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The Getting-Out-of-Bed (GoB) Scale: A Measure of Motivation and Life Outlook in Older Adults with Cancer

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Abstract

Objective—To develop and evaluate the psychometric properties of a measure of motivation and life outlook (Getting-Out-of-Bed [GoB]).

Design—Secondary analysis of baseline and 6-month data from a longitudinal follow-up study of older breast cancer survivors.

Participants—Women (N=660) diagnosed with primary breast cancer stage I -IIIA disease, age ≥65-years, and permission to contact from an attending physician in four geographic regions in the USA (city-based Los Angeles, California; state-wide in Minnesota, North Carolina, and Rhode Island).

Measurement—Data were collected over 6-months of follow-up from consenting patients' medical records and telephone interviews with patients. Data collected included the 4-item GoB, health related quality of life (HRQoL), breast cancer, socio-demographic and health-related characteristics.

Results—Factor analysis produced, as hypothesized, one principal component with eigen values of 2.74_{baseline} and $2.91_{\text{6-months}}$ which explained $68.6\%_{\text{baseline}}$ and $72.7\%_{\text{6-months}}$ of total variance. In further psychometric analyses, GoB exhibited good construct validity (divergent: low non-statistically significant correlations with unrelated constructs; convergent: moderate statistically significant correlations with related constructs; discriminant: distinguished high HRQoL groups with a high level of significance), excellent internal reliability (Cronbach's alpha 0.84_{baseline}, $0.87_{\text{6-months}}$), and produced stable measurements over 6-months. Women with GoB scores ≥50 at baseline were more likely at 6-months to have good HRQoL, good self-perceived health, and report regular exercise, indicating good predictive ability.

Conclusion—GoB demonstrated overall good psychometric properties in this sample of older breast cancer survivors, suggestive of a promising tool for assessing motivation and life outlook in

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older adults. Nevertheless, because it was developed and initially evaluated in a select sample, using measures with similar but not exact content overlap further evaluation is needed before it can be recommended for widespread use.

Keywords

Life outlook; Motivation; Older adults; Psychometrics; Reliability; Survivor; Validity

INTRODUCTION

The demographics of aging in the United States (U.S.) continue to change dramatically. In 2006, 37-million Americans, 12% of the population were 65-years or older. By 2030, those 65-years and older are projected to number 71.5-million representing nearly 20% of the U.S. population (Older Americans 2008: Key Indicators of Well-Being 2008). Furthermore, between 1992 and 2004, average inflation-adjusted healthcare costs for older Americans increased from $8,644 to $13,052 and are expected to continue to rise considerably (Older Americans 2008: Key Indicators of Well-Being 2008). Such numbers underscore the importance of understanding common diseases and health behaviors of older adults, since many conditions can be prevented and/or modified with behavioral interventions.

Motivation and life outlook play an important part in an older adult's ability to recover from illness or disabling events and to maintain and/or adopt health-promoting behaviors. The overall quality of life of older adults is associated with their ability to adapt and transcend health problems, which in turn is stimulated by an individual's motivation and life outlook (Resnick, 1999; Resnick, Zimmerman, Magaziner, & Adelman, 1998). There is a substantial literature on a set of related concepts such as positive affect (Kurland, Gill, Patrick, Larson, & Phelan, 2006), emotional vitality (Kubzansky & Thurston, 2007; Penninx et al., 2000), coping (Chesney, Neilands, Chambers, Taylor, & Folkman, 2006; Muller & Spitz, 2003), adaptation (Bedi & Brown, 2005; Chao et al., 2008), apathy (Resnick et al., 1998), and life satisfaction (Borg et al., 2008) which in broad terms suggest that more positive outlook is associated with better health outcomes.

Importantly, the ability to identify patients with low motivation establishes an opportunity for healthcare providers to develop and implement interventions to improve older adults' motivation and to help them attain and maintain a higher quality of health and life. Research on adapting to illness and research on patient-provider communication, however, often must occur in the context of a particular illness and the demands it places on people. A premium is placed on how lengthy and extensive questionnaires and interviews can be. A simple measure that can be easily administered in clinical and research settings can contribute important information regarding the possible role of motivation and positive life outlook in reducing vulnerability and adverse heath events and promoting healthy behaviors in older adults.

