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Urinary Incontinence and Psychosocial Factors Associated with Intimate Relationship Satisfaction Among Midlife Women

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Abstract

Objective—To explore associations among symptoms of urinary incontinence, severity of symptoms, and measures of psychosocial health that may be assessed during a well-woman screening examination and the possible contribution of these variables to the relationship satisfaction of partnered midlife women living with urinary incontinence.

Design—Exploratory correlational design using self-report questionnaires.

Setting—Community recruitment by posted fliers, advertisements, and social media.

Participants—Partnered women, aged 45 to 65 years, with urinary incontinence ($N = 57$).

Methods—Self-report measures of severity of incontinence symptoms, relationship satisfaction, self-concept/emotional health (self-esteem, body image, depression, anxiety), and relationship factors (sexual quality of life, incontinence-related communication). Data were analyzed using Spearman rho correlation with an exploration of the contribution of study factors to relationship satisfaction through standard multiple regression.

Results—The severity of urinary incontinence symptoms had no significant correlation with scores on relationship satisfaction or psychosocial health. Measures of self-concept/emotional health and relationship factors were significantly correlated with each other ($r_s = .40$ to $.75$, $p < .01$) and with relationship satisfaction ($r_s = .35$ to $.71$, $p < .05$). Preliminary exploration of the contribution of study factors to relationship satisfaction through exploratory regression analysis demonstrated unique contributions from sexual quality of life (18.7%, $p < .001$) and depression (8.7%, $p = .004$).

Conclusion—Midlife women with urinary incontinence, regardless of symptom severity, might benefit from screening for poorer sexual quality of life and mild depression symptoms because these two study factors significantly contributed to poorer intimate relationship satisfaction among this study's participants.

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Keywords

urinary incontinence; relationship satisfaction; sexual quality of life; depression

Screening of women for symptoms of urinary incontinence (UI) during well-woman examinations is recommended by the American College of Obstetricians and Gynecologists (2015) because women often do not raise the topic without prompting. Assessment of symptom presence, severity, and precipitating factors is important to inform treatment options; however, several psychosocial factors may also negatively affect the quality of life of women with UI. Given the time constraints of an annual well-woman examination and the many concerns that midlife women may want to discuss, it is unclear which key psychosocial factors nurses and practitioners should assess. Women with UI often manage symptoms and choose treatment options in the context of maintaining the health of relationships with intimate partners. We therefore explored what psychosocial assessment data might best help anticipate the potential for breakdown of or compromise to the woman's intimate relationship when she is coping with UI symptoms.

Background and Significance

Urinary incontinence is a major health concern for midlife women (aged 45-65 years), and reported incidence rates are as high as 51.2% (Bradley, Kennedy, & Nygaard, 2005) depending on frequency, severity, and type of UI. Wu et al. (2014) found that 15 to 25% of women aged 40 to 69 reported moderate to severe UI symptoms. Medical treatment for stress UI accounts for an estimated financial burden of \$12.4 billion annually in the United States (Wilson, Brown, Shin, Luc, & Subak, 2001). Subak et al. (2006) estimated mean annual expenditures of \$550 to \$993 to manage capture and clean-up of urinary leaking. In spite of the long-term nature and vigilant management of symptoms, women living with UI tend to describe themselves as otherwise healthy (Bradway & Strumpf, 2008) and do not present to the medical community as having chronic health conditions. The incidence rates and the economic and health-related costs of managing UI symptoms, however, suggest that this condition should be considered a major chronic health risk for midlife women.

