REVIEW

Life Goal Domains, Traits, and Setting Process in the **Collaboration between Healthcare Professionals and Cancer Survivors: A Scoping Review**

Katsuma Ikeuchi, MS, OTR ^a Seiji Nishida, PhD, OTR ^a and Mari Karikawa, PhD, RN ^b

Objectives: This study aimed to describe the classification of goal domains, goal traits, and the goal-setting process as revealed by previous life goal-setting practices of healthcare professionals collaborating with cancer survivors. Methods: The design was a scoping review. The MEDLINE, Academic Search Premier, and CINAHL databases were searched and mapped for papers with descriptions of goal domains, goal traits, and the goal-setting process. Goal domains were classified as life goals that were health-related, psychological, social, achievement-related, and leisure goals. Goal traits were classified based on specific, measurable, achievable, relevant, and timed (SMART) criteria. The goal-setting process was classified based on the frameworks of goal-setting phases (preparation, formulation, follow-up) and their components. Results: In total, 229 papers were identified, and 24 papers were included in the final analysis. All papers included health-related goals, followed by psychological and social goals. All goal domains were included in 41.7% of the papers. Relevant goals were the most common and timed goals were the least common. All papers included either of the components that comprise the preparation or formulation phases. We found that 12.5% of papers did not include any of the three components of the follow-up phase. Conclusions: The life goals collaboratively set between cancer survivors and healthcare professionals were characterized by the following: psychological and social goal domains, numerous goal domains, more relevant goals and fewer timed goals, low proportion of patient education in the preparation phase, and high proportion of evaluation of progress or achievement in the follow-up phase.

Key Words: cancer rehabilitation; cancer survivorship; goal setting; mapping review

INTRODUCTION

The global cancer burden is expected to reach 28.4 million cases by 2040, which is a 47% increase from 2020.1) Many cancer survivors have fair or poor health status, physical and psychological disabilities, and limitations in activities of daily living or instrumental activities of daily living, which may be a late consequence of cancer and its treatment.²⁾ The provision of early support, such as survivorship care³) and occupational therapy,⁴⁾ for cancer survivors has become a global concern because these individuals are constrained to

live with the persistent effects of cancer and its treatment.

Life goals give meaning to a person's life, are an important part of developing one's identity, and are defined as internal representations of the desired states that motivate behavior.⁵⁾ As a potentially life-threatening illness, cancer negatively influences one's life goals, in addition to introducing physical and mental disabilities. For example, cancer survivors report fewer achievement-related and leisure goals and are known to abandon difficult-to-attain or unattainable goals; these issues can persist for as long as 18 months after diagnosis.⁶) Higher goal disturbance in cancer survivors is associated

Correspondence: Katsuma Ikeuchi, MS, OTR, 1-1 Gakuen-cho, Mihara, Hiroshima 723-0053, Japan, E-mail: ikeuchi@pu-hiroshima.ac.jp Copyright © 2024 The Japanese Association of Rehabilitation Medicine



This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial No Derivatives (CC BY-NC-ND) 4.0 License. http://creativecommons.org/licenses/by-nc-nd/4.0/

Received: January 21, 2024, Accepted: May 10, 2024, Published online: May 21, 2024

^a Department of Occupational Therapy, Faculty of Health and Welfare, Prefectural University of Hiroshima, Hiroshima, Japan

^b Department of Nursing, Faculty of Health and Welfare, Prefectural University of Hiroshima, Hiroshima, Japan

with a decreased quality of life (QoL) at 7 and 18 months post-diagnosis.⁷) Conversely, findings have also indicated that survivors who used more goal-adjustment strategies between 7 and 18 months post-diagnosis reported higher QoL at 18 months post-diagnosis.⁷) Moreover, when cancer survivors can experience more progress in achieving goals or downgrade the importance of unattainable goals, they are less likely to experience reductions in global QoL over time.⁸) These findings suggest that healthcare professionals should assist cancer survivors to set life goals. Specifically, for cancer survivors to live with and beyond cancer, it is vital for them and their healthcare professionals to collaboratively set life goals that reflect their QoL.

Goal setting is the formal process in which a rehabilitation professional or team, together with the patient and/or their family, negotiates goals.⁹ Several studies on goal setting have been conducted for adults with acquired disabilities¹⁰) and those undergoing geriatric rehabilitation.¹¹⁾ However, to the best of our knowledge, there are few studies on goal setting for cancer rehabilitation. Cancer survivors may require unique life goal strategies that differ from those of individuals with other illnesses because they may have the abovementioned life goal disabilities. Therefore, this study aimed to describe classifications related to goal domains, goal traits, and the goal-setting process as revealed by the previous life goal-setting practices of healthcare professionals collaborating with cancer survivors. It was expected that understanding such descriptive data would help us to recognize the challenges and essential elements in this field where evidence is lacking.

MATERIALS AND METHODS

Study Design

This study was a scoping review. The review was conducted following the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR).^{12,13)} The recommended population, concept, and context (PCC) mnemonic,¹⁴⁾ which was used to identify the focus and context of the research question for the scoping review, was as follows: the population comprised adults aged 18 years or over who were experiencing or had experienced cancer treatment; the concept encompassed life goal domains, goal traits, and the goal-setting process; and the context encompassed inpatient and outpatient facilities, community, and home.

Data Sources and Searching Strategies

The MEDLINE, Academic Search Premier, and CINAHL databases were used in this study. The search terms were [(cancer) OR (oncology) OR (malignant tumor)] AND [(goal-setting) OR (goal-planning) OR (goal-directed) OR (goal-oriented)] AND [(rehabilitation) OR (nurse) OR (occupational-therapy) OR (physiotherapy) OR (physical-therapy)] AND [(life) OR (living) OR (activity) OR (occupation)]. The last search date was September 5, 2022.

