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Goals of Fecal Incontinence Management Identified by Community-Living Incontinent Adults

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Abstract

The purpose of this study was to identify goals of fecal incontinence (FI) management and their importance to community-living adults if complete continence would not be possible. Participants expressed their goals of FI management in a semistructured interview, selected others from 12 investigator-identified goals, and rated their importance. Five thematic categories emerged from the 114 participant-identified goal statements: Fecal Incontinence/Bowel Pattern, Lifestyle, Emotional Responses, Adverse Effects of Fecal Incontinence, and Self-Care Practices. Participants selected a median of seven investigator-identified goals (range = 2 to 12). Goals selected by the most participants were decreased number of leaks of stool and greater confidence in controlling fecal incontinence. These goals also had the highest importance along with decreased leakage of loose or liquid stool. The type and number of management goals identified by participants offer a toolbox of options from which to focus therapy when cure is not possible and promote patient satisfaction.

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Fecal incontinence (FI), the involuntary loss of stool, affects up to 10% of the general population living in the community (Shamliyan, Wyman, Bliss, Kane, & Wilt, 2007). FI significantly reduces a person's quality of life (Rockwood et al., 2000; Wilson, 2007). It can lead to social isolation, depression, low self-esteem, and inability to work (Peden-McAlpine, Bliss, & Hill, 2008; Rockwood et al., 2000). Yet FI is an underreported health problem. There is a stigma associated with FI (Norton, 2004); hence, the needs of people with this problem are often not voiced (Johanson & Lafferty, 1996). Clinicians also fail to inquire about FI, and opportunities for diagnosis and treatment are missed (Enck et al., 1991; Kalantar, Howell, & Talley, 2002; Prosser & Dobbs, 1997). The lack of communication about FI has resulted in a lack of knowledge about the goals of FI management that are most important to patients when cure is not possible. Compared to older women, older men perform different self-care practices for FI, suggesting their management goals may also differ (Bliss, Fischer, & Savik, 2005). Whether goals of older patients with FI differ from those of younger ones is unknown. An understanding and sensitivity to patients' goals of FI management can be useful to clinicians for recommending management options, encouraging adherence to management regimens, evaluating patient responses, and determining patient satisfaction with management outcomes. Nurse leaders in incontinence research and practice have identified the need to investigate the management goals of men and women with FI to improve patient outcomes and support the practice of nurses in this area (Bliss, Norton, Miller, & Krissovich, 2004). The purpose of this study was to examine the goals of FI management identified by community-living adults with FI.

Patients' Goals for Managing Incontinence and Related Problems

Knowledge of management options for FI that are preferred by patients are important for clinicians to effectively recommend and plan approaches that engage patients and align with their priorities. For other health conditions, it has been shown that patients cannot make appropriate decisions regarding management of their condition and establish goals without the proper knowledge and information from clinicians regarding realistic expectations (Filoramo, 2007). Knowledge about patient's goals and satisfaction with the goal outcomes

in FI management however is lacking. A review of the literature produced few articles about patient goals related to management of chronic health conditions, and no studies were found reporting these outcomes for FI. Findings of studies of urinary incontinence (UI), which seem the most related to FI, are summarized.

Sale and Wyman (1994) reported treatment goals of 123 older women undergoing bladder training for UI. Although the majority of these women wanted to completely eliminate their urine leakage, 32% stated they would be satisfied if they could just decrease their number of leaks. There were a variety of goals stated by the women including regaining bladder control, reducing incontinence episodes, reducing voiding frequency, and eliminating pad use. These findings emphasize the importance of clinicians conversing with patients to determine desired outcomes prior to determining treatment decisions for UI. Although most participants identified cure as a goal, the reported cure rate was only 12%, suggesting the importance of setting realistic goals (Sale & Wyman, 1994). When cure is set as an unrealistic goal, it most often leads to disappointment, frustration, and helplessness. This outcome can result in a feeling of failure by both the clinician and patient (Toombs, 1995).

