survivors.

Conclusion

Participants used the HTA intervention to address a wide range of activities, with the most frequent being exercise and instrumental activities of daily living. Physical symptoms and environmental features created challenges for many of the participants as they attempted to increase their activity engagement and reduce disability. Most of the participants took advantage of the opportunity to practice activities with an occupational therapist and almost half requested a piece of equipment to promote enjoyment or ease of activity engagement. Overall, this person-directed intervention appears flexible enough to accommodate the needs and preferences of subgroups of cancer survivors. Future studies in this line of research should explore the incorporation of physical therapy, formal assessment of depression and cognitive impairment, and telehealth models to maximize cost-effectiveness and potential potency.

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Table 1.

Participant Characteristics (N = 26)

Characteristic	Mean (sd)	n (%)
Age in years	72.3 (6.3)	
Gender		
Male		8 (33)
Female		18 (69)
Race and Ethnicity		
White		25 (96)
Asian		1 (4)
Not Hispanic or Latino		26 (100)
Type of Cancer		
Hematological		16 (61)
Breast		7 (27)
Lung		1(4)
Gastro-intestinal		1 (4)
Melanoma		1 (4)
Marital Status		
Never married		1 (4)
Married or living with partner		12 (46)
Divorced or separated		5 (19)
Widowed		8 (31)
Employment		
Working full-time		2 (8)
Working part-time		1 (4)
On short-term or long-term disability		1 (4)
Retired		22 (84)
Education		
Some high school		1 (4)
High school degree or equivalent		3 (12)
Some college		8 (31)
Bachelor's degree		9 (34)
Graduate degree		5 (19)

Table 2

Activities Targeted with One-week Goals

Activity	Number of participants addressing activity at least once (<i>N</i> = 26)	Number of goals addressing activity (<i>N</i> = 159)	Number of participants who practiced the activity with the therapist at least once (<i>N</i> = 20)	Number of times the activity was practiced with the therapist (<i>N</i> = 53)
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Walking or aerobic exercise	23 (88)	75 (47)	14 (70)	26 (49)
Strengthening exercise	13 (50)	34 (21)	7 (35)	13 (25)
Instrumental activity of daily living (IADL)	12 (46)	26 (16)	3 (15)	8 (15)
Leisure	8 (31)	15 (10)	3 (15)	6 (11)
Social	3 (12)	5 (3)	0 (0)	0 (0)
Stress management	2 (8)	3 (2)	0 (0)	0 (0)
Sleep	1 (4)	1 (1)	0 (0)	0 (0)

Table 3.

Obstacles to Activity Engagement Reported by Participants

Obstacle	Participants with Curative Disease Reporting the Obstacle (N = 14)	Participants with Metastatic Disease Reporting the Obstacle (N = 12)	Total Participants Reporting the Obstacle (N = 26)
	n (%)*	n (%)	n (%)
<i>Physical (pertains to someone's body i.e., a symptom or physical impairment)</i>			
Fatigue; takes more energy than I have	10 (71)	6 (50)	16 (62)
Pain	5 (36)	5 (42)	10 (38)
Having treatment in next 7 days, likely won't feel well	3 (21)	3 (25)	6 (23)
Lack of strength	2 (7)	1 (8)	3 (12)
Shortness of breath	2 (7)	1 (8)	3 (12)
Gastro-intestinal issues	1 (7)	1 (8)	2 (8)
Lack of balance	1 (7)	1 (8)	2 (8)
Dry eyes	1 (7)	0 (0)	1 (4)
Tremors	1 (7)	0 (0)	1 (4)
Allergies	0 (0)	1 (8)	1 (4)
Edema	0 (0)	1 (8)	1 (4)
Will fall asleep if I sit still for the activity	1 (7)	0 (0)	1 (4)
Lack of sleep	1 (7)	0 (0)	1 (4)
<i>Psychological (pertains to one's mood, attitude, mental state, preferences, emotional attachments, or biases)</i>			
Might not meet personal or social expectations	3 (21)	1 (8)	4 (15)
Having enough motivation	3 (21)	1 (8)	4 (15)
Inertia/hard to get self going	3 (21)	0 (0)	3 (12)
"Laziness"	2 (14)	1 (8)	3 (12)
Boring	2 (14)	1 (8)	3 (12)
Not sure where or how to start	1 (7)	2 (17)	3 (12)
Feel unproductive	1 (7)	1 (8)	2 (8)
Anxiety/worry/lack of confidence	2 (14)	0 (0)	2 (8)
Hard to concentrate	2 (14)	0 (0)	2 (8)
Having enough willpower	0 (0)	1 (8)	1 (4)
Feels too selfish	1 (7)	0 (0)	1 (4)
<i>Environmental (related to one's external resources or the physical environment)</i>			
Weather limits practical choices	5 (36)	7 (58)	12 (46)
Environment limits practical choices	4 (29)	2 (17)	6 (23)
No car or license or ability to drive at night	3 (21)	0 (0)	3 (12)
Financial constraints	1 (7)	0 (0)	1 (4)
<i>Time management (related to routines, schedules, or the management of competing priorities)</i>			

Obstacle	Participants with Curative Disease Reporting the Obstacle (N = 14)	Participants with Metastatic Disease Reporting the Obstacle (N = 12)	Total Participants Reporting the Obstacle (N = 26)
	n (%) [*]	n (%)	n (%)
Being busy/hard to find time	9 (35)	7 (58)	16 (62)
Remembering to do it	0 (0)	1 (8)	1 (4)
<i>Social (related to the need for another person's buy-in or involvement in the activity)</i>			
Need or want a friend to do the activity	1 (7)	1 (8)	2 (8)

* Percentages do not add to 100 because participants could report more than one obstacle

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