Inclusion and Exclusion Criteria

The inclusion criteria were as follows: (1) the papers were peer-reviewed; (2) the language was English; (3) participants were diagnosed with cancer; (4) participants were at least 18 years of age; (5) life goals were set collaboratively by cancer survivors and healthcare professionals; (6) life goal domains, goal traits, or the goal-setting process was described; (7) quantitative outcome data or narratives of cancer survivors showing the set goals' effectiveness were described; (8) the full text was available. The exclusion criteria were as follows: (1) participants were end-of-life cancer patients (individuals whose prognosis for life was expected to be less than 6 months), and the papers were (2) university bulletins, (3) case reports, or (4) protocol papers.

Paper Extraction

Identification, screening, eligibility, and inclusion steps were performed following the PRISMA flow diagram.¹⁵⁾ In the identification stage, the authors consulted a librarian and attempted to gain access to the full-text papers if they were unavailable for initial evaluation. At the screening stage, papers that did not meet the inclusion criteria or those that met the exclusion criteria based on titles and abstracts were excluded. Those that could not be evaluated by the title and abstract alone or those in which the title and abstract met the inclusion criteria were carefully reviewed by thorough reading of the full text at the eligibility stage. The remaining papers were included in the final analysis.

Data Analysis

After paper extraction, an abstract table for the included papers was constructed for analysis. This abstract table summarizes the main healthcare professionals involved in the study, the study design, and participant characteristics (main cancer type, age, stage, period since diagnosis or treatment, and sample sizes).

Subsequently, classifications of the goal domains, goal traits, and the goal-setting process were mapped. First, the

Prog. Rehabil. Med. 2024; Vol.9, 20240018

goal domains were classified as life goals that were health related, psychological, social, achievement-related, and leisure goals, following Pinquart et al.⁶⁾ Health-related goals focused on maintaining and improving one's physical health (e.g., getting healthy and increasing physical fitness). Psychological goals focused on inner psychological states (e.g., increasing self-insight and learning to be satisfied with one's present state). Social goals focused on interpersonal relations, such as the enlargement and maintenance of one's current social relationships (e.g., spending time with friends and relatives). Achievement-related goals included gains in prosperity and material possessions, improvement in one's material conditions, career development, and gaining social prestige (e.g., finding a new job or buying a new car). Leisure goals focused on intrinsically meaningful and self-rewarding activities in which people engaged by choice rather than necessity (e.g., going on a holiday or reading a novel).

Second, goal traits were classified according to the specific, measurable, achievable, relevant, and timed (SMART) criteria proposed by Schut and Stam¹⁶) and Bovend'Eerdt et al.¹⁷) The number of goal domains and goal traits (maximum of five for each) included in each analyzed paper was counted. This was because, in general, there is not only one goal set, but several, including an overall rehabilitation goal and corresponding specific rehabilitation goals.¹⁸)

Third, the goal-setting process was classified based on goal-setting phases and components following those proposed by Lenzen et al.¹⁹⁾ The goal-setting phases were divided into: (1) preparation (patients engaging in activities prior to setting goals), (2) formulation of goals (patients' goals are made explicit and written down), and (3) follow-up (patients actively working on achieving their goals and/or are supported in working on their goals). Preparation phases included components such as patient education, patient selfreflection, and identification of topics for setting goals. The formulation of goals did not have any component, whereas follow-up phases included components such as patients' selfmonitoring of progress toward goal achievement, support for the patients, and the evaluation of progress or achievement.

Reliability of Analysis

The search, extraction, and analysis of the papers were conducted independently by the first (KI) and second authors (SN). If the results of the two researchers differed, they conducted a joint analysis until a consensus was reached.

RESULTS

Process of Adopting Papers

After searching the databases, 229 papers were identified (86 from MEDLINE, 72 from Academic Search Premier, and 71 from CINAHL). These papers were published between 1986 and 2022. We screened 161 papers after removing duplicates. In the screening step, 77 papers were excluded because they did not meet the inclusion criteria. In the eligibility step, a total of 60 papers were excluded because they were not peer-reviewed (n=3), were not written in English (n=4), did not include the participants' cancer diagnosis (n=4), did not include participants aged 18 years or older (n=1), did not address collaborative goals (n=17), did not describe goal domains, goal traits, or the goal-setting process (n=17), did not report quantitative outcome data or narratives from cancer survivors that showed the goals' effectiveness (n=13), and did not include full access to the text (n=1). Ultimately, 24 papers were included in the analysis (Fig. 1). $^{20-43}$)

Overview of Included Papers

The primary healthcare professionals involved in goal setting included physicians (4.2%), registered nurses (58.3%), physiotherapists (33.3%), occupational therapists (25.0%), speech-language-hearing therapists (4.2%), clinical psychologists (12.5%), registered dietitians and nutritionists (12.5%), and social workers (4.2%). The study designs were as follows: randomized controlled trials (including pilot randomized controlled trials; n=4, 16.7%), non-randomized controlled trials (n=1, 4.2%), single-arm pre-post (n=6, 25.0%), longitudinal observational (n=1, 4.2%), mixed methods (n=3, 12.5%), qualitative (n=8, 33.3%), and measurement development (n=1, 4.2%). The main cancer types of the participants were breast, hematopoietic, gastrointestinal, gynecological, and lung. Participants were aged 20-88 years. The cancer stage was not reported in 15 papers (62.5%). In the 9 papers that reported cancer stage, 5 included stage I (55.6%), 6 included stage II (66.7%), 6 included stage III (66.7%), and 3 included stage IV (33.3%). Some papers reported the period since diagnosis or treatment. Participants were reported as undergoing cancer treatment in 7 papers (29.2%). The time since diagnosis was reported in 8 papers (33.3%), ranging from 1 to 156 months. The time since treatment was reported in 7 papers (29.2%), and some participants had cancer for up to 60 months after treatment. The time since diagnosis and treatment was not reported in 6 papers (25.0%). The sample sizes of the included papers ranged from 6 to 151. These details are summarized in Table 1.