Goals of women undergoing reconstructive pelvic surgery have also been identified (Elkadry, Kenton, FitzGerald, Shott, & Brubaker, 2003). The most common goals were reducing UI, repairing pelvic organ prolapse, and reorganizing lifestyle and activity. Goals stated less frequently were related to reducing urgency and frequency of urination and maintaining sexual function. Having a greater number of goals led to more specific lifestyle expectations compared to having only one or two goals that focused mainly on curing the problem by surgery. Lifestyle-related goals were a primary focus of the women and centered on returning to activities that were missed. The investigators concluded that setting and achieving patient-selected goals are important reasons for women to undergo surgery.

In the United Kingdom, a survey distributed to people with bowel or bladder incontinence living in the community asked them to identify things or services that would help them with this condition the most (Filoramo, 2007). The most common response was a request for more and conveniently located public toilets. This priority outcome was an environmental change to enable people with incontinence to respond to needs presented by their condition rather than a treatment. An important part of nursing practice for the incontinent patient is to help them cope with chronic conditions by adapting the environment. Nurses can better advise and support the patient with FI to overcome setbacks and promote good quality of life when they know which outcomes are most satisfactory to them.

Ternent, Vale, Buckley, and Galzener (2009) surveyed 188 women with stress UI about areas of their life affected by their incontinence. Thirty-eight areas were identified, and the ones most often affected were socializing and going out, personal hygiene, sleep, shopping, depression, physical activity, work, and anxiety. Women were also asked to rate how much each area was affected by stress UI and the importance of each of the areas to them. Ratings were weighted by scores of importance and computed into an overall index. The investigators interpreted the life areas that were selected and considered important to be indicators of clinical outcomes desired by the women; they proposed that the overall index was a measure of quality of life. These findings may be considered indirect indicators of UI management goals but with caution as women were asked to identify life areas affected by UI rather than desired outcomes of management.

It is unknown whether information about goals of UI management and surgery is similar for people managing FI. To our knowledge, the results of this study are the first to describe the management goals of FI if cure is not possible. These results have the potential to improve and support the communication of health care professionals with patients about desired outcomes for FI management.

Purpose

The purpose of this study was to examine the management goals of individuals with FI living in the community if total reduction of FI would not be possible, which is often the case. The specific aims of this study were to

1. identify the goals of fecal incontinence management of community-living people if they could not achieve complete continence,
2. evaluate the importance of those goals to the participants, and
3. compare the goals between male versus female and older versus younger participants.

These findings will be of interest to nurses and other clinicians who assist patients in managing FI by increasing knowledge and understanding of the patients' perspective of FI management. A main focus of nursing practice for incontinent patients is to help them evaluate and select management options and determine realistic goals for improvement. Nurses advise and support patients in developing goals that are appropriate and satisfactory to them, can be used to help overcome setbacks, and promote good quality of life (Filoramo, 2007).

Method

Design

The design is a descriptive analysis of data collected as a part of the study Impact of Fiber Fermentation on Fecal Incontinence (National Institute of Nursing Research, NIH, R01-NR07756), referred to as "The Fiber Study." The Fiber Study is a randomized controlled clinical trial comparing the effect of three dietary fibers and a placebo on FI management and quality of life of community-living adults. Participants were recruited from a large health maintenance organization and the practice of a group of colon and rectal surgeons (Whitebird, Bliss, Hase, & Savik, 2006). After a 14-day baseline period, participants were randomly assigned to receive one of the three types of soluble fiber supplements, or a placebo supplement, for 38 days. As part of the data collection at the start of the baseline period, participants were interviewed about their goals of FI management. The study including this analysis was approved by the institutional review boards of the University of Minnesota and HealthPartners Research Foundation.

Sample

Participants in the Fiber Study met specific criteria for study inclusion. They were required to be at least 18 years old and cognitively intact (determined by a Mini Mental State Examination [Folstein, Folstein & McHugh, 1975] score >24); have normal continuity of the gastrointestinal tract; leak loose or liquid stools at least twice in a 2-week period; toilet independently; understand, read, and write English; and not reside in a nursing home, be tube-fed, or have swallowing problems. All 189 participants who completed the 52-day Fiber Study protocol were included in this analysis. Their mean age was 58.4 years (*SD* = 13.7), and 35% were 65 years or older. Seventy-seven percent were female, 92% were White, 4% were Black, and 1.6% were Hispanic or Latino. Most were married (65%) and employed (58%) during the study period.