The Getting-Out-of-Bed measure (GoB) contains 4-items that assess motivation and life outlook. It is based on a layperson's representation of illness (Leventhal, Brissette, Leventhal, Cameron, & Leventhal, 2003; Leventhal, Diefenbach, & Leventhal, 1992) operationalized for use in older adults as a means of assessing the general issue of motivation and the effort it takes to get oneself up-and-going for the day. The underlying concept is that if we tap into the individual's own theories and perceptions about their state of being, we are better able to communicate with words they find meaningful, so that practical and effective interventions can be developed. The core phrase "getting out of bed in the morning" was used because in straightforward language it represents an activity that is nearly universal, commonly understood, and encompasses the simple idea that nothing gets

underway until an individual literally gets out of bed in the morning. The objective of this study was to explore psychometric properties of GoB in a sample of older breast cancer survivors with well-described demographic and health-related characteristics.

METHODS

Study Sample

The longitudinal study design and subject recruitment procedures have been reported elsewhere (Clough-Gorr, Ganz, & Silliman, 2007; Silliman et al., 2002). In brief, women diagnosed with first primary breast cancer were identified through regular review of pathology reports at hospitals or collaborating tumor registries in four geographic regions (city-based Los Angeles, California; state-wide in Minnesota, North Carolina, and Rhode Island) with Institutional Review Board (IRB) approval at each site. Women were eligible for the study if: they had stage I disease and a tumor diameter of ≥1 cm or stage II-IIIA disease; they were age 65-years or older on the date of diagnosis; and permission to be contacted was obtained from the attending physician. Eligible participants were mailed an enrollment package and were called by a research staff member from each site who explained the study's purpose and participation requirements; potential subjects were given an opportunity to decline participation and those who verbally agreed to participate were asked to return a signed consent form approved by the IRB at each site. The final baseline study sample was 660 women.

Data Collection Procedures

Telephone interviews were conducted at 3 (baseline) and 6-months after definitive surgery. A definitive-surgery-date based on medical record review was assigned for each subject. Trained interviewers conducted the interviews, which took an average of 45-minutes to complete, and ascertained socio-demographic information, psychosocial status, health status, and breast cancer therapies received. Tumor and treatment information (excepting chemotherapy and tamoxifen use obtained by interview) and comorbid conditions at the time of diagnosis were collected by medical record review at least 3-months after the definitive-surgery date.

Analytic Variables

Getting-Out-of-Bed—Motivation and life outlook was assessed using GoB questions as shown in Appendix 1. GoB consists of 4-items scored on an ordinal scale of 1 to 5. GoB total score is calculated as an equally weighted sum of items (1=poor, 2=fair, 3=good, 4=very good, 5=excellent) giving a total score range from 4 to 20. The final score is transformed to a 0 to 100 range using the formula

$$[(\text{observed score} - \text{minimum possible score}) \div (\text{maximum possible score} - \text{minimum possible score})] \times 100.$$

Higher scores indicate higher motivation and more positive outlook.

Socio-Demographic Characteristics—We classified patient age as 65-69, 70-79, or 80+ years of age; race as white or non-white; education as <high school, high school, or >high school; marital status as married or not married; having adequate finances to meet needs (yes/no); employment status as working full/part-time for pay or unemployed; and receiving Medicaid or not as a proxy for low socioeconomic status.

Breast Cancer and Treatment Characteristics—We classified stage as I or II-III, using the TNM classification (Fleming, Henson, Hutter, Kennedy, & Murphy, 1997), and

primary tumor therapy as breast conserving surgery (BCS) followed by radiation therapy, BCS alone, or mastectomy. Receipt of chemotherapy, adjuvant tamoxifen therapy and completion of treatment were each self-reported as yes/no. Tolerance of treatment side-effects was assessed by a single-item question asking "How well do you think that you are dealing with treatment side-effects that you might have been experiencing or are experiencing?", dichotomized as very well or fairly well *versus* not too well or not too well at all. Perception of being cured of breast cancer was considered as feeling cured now *versus* cured between 1-5 years after treatment, or never completely cured.