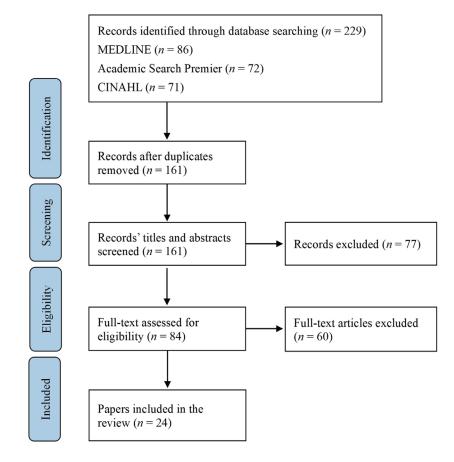


Fig. 1. PRISMA flow diagram for selection and assessment of relevant papers. Reasons for exclusion in the screening and eligibility stages are described in the text.

Goal Domains

Health-related goals were included in 24 papers (100.0%), psychological goals in 20 papers (83.3%), social goals in 17 papers (70.8%), achievement-related goals in 11 papers (45.8%), and leisure goals in 15 papers (62.5%). Three papers (12.5%) contained one goal domain, 2 papers (8.3%) contained two goal domains, 6 papers (25.0%) contained three goal domains, 3 papers (12.5%) contained four goal domains, and 10 papers (41.7%) contained five goal domains. The average number of goal domains was 3.6. These details are summarized in **Table 2**.

Goal Traits

Specific goals were included in 15 papers (62.5%), measurable goals in 12 papers (50.0%), achievable goals in 15 papers (62.5%), relevant goals in 22 papers (91.7%), and timed goals in 5 papers (20.8%). Five papers (20.8%) contained one goal trait, 6 papers (25.0%) contained two goal traits, 4 papers (16.7%) contained three goal traits, 5 papers (20.8%) con-

tained four goal traits, and 4 papers (16.7%) contained five goal traits. The average number of goal traits was 2.9. The details of these traits are summarized in **Table 3**.

Goal-setting Process

All papers included either of the components that comprise the preparation or formulation phases. However, 3 papers (12.5%) did not include any of the three components in the follow-up phase. Regarding the preparation phase, patient education was included in 16 papers (66.7%), patient selfreflection was included in 18 papers (75.0%), and identification of topics for setting goals was included in 24 papers (100%). The formulation phase was included in all papers (n=24, 100%). For the follow-up phase, self-monitoring was included in 14 papers (58.3%), support for the patient was included in 17 papers (70.8%), and evaluation of progress or achievement was included in 17 papers (70.8%). The details of these phases and components are included in **Table 4**.

PT RN RN RN PT	healthcare	Study design		1			0 00000
	CIPITOICCO		Main cancer type	Age (years) ^a	Stage	Period since diagnosis or treatment (months)	size
	, RN	Qualitative	Breast, gastrointestinal, hematopoictic, gyne- cological, lung	30–69	Unclear	1 after diagnosis	56
		RCT	Gastrointestinal	41–76	II–IV	UT	124
		Single-arm pre-post	Breast, gastrointestinal, hematopoietic, renal	21-80	Unclear	Unclear	54
		Qualitative	Hematopoietic	22–74	Unclear	1-2.5 after diagnosis	22
		Mixed methods	Lung	40-82	IV	UT	60
		Single-arm pre-post	Breast	Mean 58.1	IV	112.8 after diagnosis	55
26 RDN		Qualitative	Breast	Mean 62	Unclear	120 after diagnosis	17
27 CP		Pilot RCT	Breast, melanoma, hematopoietic, sarcoma	Mean 32.6	Unclear	24.8 after diagnosis	56
28 RN, CP, SW, administration	RN, CP, SW, administration	Qualitative	Male reproductive system	Median 63	Early stage and advanced cancer	12–36 after diagnosis	18
29 RN		Qualitative	Lung	40–75	III–I	Unclear	22
30 PT, OT, RDN	, RDN	Qualitative	Breast, hematopoietic, lung, gynecological, melanoma	Mean 52.7	Unclear	3–24 after treatment	26
31 OT		Pilot RCT	Hematopoietic	Mean 73.9	Unclear	Unclear	28
32 PT, OT, D	PT, OT, ST, RN, RDN, physicians	Measure development	Head and neck	Mean 57.6	Unclear	8 after diagnosis	23
33 RN, PT		Mixed methods	Hematopoietic, breast	44 - 88	Unclear	Unclear	11
34 RN		Non-RCT	Gastrointestinal	Mean 64.2 (intervention group), 58.4 (control)	Unclear	UT to 1 after treatment	56
35 OT		Mixed methods	Hematopoietic, breast, lung, gastrointestinal, melanoma	Mean 72	Unclear	UT to 6 after treatment	30
36 PT		Single-arm pre-post	Breast, gynecological, hematopoictic, urologic, melanoma	31–78	Unclear	5–156 after diagnosis	24
37 RN		Longitudinal observational	Gynecological	20–75	Unclear	1-3 after treatment	151
38 RN		Single-arm pre-post	Breast	Mean 52 (study 1), 46 (study 2)	III-II	UT to 6 after treatment	16
39 RN		Single-arm pre-post	Gynecological, hematopoietic, breast, male reproductive system, gastrointestinal	25–35	Unclear	UT to 60 after treatment	16
40 PT		Qualitative	Gynecological	38–78	III-I	Unclear	16
41 RN		Qualitative	Male reproductive system	29–45	Unclear	1–3 after treatment	9
42 OT		Pilot RCT	Breast	Mean 54.3	III-I	UT	15
43 PT, CP		Single-arm pre-post	Breast, sarcoma, gastrointestinal, renal	38-60	III-I	Unclear	13