Significant psychosocial sequelae of UI have been well documented in the literature. Researchers who investigated midlife women's perceptions of the effect of managing symptoms of chronic UI found recurring themes of lowered self-esteem (Nicolson, Kopp, Chapple, & Kelleher, 2008), feeling unfeminine (Coyne et al., 2007), and feeling unattractive (Nilsson, Lalos, & Lalos, 2009). Women reported that one of the major goals for seeking incontinence-related surgery was to improve body image and thereby restore confidence in their bodies. At 2 years following surgical repair, women reported struggling to regain a positive view of themselves as feminine and sexually desirable (Srikrishna, Robinson, & Cardozo, 2010). Significant associations among UI, depression, and anxiety have been reported in the literature (Coyne et al., 2012; Felde, Bjelland, & Hunskaar, 2012). Improving quality of life and lessening the effect of UI on psychosocial health may be more important to many women than complete cure of the symptoms (Srikrishna, Robinson, & Cardozo, 2009). Although the negative psychosocial effects of living with UI are well

documented, scant evidence exists regarding associations among these factors or with UI symptom severity.

Urinary Incontinence and Intimate Relationships

Chronic UI symptoms have the potential to challenge women's intimate relationships. In qualitative studies, women with UI reported that worry and embarrassment about being incontinent in public restricted their social activities (Hayder & Schnepf, 2010). Secrecy was often maintained with intimate partners as women tried to cope alone with managing the symptoms of UI (Hale, Grogan, & Willott, 2009). Women with UI who leaked during sexual activity more often reported less sexual satisfaction, avoidance of orgasm due to fear of leaking, and avoidance of sexual intimacy altogether (Beji, Yalcin, Erkan, & Kayir, 2005). This loss of pleasurable sexual intimacy was keenly felt as a strain on the intimate relationship (Coyne et al., 2007). Some women reported that the motivation for performing pelvic floor muscle exercises was to improve their sexual function (Hayder, 2012). Yip et al. (2003) found significantly poorer relationship satisfaction among women diagnosed with UI, compared with women without UI. No published research was found, however, in which the authors explored associations among UI symptom severity and measures of the health of the relationship.

Theoretical Framework

We examined UI within a chronic illness framework. Managing symptoms of a chronic health condition such as UI affects not only the individual manifesting the condition, but also the individual's relationship with an intimate partner (McPheters & Sandberg, 2010). The Corbin and Strauss Collaborative Chronic Illness Trajectory Model (Corbin & Strauss, 1984, 1988), developed from grounded theory analysis of the biopsychosocial effects of a variety of health conditions, outlines the personal biographical and interpersonal relationship work involved when managing symptoms of a chronic health condition in the context of trying to maintain a healthy relationship with an intimate partner.

Biographical work-related factors identified in the Corbin and Strauss Collaborative Chronic Illness Trajectory Model and supported in the research literature as possible factors affecting quality of life for partnered midlife women living with UI include the following personal factors: self-esteem, body image, and emotional health (depression and anxiety).

Relationship work-related factors identified in the model and in the research literature as potential threats to the successful collaborative coping skills of intimate partners managing chronic symptoms of female UI include the following interpersonal factors: sexual intimacy and communication regarding UI symptoms. Within the Corbin and Strauss Collaborative Chronic Illness Trajectory Model, the individual's personal need to maintain a positive self-concept/emotional health and the interpersonal need to nurture the intimate relationship may operate at cross purposes and challenge the couple's ability to adjust to symptom demands (Corbin & Strauss, 1984, 1988).

Breakdown in collaboration around symptom management may compromise the relationship and, consequently, the individual's quality of life. Self-concept, emotional health,

maintaining the bonds of physical intimacy, and promoting healthy symptom-related communication patterns between the woman with UI and her intimate partner are all psychosocial factors that may be amenable to health promotion and patient education strategies. Although findings from qualitative studies of women living with UI are consistent with this theoretical framework, no research was found in which the authors operationalized and tested associations among these concepts and in the context of symptom severity.

Purpose

The purpose of this study was to determine the degree of association among UI symptom severity and select psychosocial factors, and to explore the relative contribution of these factors to midlife women's relationship satisfaction with their intimate partners. The Corbin and Strauss Theory of Collaborative Chronic Illness Trajectory and the extensive body of literature on the psychosocial effects of living with female UI informed the choice of factors that we evaluated. Specifically, we examined associations among midlife women's UI symptom severity and relationship satisfaction, measures of women's self-concept/emotional health (self-esteem, body image, depression, and anxiety), and measures of the quality of the intimate relationship (sexual quality of life, and incontinence-related communication). We also explored the relative contribution of these factors to women's satisfaction with their intimate relationship.