Health-Related Characteristics—Comorbidity was measured by the presence of up to fourteen comorbid conditions. Examples of specific diseases include ischemic heart disease, congestive heart failure, cerebrovascular disease, diabetes mellitus, and chronic obstructive pulmonary disease (Greenfield, Apolone, McNeil, & Cleary, 1993). Body mass index (BMI) was derived from the patients' baseline self-reported heights and weights, and was analyzed as a continuous variable ranging from 18.9-41.7 kg/m. Self-perceived health status was assessed using a single-item measure dichotomized as excellent, very good, or good (good) versus fair or poor (poor). We asked participants whether or not they exercised regularly at the 6-month interview. Regular exercise was defined as some exercise activity for at least one-half hour a day at least three times a week, other than exercises prescribed by their doctor or physical therapist specifically for their breast cancer care.

Health-Related Quality of Life (HRQoL)—General emotional health was assessed with the MHI5, a 5-item measure from the Medical Outcomes Study SF-36 scaled from 0 to 100, with a higher score indicating better emotional health (Ware & Sherbourne, 1992). The MHI5 correlates strongly with standardized measures of anxiety and depression, and has been widely used in many populations with chronic disease and cancer; a score of ≥80 considered good general mental health and an 8-point change clinically significant (Clough-Gorr et al., 2007; Demissie, Silliman, & Lash, 2001; Ganz et al., 1996; Ganz, Rowland, Desmond, Meyerowitz, & Wyatt, 1998; Silliman, Dukes, Sullivan, & Kaplan, 1998; Silliman, Troyan, Guadagnoli, Kaplan, & Greenfield, 1997). Breast cancer-specific emotional health (BCSEH) was assessed using a 4-item measure reflecting how well the respondent was dealing with breast cancer-specific worries; the total score was standardized to 0 to 100 scale with a higher score indicating better BCSEH (Silliman et al., 1998). We used the Psychosocial Summary Scale of the 17-item Cancer Rehabilitation Evaluation System-Short Form (CARES-SF) to capture cancer-specific psychosocial function (Schag, Ganz, & Heinrich, 1991). The CARES-SF has been used with patients with various types of cancer and extensively with breast cancer patients (Clough-Gorr et al., 2007; Schag, Ganz, Kahn, & Petersen, 1992; Schag et al., 1993; Shimozuma, Ganz, Petersen, & Hirji, 1999). The CARES-SF item scores range from 1 to 4 (a higher score indicating more problems) and were transformed to a 0 to 100 point scale, with 100 being the most favorable score.

Analytic Methods

Analyses included calculation of descriptive statistics (counts, percentages, means, standard deviations and frequency distributions), and development of GoB, including examination of its factor structure, validity, reliability, and stability. All analyses were conducted at baseline and 6-months using SAS, version 9.1 (SAS Institute, Inc., Cary, NC) and all p-values were two-sided.

Instrument Development—The individual items of GoB were constructed based on face validity criteria assessed by two authors (W.R., M.C.) and subsequently reviewed by a geriatrician (R.A.S.) and an oncologist for clinical relevance. The measure, as part of overall

study instrumentation, was pilot tested for phrasing and comprehension before baseline administration in a small sample (N=4) of available older cancer patient volunteers.