Prog. Rehabil. Med. 2024; Vol.9, 20240018

Table 1. Abstract table of study characteristics

5

Copyright © 2024 The Japanese Association of Rehabilitation Medicine

Reference	Health-related goals	Psychological goals	Social goals	Achievement-related goals	Leisure goals	Total
20	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
21	\checkmark	\checkmark	\checkmark			3
22	\checkmark	\checkmark			\checkmark	3
23	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
24	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
25	\checkmark					1
26	\checkmark		\checkmark			2
27	\checkmark	\checkmark		\checkmark		3
28	\checkmark	\checkmark	\checkmark			3
29	\checkmark	\checkmark	\checkmark			3
30	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
31	\checkmark	\checkmark	\checkmark		\checkmark	4
32	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
33	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
34	\checkmark					1
35	\checkmark	\checkmark	\checkmark		\checkmark	4
36	\checkmark					1
37	\checkmark	\checkmark	\checkmark		\checkmark	4
38	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
39	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
40	\checkmark	\checkmark				2
41	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
42	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
43	\checkmark	\checkmark			\checkmark	3
Total	24 (100%)	20 (83.3%)	17 (70.8%)	11 (45.8%)	15 (62.5%)	3.6 (mean

 Table 2. Inclusion of goal domains in assessed publications

DISCUSSION

Goal Domains

The most frequently included goal domains were healthrelated goals, followed by psychological and social goals. It has been reported that cancer survivors' emotional, social, and spiritual needs, such as reducing stress or worrying, concerns about the cancer coming back, and dealing with the impact that cancer has on their relationship with their partner, were more likely to be unmet than needs in other domains.⁴⁴⁾ Meanwhile, stroke survivors have reported more unmet needs in physical function, such as pain and bladder/ bowel continence, than in psychosocial function.⁴⁵⁾ Direct comparison of the goal domains of cancer survivors with those of non-cancer survivors is difficult because of the low number of studies reporting the goal domains of non-cancer survivors. However, cancer survivors' goal domains may be characterized by inclusion of psychological and social goals.

Notably, 10 papers (41.7%) contained five goal domains, and 19 (79.2%) of the 24 analyzed papers included three or more goal domains, indicating that most papers included multiple goal domains. The rehabilitation goals and needs identified by cancer survivors indicated that they tend to place equal (and high) value on their multiple rehabilitation goals across each of the three occupational performance areas (self-care, leisure, and productivity), regardless of age or gender.^{46,47)} Hematological malignancy survivors who had diverse types of distress, including fatigue, anxiety, fear of relapse, drastic economic changes caused by loss of employment, feelings of being let down, identity crises, and loss of work-related friendships, reported that setting new or different goals in life helped them adapt to the changes following cancer treatment.⁴⁸⁾ Therefore, it is considered essential that numerous life goals covering numerous domains be set to address such

Reference	Specific	Measurable	Achievable	Relevant	Timed	Total
20	~		\checkmark	\checkmark		3
21	\checkmark		\checkmark	\checkmark		3
22	\checkmark	\checkmark	\checkmark	\checkmark		4
23				\checkmark		1
24				\checkmark		1
25			\checkmark	\checkmark		2
26	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
27	\checkmark			\checkmark		2
28	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
29		\checkmark	\checkmark			2
30	\checkmark			\checkmark	\checkmark	3
31			\checkmark	\checkmark		2
32	\checkmark	\checkmark	\checkmark	\checkmark		4
33				\checkmark		1
34	\checkmark	\checkmark		\checkmark		3
35	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
36	\checkmark			\checkmark		2
37	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	5
38	\checkmark	\checkmark	\checkmark	\checkmark		4
39	\checkmark	\checkmark	\checkmark	\checkmark		4
40		\checkmark				1
41			\checkmark	\checkmark		2
42	\checkmark	\checkmark	\checkmark	\checkmark		4
43				\checkmark		1
Total	15 (62.5%)	12 (50.0%)	15 (62.5%)	22 (91.7%)	5 (20.8%)	2.9 (mean

Table 3. Inclusion of goal traits in assessed publications

extensive negative influences.

Goal Traits

Relevant goals among the SMART criteria were the most frequently included. Cancer survivors realize that their lives are finite at least once because of their diagnosis, and many have concerns about the cancer coming back.⁴⁴⁾ Many of the goals were relevant to cancer survivors because of the need to set life goals that reflect QoL. In contrast, timed goals were the least included. Timed goals specify the time period in which the goal should be achieved.¹⁷⁾ Cancer is a progressive disease with an unclear prognosis, which may explain why relatively few timed goals are set.

The number of goal traits included in the analyzed papers was almost evenly distributed between one to five. Some reports^{9,37)} indicated that it is challenging for cancer survivors and rehabilitation staff to meet all the SMART criteria, and some may not meet any of the criteria. Therefore, cancer survivors and healthcare professionals do not need to expect that the life goals they set will meet all the SMART criteria. Although healthcare professionals may consider utilizing more of the goal traits that meet the SMART criteria when setting goals, the goal traits should ultimately be based on the clinical situation of the cancer survivors.

Goal-setting Process

In a previous systematic review on the phases and components of goal setting for persons with diabetes, rheumatic disease, stroke, and other diseases, patient education components were 82%, and evaluation of progress or achievement components were 41%.⁴⁹ Therefore, this scoping review had a relatively low percentage of patient education and a high percentage of evaluation of progress or achievement. The following discussion is divided into patient education and evaluation of progress or achievement.