Methods

Study Design and Participants

An exploratory correlational design was used in this study. G*Power analysis (Faul, Erdfelder, Lang, & Buchner, 2007) for correlation statistics was performed, and we aimed for a target of at least 59 participants ($\alpha = .05$; medium effect size = .35; power = .80; two-tailed). For the exploratory multivariate regression, we aimed for the recommended ten participants per predictor variable. Following institutional review board (IRB) approval, participants were recruited through posted fliers at women's health clinics, physical therapy offices, community centers, flea markets, newspapers, online advertisements, social media, and word of mouth. The fliers had a detachable tab to allow for unobtrusive removal of study information. Study details, informed consent, and enrollment criteria were discussed by telephone, in person, or by email, depending on the woman's preference. Community-dwelling women aged 45 to 65 years with self-reported symptoms of stress, urgency, or mixed UI and who were in a self-described committed cohabiting relationship with an adult partner were eligible for inclusion in the study. During the screening interview, the presence and type of UI were assessed by the 3 Incontinence Questions (3IQ; Brown et al., 2006). The 3IQ is a noninvasive screening tool that can be used to classify the type of UI (stress, urgency, mixed, neurogenic) by women's reports of circumstances when they leak urine. On initial development, sensitivities and specificities of the 3IQ were 0.75 and 0.77, respectively, for urgency incontinence and 0.86 and 0.60, respectively, for stress incontinence. This modest ability to classify type of UI during the screening interview was sufficient for the purposes of this study. Women with UI secondary to a disease process, neurogenic bladder, or an acute life-threatening illness or condition, or serious exacerbation

of a chronic condition for herself or her partner were excluded from the study. The ability to read and write English was also required for study inclusion.

We mailed study packets to women who met the inclusion criteria and who were interested in participating in the study, along with a stamped return envelope addressed to the researchers. Study packets included a copy of the informed consent form, along with study instructions. The questionnaires were to be completed in the privacy of the home setting at a time convenient to the participant and returned to the investigator without any personally identifiable information included. Return of the completed study packet constituted consent to participate. Participants received a \$15 gift card incentive.

Also included in the study packet were demographic questions, UI condition-related questions, and an assessment of incontinence-related sexual function. The Prolapse/Urinary Incontinence Sexual Function Questionnaire (PISQ) is the only validated condition-specific measure of sexual function in women with pelvic floor disorders (Rogers, Kammerer-Doak, Villarreal, Coates, & Qualls, 2001) and is recommended for use in assessing sexual function of women with pelvic floor disorders by the International Urogynecological Association (www.iuga.org). The PISQ-short form (PISQ-12) has demonstrated good correlation with the long form and good to excellent reliability on test-retest (Rogers, Coates, Kammerer-Doak, Khalsa, & Qualls, 2003). The PISQ-12 is a Likert-style instrument comprising 12 questions regarding sexual function, some of which apply specifically to urinary and/or fecal incontinence (e.g., Does fear of incontinence restrict sexual activity? Are you incontinent with sexual activity?). Possible scores on the PISQ-12 range from 0 to 48, with higher scores indicating better sexual function. The mean and standard deviation of PISQ-12 scores for sexually active women without pelvic floor disorders have been reported to be 40 ± 4.2 ($N = 557$; age range unreported; Ashkenazi et al., 2008). Although the possible effect of UI on sexual function is important to assess, we did not consider this instrument sufficient for the purposes of assessing the quality of intimacy in the event of diminished sexual function.

Study Instruments

Permission for use of each of the study instruments was sought and granted prior to obtaining IRB study approval and participant enrollment. The two primary measures of interest, UI symptom severity and relationship satisfaction, were presented first in the sequence of study instruments. The study instruments measuring self-concept/emotional health and relationship factors were then presented in random order to lessen bias related to response fatigue.