Factor Analysis—Item-to-total and item-to-item correlations were calculated at baseline and 6-months. Performance of GoB items was examined using exploratory factor analysis (EFA) using output from principal components analysis. An a priori single-factor structure was postulated. The number of factors retained was guided by two decision rules: Kaiser's criterion (factors with eigen values above 1), and the Scree test (number of factors on scree plot just prior to elbow or last major drop). Determination of a significant item-factor loading was set at a coefficient level of ≥0.45 and items measuring similar constructs were indicated by item-to-total correlates ≥0.70.(DeVellis, 2003)

Construct Validity—Validity of GoB was explored using cross-sectional simple correlations of GoB with constructs known to have some association (convergent validity) or no association (divergent validity) with motivation and life outlook using Pearson's rho (r) coefficients. We chose *a priori* HRQoL measures (MHI5, BCSEH, CARES-SF) to test convergent validity and self-reported number of children, height, and weight to test divergent validity. The discriminate abilities of GoB were examined by comparing differences between groups stratified on HRQoL scores ≥80 (75th percentile) and <80 using t-tests for mean scores.

Internal Reliability—Internal consistency of GoB was examined using cross-sectional Cronbach's standardized alpha for GoB total score at baseline and 6-monthss. We categorized the acceptable range of coefficient alpha (α) values as 0.60-0.64 minimally acceptable, 0.65-0.70 acceptable, 0.70-0.74 good, 0.75-0.80 very good, and 0.80 and above excellent (DeVellis, 2003; Nunnally & Bernstein, 1994; Streiner & Norman, 1995).

Stability—We used Pearson's correlation of the baseline and 6-month total GoB scores to assess measure stability over time (r ≥0.70 indicating stability of measurement). Consistency was also judged by comparing similarity of psychometric results at baseline and 6-months.

Predictive Ability—We used Spearman correlation coefficients and bivariate relative risk ratios to evaluate predictive associations of baseline GoB scores (dichotomized as ≥50 based on 50th percentile of underlying distribution) with breast cancer treatment characteristics, health-related characteristics, and HRQoL at 6-months. We also similarly evaluated predictive associations of baseline HRQoL measures with GoB scores, breast cancer treatment characteristics, and health-related characteristics at 6-months for comparison.

RESULTS

Sample Characteristics

Baseline socio-demographic and health-related characteristics of the study sample are shown in Table 1. Of 660 women, approximately one-quarter came from each of the four study sites with a mean age of 73.9-years. Most (94%) were white and had a high school education or greater (83%). Just less than half were married and the majority had adequate finances to meet their needs. About half of the women had stage I disease, nearly one-third had stage IIA disease; however the majority (82%) received either a mastectomy or breast conserving surgery (BCS) followed by radiation. Nearly one-quarter reported chemotherapy and 65% of women had two or less comorbid conditions.

Factor Analysis

Factor analyses at baseline and 6-months each produced, as expected, one principal component with eigen values of 2.74 and 2.91 respectively. (Table 2) The single-factor structure explained 68.6% of total variance at baseline and 72.7% at 6-months. All item-factor loadings were $r \geq 0.45$, and the strong statistically significant item-to-total correlations ($0.73 \leq r_{baseline} \leq 0.86$, $0.76 \leq r_{6\text{-months}} \leq 0.87$, p-values >0.0001) indicated that the items measured similar construct consistently at baseline and 6-months.

Construct Validity

Table 2 displays the results of analyses of construct validity. There were weak correlations (absolute values $0.01 \leq r \leq 0.06$, p-values >0.10) with number of living children, height, and weight and there were moderate correlations ($0.25 \leq r \leq 0.53$, p-values >0.0001) with MHI5, BCSEH, and CARES-SF. These results indicate good divergent validity (low non-statistically significant correlations with unrelated constructs), and good convergent validity (moderate statistically significant correlations with related constructs). GoB distinguished groups with HRQoL scores of ≥80 and <80 with a high level of significance.

Internal Reliability

GoB exhibited excellent internal consistency with Cronbach's α values of 0.84 and 0.87 at baseline and 6-months, respectively.

Stability

GoB demonstrated very good stability of measurement over time. Mean GoB scores were similar with strong statistically significant correlation and overall psychometric results were comparable at baseline and 6-months (Table 2).