Data Collection and Procedures

Data from the demographics form of the Fiber Study were used to describe the study sample and form groups based on gender and age. Semistructured interviews were conducted during which participants were asked to identify goals related to FI management if their bowel leakage could not be completely eliminated.

The interview began with an open-ended question that allowed participants to identify their own goals of FI management. Participants were also able to select goals that applied to them from 12 investigator-identified goals. These goals were developed using three sources: the expertise of the investigators, a review of the literature related to treatment goals of patients for UI, and consultation with a senior nurse researcher interested in goals of UI management (personal communication with Molly Dougherty, PhD, RN, FAAN). There were three main thematic categories of the investigator-identified goals: Fecal Incontinence/Bowel Pattern, Emotional Responses, and Self-Care Practices (Table 1). Seven goals were represented in the Fecal Incontinence/Bowel Pattern category, which focused on characteristics of FI such as frequency, amount, and consistency of leakage and defecation urgency. Two goals were in the Emotional Responses category and related to worry about leaking stool and confidence in controlling FI. Three goals in the Self-Care Practices category addressed the use of absorbent products and antimotility medication.

Participants were also asked to rate the importance of their goals using four methods: one method involved rating goals individually; two methods involved ranking goals in relation to all other goals; and the final method, which used a point assignment technique, enabled an evaluation of the degree of importance of a goal. Using a scale of 1 to 4 (1 = *not at all important*, 2 = *slightly important*, 3 = *moderately important*, 4 = *very important*), participants were asked to rate the importance of each individual goal they identified or selected. To help differentiate the most and least important goals, participants were asked to rank their top three most important goals, with 1 being the most important; they were also asked to rank their three least important goals using a scale with negative numbers, with –3 being the least important. For their top three most important goals, participants were then asked to divide 30 points of importance among them.

Analysis

Content analysis (Busch et al., 2005; Stemler, 2001) was performed on the participant-identified goals. The goal statements were typed and reviewed by the investigators for common themes. These themes were coded and discussed, then organized into categories and subcategories. The review process at each step was repeated until a consensus was reached among the investigators in which all the categories and subcategories were unique and supported by the data.

Frequencies were determined for the number of participants who self-identified each goal and for the number of goals identified by each participant.

Table 1. Selection and Importance of Investigator Identified Goals

Thematic Categories of Investigator-Identified Goals	Participants Who Identified Each Goal ($N = 189$), % (n)	Importance Rating[a]
Fecal incontinence/bowel pattern		
Decreased number of leaks of stool[b]	99.5 (188)	4
Decreased amount of stool leaked[b]	87.0 (165)	4
Decreased leakage of loose or liquid stool[b]	86.0 (163)	4
Less urgency to have a bowel movement[a]	70.0 (132)	4
Going to the toilet less often	64.0 (121)	3
Elimination of leakage of stool during sleep[b]	23.0 (44)	4
Elimination of leakage of stool during sex	7.0 (13)	4
Emotional		
Less worry or fear about leaking stool[b]	70.0 (132)	4
Greater confidence in controlling fecal incontinence[b]	92.0 (174)	4
Self-care practices		
Fewer pads or briefs needed[b]	45.5 (86)	4
Smaller size of pad used or use a pad instead of a brief	20.0 (38)	3.5
Lower dose of antimotility medication	14.0 (27)	3

a. Importance scale is scored from 1 to 4, with 4 being most important; results are median values.
b. Investigator-identified goal that is similar to participant-identified goal.

The number and type of goals that were similar to investigator-identified goals were also determined. All participants who identified their own goals in response to the open-ended question also selected similar goals from the investigators' list and rated their importance in the same way. Therefore, in analyses comparing goals of subgroups (e.g., men vs. women), goals self-identified by participants that were on the investigators' list were considered only once so as not to double-count them.

Mean and standard deviation or median and range (depending on the distribution of the data) were calculated to summarize the demographic data of the participants, selection of each investigator-identified goal, and most and least importance of each goal. Contradictory responses from 38 participants who ranked the same goal as most and least important were excluded.