UI symptom severity—The Incontinence Severity Index (ISI; Sandvik, Seim, Vanvik, & Huskaar, 2000) is a two-item Likert-style instrument that asks both how often (1 = *less than once a month*; 2 = *one or more times/month*; 3 = *one or more times/week*; 4 = *every day or night*) and how much (1 = *drops*; 2 = *small splashes*; 3 = *more*) urine is lost involuntarily. Item responses are multiplied and scores range from 1 to 12. Increased numerical value indicates increased symptom severity (1-2 = *slight*; 3-6 = *moderate*; 8-9 = *severe*; 10-12 = *very severe*). The ISI is recommended by the International Continence Society and the International Consultation on Incontinence as a Grade A outcome measure for UI symptom

severity (Castillo, Espaillat-Rijo, & Davila, 2010), demonstrating good test-retest reliability ($\kappa = 0.69-0.83$; Hanley, Capewell, & Hagen, 2001) and validity by concurrently measured pad-weights (Sandvik et al., 1993).

Relationship satisfaction—Women's perceived relationship satisfaction was assessed using the Couples Satisfaction Index-4 (CSI-4; Funk & Rogge, 2007). The CSI-4, a four-item Likert-style instrument, was developed through item response theory analysis of items from the most widely used instruments in research on relationship satisfaction. Scores on the CSI-4 range from 0 to 21, with higher scores indicating more satisfaction with the relationship. The distress cut point for this instrument was a score of 13.5, below which identifies couples at risk for dissolution of the relationship (Funk & Rogge, 2007).

Self-esteem—Women's perceived self-esteem was assessed by Rosenberg's Self-Esteem Scale (SES; Rosenberg, 1965), a 10-item Likert-style questionnaire with potential scores ranging from 0 to 30 and higher scores indicating better self-esteem. Although originally developed for use with adolescents, the instrument has been validated and found useful in a wide variety of adult populations (Huang & Dong, 2012; Sinclair et al., 2010).

Body image—Incontinence-related body image was assessed with the modified Body Image Scale (BIS; Hopwood, Fletcher, Lee, & Al Ghazal, 2001). The BIS was originally developed for use in patients with cancer and has been modified and validated for use with women with pelvic organ prolapse (Jelovsek & Barber, 2006), demonstrating good reliability ($\alpha = 0.89$) in this population (Patel, Mellon, O'Sullivan, & LaSala, 2010). The modified version of the BIS is an eight-item Likert-style questionnaire. Possible scores range from 0 to 24. Higher scores indicate poorer body image. The BIS was modified for use in this study by replacing the words “disease or treatment” with “leaking urine” (e.g., “Have you been feeling less feminine as a result of leaking urine,” “Have you felt less physically attractive as a result of leaking urine”).

Anxiety and depression—The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) was used to assess the degree of depressive symptoms and the level of anxiety. The HADS is a 14-item Likert-style questionnaire with seven items assessing level of anxiety (HADS-A) and seven items assessing level of depression (HADS-D). The possible score range of 0 to 21 for each subscale corresponds to symptom severity, with higher scores on either subscale indicating increased symptom burden. The instrument has been used extensively and validated in a wide variety of settings and illness conditions (Bjelland, Dahl, Haug, & Neckelmann, 2002). Subscale scores correspond to category of symptom severity for anxiety and depression (0-7 = *normal*, 8-10 = *mild*, 11-14 = *moderate*, 15-21 = *severe*).

Sexual quality of life—The Sexual Quality of Life-Female (SQLF; Symonds, Boolell, & Quirk, 2005) was used to measure satisfaction with the sexual intimacy component of maintaining the physical bonds of the intimate dyadic relationship. Content validity of the items was established through extensive interviews of women diagnosed with sexual dysfunction, literature review, factor analysis, and by a multidisciplinary panel of experts (Symonds et al., 2005). The SQLF has 18 items with Likert-style response options, with

higher scores (ranging from 0-90, standardized to a maximum score of 100) indicating a better sexual quality of life. Items include rating degree of agreement with statements about the woman's sex life such as "feel like less of a woman," "lost confidence in myself as a sexual partner," "embarrassed", and "avoid."