Predictive Ability

Women with GoB scores ≥50 (representing higher motivation) at baseline were statistically significantly more likely at 6-months to have good HRQoL ($RR_{MHI5 \geq 80}=1.82$, $RR_{BCSEH \geq 80}=1.29$, $RR_{CARES\text{-}SF \geq 80}=1.64$), good self-perceived health (RR=2.15), and report regular exercise (RR=1.56) than those with scores <50, indicating good predictive ability (Table 3). In comparison, baseline HRQoL measures were similarly predictive of 6-month GoB and self-perceived health, but not regular exercise (Data not shown).

DISCUSSION

Aging is a highly individualized and complex process resulting in heterogeneous populations of older adults. GoB is based on the premise that older adults are unique with inherent strengths and potential for adaptation manifested in their motivation. Focusing on individual motivation could further our knowledge regarding the ability of older adults to deal successfully with adverse events that are inevitable in advanced age and may present healthcare providers with a distinctive opportunity to guide and facilitate clinical management plus secure extra resources to help foster overall better health.

GoB is a 4-item measure of motivation and life outlook. The scale development reported here was based on GoB interviewer-administered data in a sample of community-dwelling older breast cancer survivors from four geographic locations in the USA. The single-factor *a priori* hypothesized factor structure was confirmed. The measure was shown to be valid when analyzed against HRQoL measures (MHI5, BCSEH, CARES-SF) and demonstrated substantial internal consistency, stability, and predictive ability in this sample of older women. GoB's good psychometric properties and its brevity suggest potential applicability

in a broad range of clinical and research settings (e.g. alone or part of a clinical multidimensional geriatric assessment, individually or part of longer research questionnaire as independent or dependant variable).

Specifically, GoB addresses aspects of motivation and life outlook potentially relevant to a variety of health behaviors and outcomes that overlap conceptually with, but are not entirely captured by, the other HRQoL measures used in this research. For example, GoB was moderately correlated with HRQoL measures, yet high baseline GoB scores predicted regular exercise at 6-months whereas other HRQoL measures did not. It is conceivable that measurement of motivation using GoB detects varying subjective aspects of health. The affect of motivation especially on health behaviors may be a key factor in improving and/or maintaining health status. It is also plausible that older adults in general, not just breast cancer survivors, with low motivation may be disengaged from their health care experiences and thus at high risk of adverse health outcomes and subsequent loss of independence. If so, GoB may represent a useful tool in the measurement and management process of older adults representing a potential opportunity to promote positive health effects.

Limitations and Caveats

The psychometric properties of GoB evaluated in a sample of mostly white, well-educated breast cancer survivors in selected geographic areas in the U.S. limits external validity. Future studies confirming the psychometric properties of GoB in different populations (e.g., international, community-dwelling general, nursing home, mixed gender, non-cancer) are necessary. The EFA approach is considered controversial because results can vary according to decisions made at the design and analysis stages. However, if a construct is hypothesized *a priori* to be unidimensional, then EFA showing a single factor grouping is considered supportive evidence; this was the case both at baseline and 6-months. Additionally, because we assessed construct validity using measures that are not direct, objective measures of what is being measured by GoB we could have an inaccurate estimate of validity. However, we purposely used three different HRQoL measures to expand conceptual over-lap, and results were consistent across measures at baseline and 6-months. Regardless future studies examining construct validity with direct comparison to similar constructs such as hope or optimism are warranted. GoB should be tested for predictive ability, sensitivity to change, and ability to detect change over longer periods of follow-up. Future research utilizing additional follow-up of this sample is planned to address these shortcomings. Unfortunately, this study was not designed to evaluate self-administered applications or to test feasibility and clinical utility of the instrument.

The 4-items used for GoB are not necessarily the only ones that might be used to represent the construct. Despite their good psychometric properties, the generally favorable results here might prompt developing additional items for testing. Nonetheless, the objective should be to have a short, readily useable scale. Furthermore, we are not proposing that GoB is suited to all contexts. It is important to find the situations in which it makes the strongest contributions to explaining variance in health behaviors and health outcomes. Its very label, “getting out of bed” may imply that it is most useful for outcomes that are grounded in earlier-in-the-day activities, or situations in which people opt to schedule appointments and activities later in the day. Perhaps one of the reasons GoB was predictive of exercise at 6-months is because people who do not have problems getting out of bed in the morning have more available time to do activities such as exercise.