In considering the relevance of patient education, it is

	Phase:		Preparation		Formulation		Follow-up	
Refer- ence	Compo- nent:	Patient edu- cation	Patient self- reflection	Identification of topics for setting goals		Patient self- monitoring	Support for the patient	Evaluation of progress or achievement
20		\checkmark		\checkmark	\checkmark		\checkmark	\checkmark
21		\checkmark	\checkmark	\checkmark	\checkmark			\checkmark
22			\checkmark	\checkmark	\checkmark			
23				\checkmark	\checkmark			\checkmark
24			\checkmark	\checkmark	\checkmark			
25				\checkmark	\checkmark			\checkmark
26		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
27		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
28		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
29		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
30		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
31				\checkmark	\checkmark	\checkmark	\checkmark	
32			\checkmark	\checkmark	\checkmark			
33			\checkmark	\checkmark	\checkmark		\checkmark	
34		\checkmark		\checkmark	\checkmark	\checkmark		\checkmark
35		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
36		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
37			\checkmark	\checkmark	\checkmark		\checkmark	\checkmark
38		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
39		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
40		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
41		\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	
42		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
43		\checkmark		\checkmark	\checkmark	\checkmark	\checkmark	
Total		16 (66.7%)	18 (75.0%)	24 (100%)	24 (100%)	14 (58.3%)	17 (70.8%)	17 (70.8%)

Table 4. Details of the phases and components of the goal-setting process in assessed publications

presumed that some cancer survivors are unable to accept an unknown or poor life expectancy. This is because there are multiple barriers regarding goal setting between cancer survivors and healthcare professionals, such as unknown life expectancy, unknown patient wishes, deteriorating disease status, difficulty for patients to understand the limitations of life-sustaining treatment, lack of ability to determine the goals of care, and differences of opinion between patients and healthcare professionals.^{50,51)} In such cases, healthcare professionals might be hesitant to attempt patient education toward goal setting, which was a possible reason for the low rate of patient education in this study. In goal setting with stroke survivors, patient education prior to starting the goal-setting process is expected to increase the chances of setting realistic goals that are consistent with the patient's wishes and expectations.⁵²⁾ In particular, it is estimated that the presence or absence of patient education in the goalsetting process influences the ability to set achievable and relevant goals. In this study, however, achievable goals were set in five of the eight papers $(62.5\%)^{22,25,31,32,37)}$ that did not address patient education and in 10 of the 16 papers $(62.5\%)^{20,21,26,28,29,35,38,39,41,42)}$ that did address patient education, meaning that relative dominance of these approaches were the same. Relevant goals were also set in all eight papers $(100\%)^{22-25,31-33,37)}$ that did not address patient education and in 14 of the 16 papers $(87.5\%)^{20,21,26-28,30,34-36,38,39,41-43}$ ⁾ that addressed patient education, giving similar relative dominance for these approaches. Therefore, the presence or absence of patient education did not appear to influence the abilities of cancer survivors and healthcare professionals to set achievable and relevant goals. This may suggest that the mechanisms representing the relationship between the goal-setting process and goal traits differ between stroke survivors and cancer survivors.

In considering the importance of evaluating progress, it is notable that the previous systematic review⁴⁹⁾ focused on the level of active engagement in rehabilitation goalsetting interventions, whereas the current scoping review focuses on life goals. Because the life goals that lead to a person's identity are modified by various factors like age, gender, personality, affect, environment, and health,⁵³⁾ it is logical that a person's life goals should be continuously evaluated. Furthermore, some cancer survivors used more goal-adjusted strategies as time went on.^{54,55)} However, some self-developed strategies that cancer survivors use to manage specific occupations might also be counterproductive.⁵⁶⁾ Therefore, to set life goals, it would be critical to evaluate progress or achievement and to continuously adjust life goals with the cancer survivor.

Limitations and Future Research Directions

This scoping review has several limitations. First, in efforts to locate information sources, some papers in the searched databases may have remained undetected. Second, papers with unpublished results at the date of the search were not used in this scoping review because protocol papers were excluded. Third, papers written in languages other than English were not included.

Fourth, this scoping review focused on cancer survivors who varied in terms of age, cancer type, treatment type, stage, and functional disabilities. Goal domains, goal traits, and the goal-setting process may differ depending on the patient background. However, we analyzed these various backgrounds without distinguishing between them because no previous studies have comprehensively reviewed life goals set in collaboration between cancer survivors and healthcare professionals. Further research is needed to clarify the influence of different cancer types on goal traits and the goal-setting process, because it has been reported that different cancer types, such as those with different degrees of expected recovery, have different goal domains and levels of goal attainment.^{37,57})

Fifth, this scoping review did not provide findings on the influence of infrequent patient education on goals traits in goal setting with cancer survivors. Therefore, further research is needed to investigate how the presence or absence of patient education for cancer survivors influences goalsetting practices. Sixth, although this scoping review provided descriptive data on elements of life goals, it was not possible to determine for which outcomes and to what extent these life goals were effective. Systematic reviews, meta-analyses, or metasyntheses may also be conducted to clarify which outcomes are positively affected by collaboratively set life goals and the degree of their effectiveness. In addition, further research is required to assess the effectiveness of life goal-setting interventions for cancer survivors that include the following: setting psychological and social goals, covering numerous goal domains, setting relevant goals, and evaluating progress or achievement.

Scoping reviews can contribute to the identification of gaps in knowledge and/or future research needs.⁵⁸⁾ By accumulating recommendations for further research and expanding on this study, the findings regarding the domains, traits, and setting process of goals collaboratively set between cancer survivors and healthcare professionals can help survivors to enhance their QoL and live with cancer on their own terms. This study is positioned as a first step in that direction.