Incontinence-related communication—The Couples' Illness Communication Scale (CICS; Arden-Close, E., Moss-Morris, Dennison, Bayne, & Gidron, 2010) was modified and used to measure perceptions regarding shared talk specifically about UI. The CICS comprises four items with Likert-style responses (possible scoring from 0-20), with higher scores indicating increased perceived ability to communicate about the illness with one's partner. The CICS demonstrated construct and convergent validity in evaluating perceived communication between women with multiple sclerosis or ovarian cancer and their partners (Arden-Close et al., 2010). As recommended by the authors, items were modified to replace "illness" with "leaking urine" (e.g., "I feel comfortable discussing issues related to leaking urine with my partner," "My partner is willing to share her feelings about leaking urine with me").

Data Analysis

Five instrument scores that were missing a single item (one SES and four SQLF) were replaced with the median value of the scored items on the instrument. Two HADSA and HADSD scores had more than two missing items, and these total scores were not imputed and were not included in the analysis. The skewness statistic for all study instruments fell within an acceptable range and the normal Q-Q plots approximated a straight line, supporting an assumption of reasonably normal distributions. Spearman's rho correlation coefficient was used to assess effects among study variables ($p < .05$, two-tailed). A preliminary exploration of the possible contribution of study variables to women's relationship satisfaction was performed using standard multiple regression analysis.

Results

Description of Participants

Of the 77 women who initiated contact regarding their interest in the study and completed the screening interview, 13 did not meet the inclusion criteria. Two had not had any urinary leaking in the previous 3 months, 1 wanted to pursue another medical diagnosis to explain the incontinence, 5 were not in a partnered relationship, 4 were either younger than 45 years of age or older than 65 years, and 1 did not read and write in English. Of the 64 women who met criteria and were mailed a study packet, 57 (87.7%) returned completed study packets.

See Table 1 for demographic characteristics and Table 2 for the condition-specific characteristics of the participants in this study. Approximately half of the women reported that their primary form of urinary leaking was stress UI and that they had been living with symptoms an average of 8 years. Approximately half of the women had discussed UI symptoms with their health care providers, fewer had discussed treatment options, and the majority had not received treatment for UI. All of the partners in this study were male. Most of the women had discussed UI with their partners, and most had been sexually active in the

previous 6 months. The majority reported having experienced urinary leaking during sexual activity. Women's scores on the PISQ-12 averaged 31.5, 95% CI [29.43, 33.57], falling significantly below PISQ-12 scores of $40 + 4.2$ for women without UI. The women in this study, therefore, demonstrated statistically poorer sexual function than might be expected in the general population.

UI Symptom Severity

The average score on the ISI fell in the moderate symptom severity category (Table 3), and each symptom severity category was fairly well represented for the sample size. No significant correlations were found between women's UI severity scores on the ISI and their scores on measures of self-concept/emotional health or measures of the intimate relationship, including relationship satisfaction (Table 4). The length of time women reported living with UI was not significantly correlated with ISI scores ($r_s = .172$, $p = .209$, $n = 55$). Symptom severity was not significantly correlated with scores on the PISQ-12 ($r_s = -.143$, $p = .294$, $n = 56$).

Psychosocial Factors and Relationship Satisfaction

The average score on the CSI was just above the cut point of 13.5 for distress in the relationship, with 44% of the women ($n = 25$) scoring below 13.5, indicating distress in the relationship (Table 3). Women's scores on the HADSD indicated predominately normal (72.7%) or mild (23.6%) depressive symptom severity. Women's scores on the HADSA were distributed across all categories of symptom severity for anxiety, with the mean score slightly above normal for anxiety level. Inspection of the histograms of sexual quality of life scores demonstrated a fairly broad distribution pattern across the possible range of scores.