IMPLICATIONS FOR CLINICAL PRACTICE

The GoB has the potential to be a practical, short, and easy-to-administer instrument for targeting adequate interventions to bolster motivation and thus improve health behaviors and

outcomes in older adults. GoB values could be helpful in monitoring motivation in both clinical and research settings, and GoB scores over time could be used for comparing motivation in relation to aspects of health care of an individual. The shortness of the instrument decreases respondent burden and thus increases its utility for busy clinical settings as well as inclusion in longer multidimensional assessment programs.

CONCLUSION

The GoB demonstrated good psychometric properties in this sample of older breast cancer survivors, suggestive of a promising tool for measuring motivation and life outlook in older adults. Because it was developed and initially evaluated in a select sample further evaluation is needed before it can be recommended for widespread use.

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Appendix 1

Items of the Getting-Out-of-Bed (GoB) measure with text

"This set of questions asks about things that encourage you to get up each morning and begin your day. Please indicate whether it is an Excellent description of you, a Very Good description of you, a Good description of you, a Fair description of you, or a Poor description of you."

GoB Item	Excellent	Very Good	Good	Fair	Poor
1. I am the type of person who almost always has a reason to get out of bed in the morning.	5	4	3	2	1
2. It is important for me to get out of bed each day and to do what I have to do.	5	4	3	2	1
3. I have reasons in my life to get up and to get going every day.	5	4	3	2	1
4. In the future, I am sure there will be things in my life to keep me getting up each day.	5	4	3	2	1

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Table 1

Baseline socio-demographic and health-related characteristics in a sample (N=660) of older breast cancer survivors, 1998-2001

Characteristic at Baseline	N (%)
Socio-demographic	
Enrollment site	
LA	150 (23)
RI	163 (25)
MN	188 (28)
NC	159 (24)
Age*	73.9±6.0
Race	
White	620 (94)
Other	40 (6.1)
Education	
Less than 12 years	115 (17)
12 years	228 (35)
More than 12 years	316 (48)
Married	304 (46)
Adequate finances	587 (90)
Breast Cancer	
Stage	
I	336 (51)
IIA	198 (30)
IIB	100 (15)
IIIA	25 (3.8)
Therapy	
BCS with radiation	215 (33)
BCS without radiation	102 (16)
Mastectomy	316 (49)
Other	17 (2)
Chemotherapy	145 (22)
Tamoxifen	498 (75)
Health-related	
Comorbidity – number of conditions	
0	86 (13)
1-2	340 (52)
3-4	172 (26)
5+	57 (8.7)
BMI*	26.5±5.3
HRQoL	
MHI5*	80.7±17.8

Characteristic at Baseline	N (%)
BCSEH*	68.1±21.5
CARES-SF*	78.6±15.5

Los Angeles, CA; RI, Rhode Island; MN, Minnesota; NC, North Carolina; BCS, Breast Conserving Surgery; BMI, Body Mass Index; HRQoL, Health Related Quality of Life; MHI5, 5-item Mental Health Index; BCSEH, 4-item Breast Cancer Specific Emotional Health; CARES-SF, 17-item Cancer Rehabilitation Evaluation System-Short Form.

*mean ±standard deviation

Table 2

Psychometric properties of GoB at baseline (3-months) and 6-months post-definitive treatment in a sample (N=660) of older breast cancer survivors, 1998-2001