CONCLUSION

We conducted a comprehensive review of classifications related to the life goal domains, goal traits, and the goalsetting process used in collaborations between healthcare professionals and cancer survivors. They set health-related, psychological, and social goals within numerous goal domains. Regarding goal traits, relevant goals were set based on the cancer survivor's clinical situation, whereas the setting of timed goals was less common. For the goal-setting process, there was a lower percentage of patient education during preparation and a higher percentage of evaluation of progress or achievement during follow-up when compared with previous studies. By accumulating further research and expanding on this study, the findings will contribute to understanding the challenges and essential classifications related to goal setting with cancer survivors.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

REFERENCES

- Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, Bray F: Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin 2021;71:209–249. https://doi.org/10.3322/ caac.21660, PMID:33538338
- Hewitt M, Rowland JH, Yancik R: Cancer survivors in the United States: age, health, and disability. J Gerontol A Biol Sci Med Sci 2003;58:M82–M91. https://doi. org/10.1093/gerona/58.1.M82, PMID:12560417
- Hayes BD, Young HG, Atrchian S, Vis-Dunbar M, Stork MJ, Pandher S, Samper S, McCorquodale S, Loader A, Voss C: Primary care provider-led cancer survivorship care in the first 5 years following initial cancer treatment: a scoping review of the barriers and solutions to implementation. J Cancer Surviv 2024;18:352–365. https://doi.org/10.1007/s11764-022-01268-y, PMID:36376712
- Dolgoy N, Driga A, Brose JM: The essential role of occupational therapy to address functional needs of individuals living with advanced chronic cancers. Semin Oncol Nurs 2021;37:151172. https://doi.org/10.1016/j. soncn.2021.151172, PMID:34275707
- Hullmann SE, Robb SL, Rand KL: Life goals in patients with cancer: a systematic review of the literature. Psychooncology 2016;25:387–399. https://doi.org/10.1002/ pon.3852, PMID:25990641
- Pinquart M, Fröhlich C, Silbereisen RK: Testing models of change in life goals after a cancer diagnosis. J Loss Trauma 2008;13:330–351. https://doi. org/10.1080/15325020701742052
- Janse M, Sprangers MA, Ranchor AV, Fleer J: Long-term effects of goal disturbance and adjustment on well-being in cancer patients. Qual Life Res 2016;25:1017–1027. https://doi.org/10.1007/s11136-015-1139-8, PMID:26446093
- von Blanckenburg P, Seifart U, Conrad N, Exner C, Rief W, Nestoriuc Y: Quality of life in cancer rehabilitation: the role of life goal adjustment. Psychooncology 2014;23:1149–1156. https://doi.org/10.1002/pon.3538, PMID:24729457
- Wade DT: Goal setting in rehabilitation: an overview of what, why and how. Clin Rehabil 2009;23:291– 295. https://doi.org/10.1177/0269215509103551, PMID:19293289

- Levack WM, Weatherall M, Hay-Smith EJ, Dean SG, McPherson K, Siegert RJ: Goal setting and strategies to enhance goal pursuit for adults with acquired disability participating in rehabilitation. Cochrane Libr 2015;2015:CD009727.https://doi.org/10.1002/14651858. CD009727.pub2, PMID:26189709
- Smit EB, Bouwstra H, van der Wouden JC, Wattel LM, Hertogh CM: Patient-centred goal setting using functional outcome measures in geriatric rehabilitation: is it feasible? Eur Geriatr Med 2018;9:71–76. https://doi. org/10.1007/s41999-017-0011-5, PMID:29430267
- Arksey H, O'Malley L: Scoping studies: towards a methodological framework. Int J Soc Res Methodol 2005;8:19–32. https://doi. org/10.1080/1364557032000119616
- Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, Moher D, Peters MD, Horsley T, Weeks L, Hempel S, Akl EA, Chang C, McGowan J, Stewart L, Hartling L, Aldcroft A, Wilson MG, Garritty C, Lewin S, Godfrey CM, Macdonald MT, Langlois EV, Soares-Weiser K, Moriarty J, Clifford T, Tunçalp Ö, Straus SE: PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med 2018;169:467–473. https://doi.org/10.7326/M18-0850, PMID:30178033
- Peters MD, Marnie C, Tricco AC, Pollock D, Munn Z, Alexander L, McInerney P, Godfrey CM, Khalil H: Updated methodological guidance for the conduct of scoping reviews. JBI Evid Synth 2020;18:2119–2126. https:// doi.org/10.11124/JBIES-20-00167, PMID:33038124
- Moher D, Liberati A, Tetzlaff J, Altman DG, PRISMA Group: Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. PLoS Med 2009;6:e1000097. https://doi.org/10.1371/ journal.pmed.1000097, PMID:19621072
- Schut HA, Stam HJ: Goals in rehabilitation teamwork. Disabil Rehabil 1994;16:223–226. https://doi. org/10.3109/09638289409166616, PMID:7812023
- Bovend'Eerdt TJ, Botell RE, Wade DT: Writing SMART rehabilitation goals and achieving goal attainment scaling: a practical guide. Clin Rehabil 2009;23:352– 361. https://doi.org/10.1177/0269215508101741, PMID:19237435
- Dekker J, de Groot V, Ter Steeg AM, Vloothuis J, Holla J, Collette E, Satink T, Post L, Doodeman S, Littooij E: Setting meaningful goals in rehabilitation: rationale and practical tool. Clin Rehabil 2020;34:3–12. https:// doi.org/10.1177/0269215519876299, PMID:31530186