Younger age was defined as less than 65 years old, and older age was defined as greater than or equal to 65 years old. Differences in importance scores between males versus females and younger versus older participants were

determined using *t* tests (Rosner, 1995). A chi-square test was used to compare percentages of males versus females and younger versus older persons who selected a certain goal (Rosner, 1995).

An average point ranking was calculated for each goal to determine the top three most important goals selected by participants per points allocated. A Mann–Whitney *U* test was used to test differences in ranked means in scores between males versus females and younger versus older persons (Siegel & Castellan, 1988). The alpha level was .05. SPSS software (version 16.0) was used.

Results

Goals of Fecal Incontinent Management

Participant-identified goals and their thematic categories. Sixty-two participants (33%) stated their own goals. There was a median of two goals identified by each participant (range 1-5). Five main thematic categories and 22 distinct goals emerged from content analysis of the 114 goal statements by participants: Fecal Incontinence/Bowel Pattern (10 goals), Lifestyle (5 goals), Emotional Responses (2 goals), Adverse Effects of Fecal Incontinence (4 goals), and Self-Care Practices (1 goal; Table 2). Goals in the Emotional Responses and Fecal Incontinence/Bowel Pattern categories were similar to those in these categories identified by the investigators. Additional goals identified by participants in the Fecal Incontinence/Bowel Pattern category related to decreased pain and more complete elimination of stool during a bowel movement. Goals in the Lifestyle thematic category involved fewer dietary restrictions, elimination of leakage during exercise, less inconvenience in public toilet accessibility, and a normal daily routine. The category Adverse Effects of Fecal Incontinence focused on reductions in symptoms of bloating, flatus, odor, skin irritation, and staining of clothing.

Selection of investigator-identified goals. All participants selected at least two goals from the list provided by the investigators. The median number of investigator-identified goals that were selected by each participant was 7 (range 2-12). Table 1 lists the percentage of participants who selected each investigator-identified goal. Five of the 12 investigator-identified goals were selected by 70% or more of the participants. All but one of these were in the Fecal Incontinence/Bowel Pattern category. The most common goal was decreased number of leaks of stool, identified by 99% of participants. The second most frequently selected goal was having greater confidence in controlling fecal incontinence. The lowest percentage of participants selected elimination of leakage of stool during sex as a goal, which may reflect a

Table 2. Participant-Identified Goals

Thematic Categories of Participant-Identified Goals (no. of goal statements in category)	Examples of Goal Statement
Fecal incontinence/bowel pattern (52)	
Elimination of fecal incontinence (10)	"I'd like for it to not happen at all"
Less episodic nature of fecal incontinence (10)	"More regular BM pattern"
Decreased number and frequency of leaks of stool (9)	"Decrease the frequency of the stool leakage"
Less urgency to have a bowel movement (7)	"Not have to find a bathroom right away; being able to hold it"
Less loose consistency of stools (6)	"I want my stool to be formed"
	"Not to have loose stools"
More complete evacuation of stool with each bowel movement (4)	"Being able to finishing having a BM—complete elimination"
	"I want to pass my stool all at once"
Less pain on defecation (3)	"Decreasing pain when I leak stool"
Prevention of fecal incontinence worsening (1)	"I don't want it to get any worse"
Decreased amount of stool leaked (1)	"Less loose stool"
Elimination of leakage of stool during sleep (1)	"Would like not to have fecal incontinence wake me up at night"
Lifestyle (27)	
Fewer diet restrictions/effective fecal incontinence management using diet (8)	"Be able to eat the foods I enjoy a lot"
	"I'd like to know what foods would help"
Less public inconvenience and risk for exposing fecal incontinence presence (8)	"Not plan life around bathroom location"
	"Not be so afraid to go out"
More normal life (5)	"Return to more normal life"
	"Getting my life back"
Elimination of leakage during exercise (3)	"Not have stool leakage while exercising"
	"Take longer walks without toilet nearby"
Additional benefits of dietary fiber for a healthier lifestyle (3)	"Fiber to improve blood sugar and cholesterol"
Emotional responses (21)	
Better control and increased confidence (16)	"Get to a point of 99% manageability"
	"Have social confidence"
Less worry or fear about leaking stool (5)	"Go out and not worry about leaks and bathroom location"
Adverse effects of fecal incontinence (11)	
Less bloating and gas (5)	"Reduce gas and bloating symptoms"
Less skin irritation (4)	"Decrease skin irritation"
Less odor (1)	"Not having the odor"
Less soiling of clothing (1)	"Stains off underwear"
Self-care practices (3)	
Fewer pads or briefs used (3)	"Decrease the number of pads I use"