Psychometric Property	GoB at Baseline	GoB at 6-months	p-value
Facture Structure			
Number of factors	1	1	
Eigen value	2.74	2.91	
Percent of variance	68.6	72.7	
Item-to-Total Correlations*			
GOOB-item 1	0.86	0.87	< 0.0001
GOOB-item 2	0.84	0.87	< 0.0001
GOOB-item 3	0.86	0.90	< 0.0001
GOOB-item 4	0.73	0.76	< 0.0001
Item-to-Item Correlations*			
Item 1-2	0.70	0.73	< 0.0001
Item 1-3	0.66	0.72	< 0.0001
Item 1-4	0.49	0.53	< 0.0001
Item 2-3	0.71	0.72	< 0.0001
Item 2-4	0.45	0.47	< 0.0001
Item 3-4	0.48	0.57	< 0.0001
Convergent Validity*			
MHI5	0.37	0.37	< 0.0001
BCSEH	0.46	0.53	< 0.0001
CARES-SF	0.25	0.36	< 0.0001
Divergent Validity*			
Number of children	0.02	0.03	> 0.50
Height	0.03	0.04	> 0.31
Weight	-0.06	-0.01	> 0.10
Discriminant Validity*			
MHI5 ≥80			
Yes	82.4±18.1	84.5±16.3	< 0.0001
No	69.2±22.1	69.7±22.4	
BCSEH ≥80			
Yes	89.9±14.2	90.0±14.0	< 0.0001
No	72.9±20.7	72.7±20.6	
CARES-SF ≥80			
Yes	82.4±18.2	82.8±17.5	< 0.0001
No	72.6±21.7	70.2±22.6	
Internal Reliability			
Standardized Cronbach's alpha	0.84	0.87	
Stability			

Psychometric Property	GoB at Baseline	GoB at 6-months	p-value
Mean total score ±SD	78.3±20.3	78.2±20.4	0.67[+] < 0.0001

GoB, 4-item Getting-Out-of-Bed; SD, Standard Deviation; BMI, Body Mass Index; MHI5, 5-item Mental Health Index; BCSEH, 4-item Breast Cancer Specific Emotional Health; CARES-SF, 17-item Cancer Rehabilitation Evaluation System-Short Form; HRQoL, Health Related Quality of Life; SD, Standard Deviation

[*] correlation coefficient (rho) of $GoB_{baseline}$ with baseline characteristic, $GoB_{6\text{-months}}$ with 6-month characteristics

[#] cross-sectional comparison of mean value±SD: $GoB_{baseline}$ compared with $HRQoL_{baseline}$, GoB6-months compared with $HRQoL_{6\text{-months}}$

[+] correlation coefficient (rho) of $GoB_{baseline}$ with $GoB_{6\text{-months}}$

Table 3

Baseline GoB scores predicting 6-months post definitive treatment HRQoL, health-related, and breast cancer treatment characteristics in a sample (N=660) of older breast cancer survivors, 1998-2001

Characteristic at 6-months[#]	Risk Ratio[*] 95% CI	Correlation Coefficient rho, p-value
HRQoL		
MHI5 ≥80	1.82 (1.51-2.19)	0.32, <0.0001
BCSEH ≥80	1.29 (1.14-1.45)	0.33, <0.0001
CARES-SF ≥80	1.64 (1.29-2.09)	0.26, <0.0001
Health-related		
Good self-perceived health	2.15 (1.51-3.06)	0.17, 0.0001
Regular exercise	1.56 (1.27-1.92)	0.17, <0.0001
Breast cancer treatment		
Participants with radiation therapy (N=330)		
Completed radiation treatment	2.23 (0.65-7.68)	0.10, 0.11
Participants with chemotherapy (N= 145)		
Completed chemotherapy	1.09 (0.39-3.07)	0.08, 0.35
Coping well with treatment side-effects	1.55 (0.71-3.35)	0.06, 0.16
Perception of being cured now	1.13 (0.94-1.35)	0.16, 0.0003

GoB, 4-item Getting-Out-of-Bed; HRQoL, Health related Quality of Life; MHI5, 5-item Mental Health Index; BCSEH, 4-item Breast Cancer Specific Emotional Health; CARES-SF, 17-item Cancer Rehabilitation Evaluation System-Short Form

[*] Risk ratio using $GoB_{baseline}$ ≥50 dichotomized by underlying distribution of baseline scores, cut-off 50th percentile

[#] N varies between 555 and 602 due to missing values