- Lenzen SA, Daniëls R, van Bokhoven MA, van der Weijden T, Beurskens A: Disentangling self-management goal setting and action planning: a scoping review. PLoS One 2017;12:e0188822. https://doi.org/10.1371/ journal.pone.0188822, PMID:29176800
- Løken OU, Hauken MA: A qualitative study of cancer survivors' experienced outcomes of a multidimensional rehabilitation program in primary healthcare. Cancer Nurs 2022;45:E646–E654. https://doi.org/10.1097/ NCC.000000000000989, PMID:34310389
- Xian X, Zhu C, Chen Y, Huang B, Xiang W: Effect of solution-focused therapy on cancer-related fatigue in patients with colorectal cancer undergoing chemotherapy: a randomized controlled trial. Cancer Nurs 2022;45:E663–E673. https://doi.org/10.1097/ NCC.000000000000994, PMID:34380963
- Ehrlich O, Brandoff D, Gorman DP, Berry DL: Nurse-led motivational interviewing for setting functional cancer pain goals. Pain Manag Nurs 2021;22:716–723. https:// doi.org/10.1016/j.pmn.2021.03.003, PMID:33962871
- Friesen-Storms JH, Bours GJ, Quadvlieg-Delnoy DJ, Moser A, Heijmans JM, van der Weijden T, Beurskens AJ, Jie KS: Stories of lymphoma survivors in early aftercare: a narrative inquiry. Cancer Nurs 2021;44:489– 498. https://doi.org/10.1097/NCC.000000000000850, PMID:32604137
- 24. McLouth LE, Weyman K, Golden SL, Cheavens JS, Peterman A, Bursac V, Gabbard J, Weaver KE: Developing pathways, a hope-enhancing intervention for metastatic lung cancer patients receiving cancer treatment. Psychooncology 2021;30:863–873. https://doi.org/10.1002/pon.5650, PMID:33638288
- 25. Groen WG, ten Tusscher MR, Verbeek R, Geleijn E, Sonke GS, Konings IR, Van der Vorst MJ, van Zweeden AA, Schrama JG, Vrijaldenhoven S, Bakker SD, Aaronson NK, Stuiver MM: Feasibility and outcomes of a goal-directed physical therapy program for patients with metastatic breast cancer. Support Care Cancer 2021;29:3287–3298. https://doi.org/10.1007/s00520-020-05852-9, PMID:33104921
- 26. Beckenstein H, Slim M, Kim H, Plourde H, Kilgour R, Cohen TR: Acceptability of a structured diet and exercise weight loss intervention in breast cancer survivors living with an overweight condition or obesity: a qualitative analysis. Cancer Rep (Hoboken) 2021;4:e1337. https://doi.org/10.1002/cnr2.1337, PMID:33491338

- 27. Berg CJ, Vanderpool RC, Getachew B, Payne JB, Johnson MF, Sandridge Y, Bierhoff J, Le L, Johnson R, Weber A, Patterson A, Dorvil S, Mertens A: A hope-based intervention to address disrupted goal pursuits and quality of life among young adult cancer survivors. J Cancer Educ 2020;35:1158–1169. https:// doi.org/10.1007/s13187-019-01574-7, PMID:31297743
- Lambert SD, Duncan LR, Ellis J, Schaffler JL, Loban E, Robinson JW, Culos-Reed N, Matthew A, Clayberg K, Santa Mina D, Goldberg L, Pollock P, Tanguay S, Kassouf W, Saha-Chaudhuri P, Peacock S, Katz A: Acceptability and usefulness of a dyadic, tailored, web-based, psychosocial and physical activity selfmanagement program (TEMPO): a qualitative study. J Clin Med 2020;9:3284. https://doi.org/10.3390/ jcm9103284, PMID:33066225
- Somayaji D, Blok AC, Hayman LL, Colson Y, Jaklisch M, Cooley ME: Enhancing behavioral change among lung cancer survivors participating in a lifestyle risk reduction intervention: a qualitative study. Support Care Cancer 2019;27:1299–1308. https://doi.org/10.1007/ s00520-018-4631-1, PMID:30643990
- Boland L, Bennett K, Cuffe S, Gleeson N, Grant C, Kennedy J, Connolly D: Cancer survivors' experience of OptiMal, a 6-week, occupation-based, self-management intervention. Br J Occup Ther 2019;82:90–100. https://doi.org/10.1177/0308022618804704
- Sagari A, Ikio Y, Imamura N, Deguchi K, Sakai T, Tabira T, Higashi T: Effect of occupation-based interventions in patients with haematopoietic malignancies undergoing chemotherapy: a pilot randomised controlled trial. Hong Kong J Occup Ther 2018;31:97–105. https://doi. org/10.1177/1569186118818680, PMID:30643497
- Komar A, Dunphy C, McEwen S, Rios J, Polatajko H, Ringash J: The brief rehabilitation assessment for survivors of head and neck cancer (BRASH): content and discriminant validity. Rehabil Oncol 2018;36:223–231. https://doi.org/10.1097/01.REO.000000000000107
- 33. Friesen-Storms JH, Bours GJ, Snijders IC, van der Weijden T, Jie KS, Beurskens AJ: A conversation approach based on shared goal-setting and shared decisionmaking for nurses in cancer aftercare: a developmental study. Eur J Oncol Nurs 2018;35:107–116. https://doi. org/10.1016/j.ejon.2018.06.002, PMID:30057077

- Lee J, Seo E, Choi J, Min J: Effects of patient participation in the management of daily nursing goals on function recovery and resilience in surgical patients. J Clin Nurs 2018;27:2795–2803. https://doi.org/10.1111/ jocn.14302, PMID:29399909
- 35. Lyons KD, Newman RM, Kaufman PA, Bruce ML, Stearns DM, Lansigan F, Chamberlin M, Bartels SJ, Whipple J, Hegel MT: Goal attainment and goal adjustment of older adults during persondirected cancer rehabilitation. Am J Occup Ther 2018;72:7202205110p1–7202205110p8. https://doi. org/10.5014/ajot.2018.023648, PMID:29426388
- 36. Gell NM, Grover KW, Humble M, Sexton M, Dittus K: Efficacy, feasibility, and acceptability of a novel technology-based intervention to support physical activity in cancer survivors. Support Care Cancer 2017;25:1291–1300. https://doi.org/10.1007/s00520-016-3523-5, PMID:27957621
- Holt KA, Mogensen O, Jensen PT, Hansen DG: Goal setting in cancer rehabilitation and relation to quality of life among women with gynaecological cancer. Acta Oncol 2015;54:1814–1823. https://doi.org/10.3109/0284 186X.2015.1037009, PMID:25943136
- Lyons KD, Hull JG, Kaufman PA, Li Z, Seville JL, Ahles TA, Kornblith AB, Hegel MT: Development and initial evaluation of a telephone-delivered, behavioral activation, and problem-solving treatment program to address functional goals of breast cancer survivors. J Psychosoc Oncol 2015;33:199–218. https://doi.org/10.1 080/07347332.2014.1002659, PMID:25668509
- Hauken MA, Holsen I, Fismen E, Larsen TM: Participating in life again: a mixed-method study on a goal-orientated rehabilitation program for young adult cancer survivors. Cancer Nurs 2014;37:E48–E59. https://doi.org/10.1097/NCC.0b013e31829a9add, PMID:23860395
- 40. Donnelly CM, Lowe-Strong A, Rankin JP, Campbell A, Blaney JM, Gracey JH: A focus group study exploring gynecological cancer survivors' experiences and perceptions of participating in a RCT testing the efficacy of a home-based physical activity intervention. Support Care Cancer 2013;21:1697–1708. https://doi.org/10.1007/s00520-012-1716-0, PMID:23321934
- Martin F, Turner A, Bourne C, Batehup L: Development and qualitative evaluation of a self-management workshop for testicular cancer survivor-initiated follow-up. Oncol Nurs Forum 2013;40:E14–E23. https://doi.org/10.1188/13.ONF.E14-E23, PMID:23269777