Statistically significant correlations of medium to large effect size were found among all measures of women's self-concept/emotional health (SES, BIS, HADSA, HADSD) and relationship (SQLF, CICS), with the exception of the association of the CICS with the SES (Table 4). Poorer scores on all six psychosocial measures were significantly associated with poorer relationship satisfaction. Poorer body image, elevated anxiety, and mild depressive symptoms were significantly associated with poorer communication regarding UI symptoms and with poorer sexual quality of life.

Psychosocial Factors as Predictors of Relationship Satisfaction

Due to the number and degree of statistically significant associations among the study variables, standard multiple regression analysis was performed as a preliminary exploration for possible contributions of women's self-concept/emotional health and relationship variables to the variance in scores on the CSI. With six self-concept/emotional health and relationship variables entered simultaneously as predictors for women's scores on the CSI, total variance explained in CSI scores by the six predictor variables was 55.9% ($F(6, 47) = 9.930$, $p < .001$, $R^2 = .559$, adjusted $R^2 = .503$) with SQLF uniquely explaining 18.7% and HADSD uniquely explaining 8.7% of the variance in CSI scores (Table 5). Of note, the women's scores on measures of self-esteem, body image, anxiety, depression, and incontinence-related communication were significantly associated with their scores on sexual quality of life.

Discussion

Despite ACOG's recommendation (2015) for women's health providers to screen all women for UI, 46% of the participants in our study had not discussed their UI symptoms with their health care providers. Unfortunately, our results were consistent with prior research. For example, Melville, Newton, Fan, and Katon (2006) surveyed 1,160 women with self-reported UI and found that 50% had not reported their symptoms to their providers. Morrill et al. (2007) found that of 4,291 women with UI, 39% had not discussed their symptoms with a health care professional. Our findings were disappointing with regard to moving toward achieving the goal of universal screening for UI.

When we designed this study, we were hoping to find quantitative support for the psychosocial benefits of early identification of UI. The primary outcome measure, relationship satisfaction, was chosen because we were interested in that most critical attribute of a couple coping with the symptom demands of a chronic health condition. In our experience, women who have questions about the timing and type of UI treatment options often ask about the potential effect on their intimate relationships. Although Yip et al. (2003) reported significantly poorer relationship satisfaction scores for women with UI than for women without UI, the possible association between UI symptom severity and relationship satisfaction had not, to our knowledge, been investigated. We were unable to demonstrate an association between UI symptom severity and women's relationship satisfaction in this study.

We also found no support for any statistically significant associations among UI symptom severity and any of the other psychosocial factors we postulated might be affected by chronic UI symptom management. Self-esteem, body image, sexual quality of life, and communication between women and their intimate partners have been reported by qualitative researchers as major themes evident when women talk about the effects of living with chronic UI (Coyne et al., 2007; Nicolson et al., 2008), although an analysis of the degree of association of these psychosocial factors with symptom severity and with each other was lacking in the literature. Research teams analyzing data from large population studies have reported significant associations between UI symptom severity and depression or anxiety (Felde et al., 2012; Melville, Delaney, Newton, & Katon, 2005). Poor sexual function for women with UI has been documented in the literature, and the women in our study also scored low on sexual function. Finding a consistent association between UI symptom severity and sexual function has been challenging for researchers, and our study proved to be no exception.

The lack of significant statistical associations among UI symptom severity and the study measures may have been due to sample size constraints and sample characteristics (predominantly White, college educated, and employed outside the home). The possibility remains, however, that UI symptom severity either does not play a significant role in psychosocial health or has a small effect on psychosocial health. How women internalize the meaning of UI and how UI affects their intimate relationship, if at all, might be more dependent on the presence or absence of symptoms than on symptom severity.

To our knowledge, ours is the first study investigating associations among UI symptom severity and self-esteem, incontinence-related body image, depression, anxiety, incontinence-related communication, sexual quality of life, and relationship satisfaction. Our study provides new support for a more detailed psychosocial assessment when screening women for the presence of UI. Of particular interest were the significant associations found between relationship satisfaction and all of the psychosocial variables in our study. Further research is needed to explore the temporal relationships of these psychosocial variables and the effect of UI on midlife women's intimate relationships from the perspective of women and their partners.