smaller number who experienced this problem. Eight of the 12 investigator-identified goals were also identified by participants in their open-ended responses (Table 1).

Importance of Goals

Importance of goals rated individually. All goals self-identified by the participants and evaluated individually had a median importance rating of very important (*Mdn* importance rating = 4, range = 2 to 4). Seventy-five percent of the investigator-identified goals that were selected by the participants had an importance rating of very important (*Mdn* = 4, range = 1 to 4). The remaining investigator-identified goals were rated as moderately important (*Mdn* = 3, range = 1 to 4). The moderately important goals were going to the toilet less often, smaller size of pad used or use a pad instead of a brief, and lower dose of antimotility medication.

Of the goals identified by both investigators and participants, two categories of goals were considered very important by all participants. These were Fecal Incontinence/Bowel Pattern and Emotional Responses (*Mdn* importance rating = 4, range = 1 to 4). Goals in the Self-Care Practices category had a slightly lower importance level (*Mdn* = 3.5, range = 1 to 4; Table 1).

Three most important goals. Table 3 shows the goals that were ranked as the top three most important goals by all participants. The two most important goals related to decreases in liquid consistency (ranking score = 1.19, *SD* = 1.2) and frequency of stool leaks (1.09, *SD* = 0.90). The third goal was in the Emotional Responses category: greater confidence in controlling fecal incontinence (0.86, *SD* = 1.2).

The results of the method of dividing 30 points among the top-ranked goals are also shown in Table 3. This method identified the same goals as most important as did the ranking method but resulted in a different ordering of importance of the top two goals. Decreased FI frequency was first (*M* points = 8.83, *SD* =), whereas decreased liquid consistency of leaks was second (*M* = 5.69, *SD* = 6.5); the third-ranked goal remained the same (*M* = 3.49, *SD* =).

Least important goals. The three least important goals of all the participants related to a desire for decreased frequency of going to the toilet (vs. being incontinent; *M* ranking score = –0.93, *SD* = 1.2), smaller size of absorbent products used (*M* = –0.83, *SD* = 1.2), and eliminating incontinence during sleep (*M* = –0.6, *SD* = 1; Table 3).

Comparing Goals of Men Versus Women

Goals identified. Differences in goals identified by men and women were apparent in the Self-Care Practices and Fecal Incontinence/Bowel Pattern categories. A smaller percentage of men (21%, 9/44) compared to women (53%, 77/145) were interested in using fewer absorbent pads or briefs (χ^2 = 14.5,

Table 3. Importance of Goals of Fecal Incontinence Management

	Decreased Number of Leaks of Stool	Decreased Amount of Stool Leaked	Decreased Leakage of Loose or Liquid Stool	Greater Confidence in Controlling Fecal Incontinence
Rank[a]	Most Important Goals Using Ranking Method			
All participants	2		1	3
Men	3	2	1	
Women	1	2	3	
Younger (<65 years)	2		1	3
Older	2	3	1	
Order of Importance[a]	Top Goals Based on Allocation of 30 Points of Importance			
All Participants	1		2	3
Men	1	3	2	
Women	1		2	3
Younger	2		1	3
Older	1	3	2	

	Least Important Goals Using Ranking Method				
Rank[b]	Less Urgency to Have a Bowel Movement	Going to the Toilet Less Often	Elimination Leakage of Stool During Sleep	Fewer Pads or Briefs Used	Smaller Size of Pad Used or Use a Pad Instead of a Brief
All participants		1	2	3	
Men	2	1	3	3	
Women		2		1	3
Younger		1	3	2	3
Older		1	3	1	

a. Ranking scale: 3 = *important*, 2 = *more important*, 1 = *most important*.
b. Ranking scale: 1 = *less importance*, 2 = *lesser importance*, 3 = *least important*.