- Lyons KD, Erickson KS, Hegel MT: Problem-solving strategies of women undergoing chemotherapy for breast cancer. Can J Occup Ther 2012;79:33–40. https:// doi.org/10.2182/cjot.2012.79.1.5, PMID:22439290
- 43. Robb KA, Williams JE, Duvivier V, Newham DJ: A pain management program for chronic cancer-treatment-related pain: a preliminary study. J Pain 2006;7:82–90. https://doi.org/10.1016/j.jpain.2005.08.007, PMID:16459273
- Geller BM, Vacek PM, Flynn BS, Lord K, Cranmer D: What are cancer survivors' needs and how well are they being met? J Fam Pract 2014;63:E7–E16. PMID:25343160
- Chen T, Zhang B, Deng Y, Fan JC, Zhang L, Song F: Long-term unmet needs after stroke: systematic review of evidence from survey studies. BMJ Open 2019;9:e028137. https://doi.org/10.1136/bmjopen-2018-028137, PMID:31110106
- 46. Watterson J, Lowrie D, Vockins H, Ewer-Smith C, Cooper J: Rehabilitation goals identified by inpatients with cancer using the COPM. Int J Ther Rehabil 2004;11:219–225. https://doi.org/10.12968/ ijtr.2004.11.5.13344
- Lyons KD, Svensborn IA, Kornblith AB, Hegel MT: A content analysis of functional recovery strategies of breast cancer survivors. OTJR (Thorofare NJ) 2015;35:73–80. https://doi. org/10.1177/1539449214567306, PMID:26460469
- Lindman A, Krintel Petersen A, Olesen G, Handberg C: Patients' experiences and perspectives of challenges and needs related to nonmyeloablative stem cell transplantation: involving patients in developing a targeted rehabilitation programme. J Clin Nurs 2019;28:1260–1272. https://doi.org/10.1111/jocn.14739, PMID:30552726
- Kang E, Kim MY, Lipsey KL, Foster ER: Person-centered goal setting: a systematic review of intervention components and level of active engagement in rehabilitation goal-setting interventions. Arch Phys Med Rehabil 2022;103:121–130. https://doi.org/10.1016/j.apmr.2021.06.025, PMID:34375632
- Kagaya Y, Asano T, Tsugaruya M, Ishikawa T: Sense of difficulties experienced by Japanese occupational therapists in cancer rehabilitation. Asian J Occup Ther 2022;18:209–220. https://doi.org/10.11596/asiajot.18.209

- 51. Piggott KL, Patel A, Wong A, Martin L, Patel A, Patel M, Liu Y, Dhesy-Thind S, You JJ: Breaking silence: a survey of barriers to goals of care discussions from the perspective of oncology practitioners. BMC Cancer 2019;19:130. https://doi.org/10.1186/s12885-019-5333-x, PMID:30736754
- Leach E, Cornwell P, Fleming J, Haines T: Patient centered goal-setting in a subacute rehabilitation setting. Disabil Rehabil 2010;32:159–172. https://doi. org/10.3109/09638280903036605, PMID:19562579
- Austin JT, Vancouver JB: Goal constructs in psychology: structure, process, and content. Psychol Bull 1996;120:338–375. https://doi.org/10.1037/0033-2909.120.3.338
- 54. Janse M, Fleer J, Smink A, Sprangers MA, Ranchor AV: Which goal adjustment strategies do cancer patients use? A longitudinal study. Psychooncology 2016;25:332–338. https://doi.org/10.1002/pon.3924, PMID:26308665

- 55. Janse M, Ranchor AV, Smink A, Sprangers MA, Fleer J: People with cancer use goal adjustment strategies in the first 6 months after diagnosis and tell us how. Br J Health Psychol 2016;21:268–284. https://doi. org/10.1111/bjhp.12167, PMID:26412011
- Peoples H, Brandt Å, Wæhrens EE, la Cour K: Managing occupations in everyday life for people with advanced cancer living at home. Scand J Occup Ther 2017;24:57–64. https://doi.org/10.1080/11038128.2016.1 225815, PMID:27578556
- 57. Adellund Holt K, Hansen DG, Mogensen O, Jensen PT: Self-assessment of goal achievements within a gynecological cancer rehabilitation counseling. Cancer Nurs 2019;42:58–66. https://doi.org/10.1097/ NCC.000000000000567, PMID:29461281
- 58. Miake-Lye IM, Hempel S, Shanman R, Shekelle PG: What is an evidence map? A systematic review of published evidence maps and their definitions, methods, and products. Syst Rev 2016;5:28. https://doi. org/10.1186/s13643-016-0204-x, PMID:26864942