Strengths and Limitations

Strengths of this study include the use of validated and reliable instruments to measure concepts purported to be factors affected by living with a chronic condition based on our theoretical framework or specifically reported in qualitative research studies by women who live with UI. There was a strong representation of Hispanic women in this study. Our community-based recruitment strategy resulted in a significant number of participants who had not discussed their symptoms with a provider, thus offering a unique view into the effects of managing UI on psychosocial health and intimate relationship satisfaction.

Nonprobability sampling, small sample size, demographic characteristics of the participants, and English fluency limit the ability to generalize the findings of this study. This last limitation is noteworthy because of the large population of Spanish-speaking women in the recruitment area who likely did not have the opportunity to participate in this study. Further exploration of UI and its effect on the intimate relationship among non-English-speaking women is crucial for the development of an inclusive and holistic approach in women's health care. Women from the African American and Asian communities were under-represented, as were women from a diverse religious background. The sample size limited the ability to detect potentially significant small effect size associations ($< .35$) of the psychosocial variables with UI symptom severity. Further research is needed to encompass a larger, more diverse participant population. Community-based recruitment may have resulted in sample bias in terms of who might have been likely to respond to posted fliers or online advertisements and therefore participate in a research study on such a sensitive topic as UI.

The demonstrated correlations among self-concept and relationship variables do not imply cause and effect and cannot be interpreted as such. Implications of the statistically significant correlations found between the measures of self-concept and quality of the intimate relationship are offered as suggestions for future inquiry or assessment of possible outcomes as women and their partners collaboratively cope with UI symptom management. Further research is needed to follow a larger number of women over time in order to monitor psychosocial assessments as symptoms progress or as women cope with ongoing symptom management.

Implications for Clinical Practice

This study supports the importance of screening midlife women with UI for possible effects on their intimate relationship and their psychosocial health. Asking women if they are experiencing UI symptoms, as recommended practice by ACOG, is a critical first step, as many women do not bring up the topic during a health history. We propose that the presence of UI, and not just the severity of symptoms, warrants an assessment of the woman's psychosocial health.

Conclusion

The findings of this research offer nurses and nurse practitioners further insights into the possible associations among psychosocial factors that might affect the ability of intimate, midlife couples to cope with UI. Regardless of UI symptom severity, significant correlations were found among measures of self-concept/emotional health (self-esteem, body image, anxiety, and depression), relationship (sexual quality of life, and incontinence-related communication), and relationship satisfaction. Further research exploring the contributions of poor sexual quality of life and mild depressive symptoms to relationship satisfaction is warranted.

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Callouts

1. Midlife women with urinary incontinence may face significant psychosocial challenges to intimate relationships.
2. Regardless of the severity of urinary incontinence symptoms, measures of midlife women's self-concept and relationship factors were significantly correlated with each other and with relationship satisfaction.
3. Consider assessment of sexual quality of life and depressive symptoms when midlife women report urinary incontinence, as these are possible contributors to poor relationship satisfaction.

Table 1
Demographic Characteristics of Participants (N = 57 women)

Characteristic	<i>M</i> ± <i>SD</i>	<i>n</i>	%	Characteristic	<i>n</i>	%
Age in years	54.9 ± 5.9					
Years together (<i>n</i> = 53)	21.3 ± 12.3					
Relationship status				Occupants in home		
Married		47	82.5	Couple only	23	40.4
Living together		9	15.8	Child(ren)/others	32	58.2
Joint annual income (\$)				Education level		
25,000		6	10.5	High school/GED	13	22.8
26 – 50,000		10	17.5	Associate degree	11	19.3
51 – 75,000		7	12.3	4-year college	12	21.1
76 – 100,000		13	22.8	Graduate degree	21	36.8
101 – 150,000		10	17.5	Employed (<i>n</i> = 55)	37	67.3
> 150,000		11	19.3	Religious affiliation		
Race/ethnicity				Catholic	18	31.6
Hispanic/Latina		12	21.1	Protestant	14	24.6
White		41	71.9	Evangelical	10	17.5
African American		1	1.8	Jewish	1	1.8
Asian		1	1.8	Unitarian/Universalist	2	3.5
> 1 heritage		2	3.4	No affiliation	12	21.1