$df = 1$, $p < .001$). The percentage of men (7%, 3/44) who were interested in needing a smaller size of a pad was also lower than women (24%, 35/145, $\chi^2 = 6.3$, $df = 1$, $p = .006$). Significantly fewer men (52%, 23/44) than women

(75%, 109/145) selected the goal of less urgency to have a bowel movement ($\chi^2 = 8.4$, $df = 1$, $p = .002$).

Importance of goals. Although elimination of leakage of stool during sleep was a goal of lesser importance to men, they placed a significantly higher importance on it (M importance score = 3.92, $SD = 0.28$, $t = 2.2$, $df = 42$, $p = .03$) than did women (3.58, $SD = 0.77$). Even though there were significantly fewer men who stated that using fewer pads was a goal, the men who did select this goal gave it a higher level of importance (M score = 3.89, $SD = 0.33$) than did women ($M = 3.27$, $SD = 0.87$, $t = 4.2$, $df = 23.9$, $p < .001$).

Three most important goals. There were differences between men and women in ranking the relative importance of goals (Table 3). Men gave highest importance to decreased leakage of loose or liquid stool (M ranking score = 1.60, $SD = 1.3$), whereas women rated this as second in importance ($M = 1.07$, $SD = 1.2$). Women were most interested in having fewer leaks ($M = 1.09$, $SD = 0.9$); men rated this goal third in importance ($M = 1.08$, $SD = 0.7$). The goal of second highest importance to men was decreasing the amount of stool leaked ($M = 1.31$, $SD = 1.3$). Women favored having greater confidence in controlling FI ($M = 0.90$, $SD = 1.3$).

The method of allocating 30 points among the top goals eliminated differences in the top two most important goals of men and women seen with the ranking technique (Table 3). Having fewer leaks was of primary importance to both (for men, M points = 10.58, $SD = 7.7$, and for women, $M = 8.28$, $SD = 7.0$), whereas decreasing leaks of loose or liquid consistency was second ($M = 6.41$, $SD = 6.0$, for men, and $M = 5.47$, $SD = 6.7$, for women). Men assigned more points (i.e., gave greater importance) to both these goals. Men and women still differed in their third most important goal; men desired a decreased amount of leakage ($M = 4.58$, $SD = 5.2$), whereas women favored greater confidence in controlling fecal incontinence ($M = 3.5$, $SD = 5.7$).

Least important goals. Men and women differed in their rating of goals of lesser importance to them (Table 3). Men were less interested in using fewer pads (M rating score = –0.56, $SD = 1.1$) than were women ($M = –0.92$, $SD = 1.2$). Using fewer pads was tied with elimination of leakage of stool during sleep ($M = –0.56$, $SD = 1.1$) as the least important goal to men. Men also considered reducing defecation urgency as a lesser important goal ($M = –0.63$, $SD = 1$). Women were less interested in decreasing the frequency of going to the toilet ($M = –0.83$, $SD = 1.1$) than were men ($M = –1.29$, $SD = 1.3$). Decreasing the size of the pad ($M = –0.63$, $SD = 1$) was the least important goal to women.

Comparing Goals of Younger and Older Participants

Goals identified. Far more younger participants selected elimination of leakage of stool during sex as a goal (10%, 12/123) than did older participants

(2%, 1/66, $\chi^2 = 4.5$, $df = 1$, $p = .033$). A greater percentage of younger people (78%, 96/123) selected the goal of less worry or fear about leaking stool than older participants (55%, 36/66, $\chi^2 = 11.3$, $df = 1$, $p = .001$). Twice as many older participants (21%, 14/66) selected the goal of lower dose of antimotility medication compared to younger participants (11%, 13/123, $\chi^2 = 3.97$, $df = 1$, $p = .046$).

Importance of goals. When considering the importance of FI management goals individually, older participants attributed a higher importance (*M* importance score = 3.59, *SD* = 0.59) to the goal of decreased amount of stool leaked than did younger participants (*M* = 3.36, *SD* = 0.8, $t = -2.1$, $df = 147$, $p = .04$). Older participants ranked the importance of elimination of leakage of stool during sleep (*M* = 3.92, *SD* = 0.23) higher than did younger participants (*M* = 3.58, *SD* = 0.77, $t = -2.2$, $df = 41.5$, $p = .035$).

Most and least important goals. In ranking their three most important goals, younger and older participants identified the same two goals as being most important to them (Table 3). These related to a decrease in the leakage of loose or liquid stool (*M* ranking score = 1.21, *SD* = 1.2, for older and *M* = 1.18, *SD* = 1.2, for younger participants) and the number of leaks (*M* = 1.19, *SD* = 0.8, for older and *M* = 1.04, *SD* = 0.93, for younger participants). Older participants attributed greater importance to decreasing the number of leaks indicated by the greater number of points assigned to this goal on average (*M* = 10.58, *SD* = 7.1) than did younger participants (*M* = 8.0, *SD* = 7.1). Younger participants seemed to consider decreasing the loose or liquid stools as more important, shown by the slightly greater number of points allocated to this goal (*M* = 5.85, *SD* = 6.7) on average than younger participants (*M* = 5.35, *SD* = 6.2). Younger participants considered developing greater confidence in controlling fecal incontinence as their third most important goal (*M* ranking score = 0.84, *SD* = 1.2) and allocated an average of 3.42 (*SD* = 5.5) points to its importance. Older participants, on the other hand, included having a decreased amount of stool leaked as their third most important goal (*M* ranking score = 1.06, *SD* = 1.2, and *M* points allocated = 4.0, *SD* = 5.4).

There were similarities between younger and older individuals in goals that were of lesser importance to them. Some rank scores are a negative number because the ranking scale used negative numbers (e.g., -1 = less important and -3 = least important). Both groups considered elimination of leakage of stool during sleep as one of their least important goals (*M* ranking score = -0.5, *SD* = 0.97, for younger and *M* = -0.81, *SD* = 1.2, for older participants). Both groups thought going to the toilet less often was not very important (*M* = -0.9, *SD* = 1.2, for younger and *M* = 1.0, *SD* = 1.2, for older participants). Both ranked using fewer pads or briefs among their less important goals (*M* = -0.76, *SD* = 1.1, for younger and *M* = 1.0, *SD* = 1.2, for older participants). Younger

participants were also less interested in using a smaller sized pad ($M = -0.5$, $SD = 0.95$).

Discussion

The results of this study indicate that community patients with FI have numerous management goals if a cure for FI would not be possible. According to Elkadry et al. (2003), the more goals stated, the more specific are the expectations for lifestyle change. The findings provide guidance for targeting therapeutic strategies toward specific outcome priorities. In this study, having fewer leaks was the most popular goal, regardless of sex or age. Approximately one third of participants were able to identify some of their own goals of FI management. The other two thirds of the participants selected from a list of goals provided by the investigators. This finding supports the conclusions of Bliss et al. (2005) that many individuals with FI, particularly older men, may require assistance in identifying self-care management goals and practices.

Elkadry et al. (2003) found that achievement of lifestyle goals, such as sexual function and activity, had a high satisfaction. The identification of lifestyle goals by participants when they were not included in the list developed by investigators suggests the importance of these types of goals. Among the lifestyle goals identified by participants in our study was less inconvenience in accessibility of public toilets, which supported the findings of Filoramo (2007) in the United Kingdom.

Several goals of FI management were similar to those reported for UI management: fewer incontinence episodes; needing fewer pads; reduced fear or worry about leaking; less leakage while sleeping, exercising, or during sex; a more normal daily routine; and less urgency (Elkadry et al., 2003; Sale & Wyman, 1994; Ternent et al., 2009). Goals that were unique to FI were a decreased amount of leakage, more formed stool consistency, going to the toilet less often, greater confidence in controlling FI, decreased amount of antimotility medication needed, a more regular bowel pattern, a more complete evacuation of stool, less pain on defecation, prevention of FI worsening, fewer diet restrictions, less public inconvenience and risk of exposing FI, and reduced symptoms. Many of the differences between goals of FI and UI management appear related to the nature of bowel versus bladder function.

Whereas previous studies focused only on goals of women for UI management (Elkadry et al., 2003; Filoramo, 2007; Sale & Wyman, 1994), this study provides new information about goals of men and women for FI management. There were some differences in the type and importance of goals selected by men versus women. Men were more interested in not leaking stool

while sleeping and decreasing the amount of stool leaked. Aspects of FI improvement that were selected more often or considered of higher importance by women related to having less urgency and decreasing the number or size of absorbent products needed. The desire of women to reduce pad use is consistent with previous reports that more women than men wear an absorbent pad for FI or UI management (Bliss et al., 2005; Herzog, Fultz, Normolle, Brock, & Diokno, 1989; Johnson, Kincade, Bernard, Busby-Whitehead, & DeFriese, 2000; Thomas & Morse, 1991). Nevertheless, when the relative importance of all goals is considered, those related to reductions in the number or size of pads are of less importance to women (as well as to younger and older individuals) than those about the characteristics of fecal leakage (e.g., frequency, amount). Peden-McAlpine et al. (2008) showed that absorbent products are an important support for going into public, which may offer one explanation for this finding. Results suggest that it is important for clinicians to consider gender differences in care.

Our results show that goals that are important to younger people for FI management differ from those of older people. Younger participants were more interested in elimination of leakage of stool during sex and lessening their worry about being incontinent. Older participants wanted to decrease antimotility medication use, which may reflect their greater use of medications overall. Clinicians should consider age-based priorities when developing a plan of care for FI. Goals of lesser importance to these groups were more similar and knowing these can assist in narrowing the focus of management plans.

Knowledge about the relative importance of a patient's goals can guide clinicians in focusing their initial therapeutic recommendations. The methods of rating the most and least important goals in relation to all goals were more discriminating than rating each goal individually. When rated individually, almost all goals, the exception being self-care practice goals, were very important to the participants. Allocating points among a smaller list of goals appeared to refine considerations of importance. However, ranking goals in relation to each other and allocating points seemed to be a confusing exercise for some people as they did not follow the instructions correctly. Ternent et al. (2009) also reported that survey respondents, especially older people, made mistakes in ranking and assigning points to survey items. In our study, using negative numbers to rank the least important goals and, in the survey by Ternent et al., the large number of items to rank may have increased the complexity of these procedures.

There are limitations of this study. Because the sample is limited in diversity of race and ethnicity, findings may not adequately represent goals of all groups. The validity and reliability of the methods used in this study were not

established prior to their use, which is due in part to a lack of availability of an existing instrument in the literature for identifying and measuring patients' goals for managing chronic health conditions.

The findings of this study suggest that even when complete continence of stool may not be possible, community-living individuals can identify goals of management that are important to them. Nurses who care for community-dwelling adults with FI are encouraged to assist patients reflect on their own goals as well as offer them suggestions as needed. Nurses can then target therapeutic modalities toward goals of priority. For example, therapies to lower the frequency of leaking loose or liquid stool may be a priority, especially to younger individuals. Nurses need to consider age and sex differences in management goals when caring for patients with FI. For example, our findings suggest that nurses seek alternatives to medication use for FI in older participants and discuss sexual concerns with younger patients.

Results suggest that goals can be comprehensive in nature addressing lifestyle and emotional effects of FI as well as bowel patterns. Engaging patients to participate in goal setting and activities to achieve those goals may help them feel more hopeful or confident in controlling FI and thereby continue or return to their usual activities. According to Elkadry et al. (2003), achievement of goals even when focused on improvements of less than complete cure was highly correlated with returning to normal activities. Additional research is needed in relation to FI management goals. Findings indicate that separate goals should be determined for FI and UI management as we have shown there are differences.

The variety of goals selected suggests the possibility of having a toolbox approach to FI management. Nurses and patients might collaborate in developing a tailored plan of FI management for a patient from a set of management options, thus promoting motivation, realistic expectations for improvement, and satisfaction. Further research is needed to determine whether setting goals and tailoring interventions effective in promoting adherence to a management plan and improving satisfaction.

Declaration of Conflicting Interests

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