Table 2
Participant Responses to Condition-Specific Questions (N = 57 women)

Characteristic	<i>M ± SD</i>	Min-Max	<i>n</i> (%)	%
Years lived with UI symptoms (<i>n</i> = 55)	7.9 ± 7.1	1 – 30		
Number of times wake to void	2.0 ± 1.4	0 – 6		
Type of UI reported:				
Stress			29	50.9
Urgency			15	26.3
Mixed			13	22.8
BMI category (<i>n</i> = 53):				
Normal weight (BMI, 18.5 – 24.9 kg/m ²)			19	35.8
Overweight (BMI, 25 – 29.9 kg/m ²)			19	35.8
Obese (BMI ≥ 30 kg/m ²)			15	28.3
Discussed UI with partner			42	73.7
Discussed UI with provider			32	56.1
Provider discussed treatment options			24	42.1
Treatment received for UI			11	19.3
Pelvic organ prolapse			10	17.5
Fecal incontinence of solid stool (<i>n</i> = 56)			6	10.7
Sexually active in previous 6 months			44	77.2
Leaked urine during sexual activity (<i>n</i> = 56)			39	69.6

Note. UI = urinary incontinence; BMI = body mass index

Table 3
Study Instruments With Descriptive Statistics and Reliability Estimates (Cronbach's α)

Instrument	<i>n</i>	<i>M</i>	95% CI	<i>SD</i>	Cronbach's α
Incontinence Severity Index	57	5.75	4.92, 6.59	3.14	—
Mild	7				
Moderate	32				
Severe	11				
Very severe	7				
Couples Satisfaction Index	57	13.63	12.26, 15	5.17	.970
Self-Esteem Scale	57	21.98	20.5, 23.47	5.59	.908
Body Image Scale	56	8.98	7.4, 10.56	5.91	.894
Hospital Anxiety and Depression Scale – Anxiety	55	7.80	6.7, 8.9	4.07	.867
Hospital Anxiety and Depression Scale – Depression	55	4.75	3.76, 5.74	3.66	.825
Sexual Quality of Life – Female	57	60.51	53.2, 67.82	27.55	.959
Couples' Illness Communication Scale	56	13.11	12.05, 14.16	3.94	.841

Table 4
Spearman Correlation Coefficients Among Urinary Incontinence Symptom Severity, Self-Concept/Emotional Health Factors, Relationship Factors, and Relationship Satisfaction

	ISI	SES	BIS	HADSA	HADS	SQLF	CICS
ISI	—						
SES	-.009	—					
BIS	.085	-.506***	—				
HADSA	.081	-.674***	.626***	—			
HADS	.154	-.683***	.594***	.752***	—		
SQLF	-.137	.400**	-.594***	-.549***	-.614***	—	
CICS	.087	.165	-.419**	-.395**	-.480***	.510***	—
CSI	-.164	.402**	-.451***	-.408*	-.619***	.705***	.353**

Note. ISI = Incontinence Severity Index; SES = Self-Esteem Scale; BIS = Body Image Scale; HADSA = HADS Anxiety; HADS = HADS Depression; SQLF = Sexual Quality of Life Female; CICS = Couples' Illness Communication Scale; CSI = Couples Satisfaction Index.

* $p < .05$ level.

** $p < .01$ level.

*** $p < .001$ level.

Table 5
Exploratory Standard Regression Model with Six Variables as Predictors of Participants' Relationship Satisfaction

Predictors	<i>b</i>	95% CI	β	<i>t</i>	<i>p</i>	Semi-partial	Tol
SES	.005	-.290, .300	.005	.03	.973	.003	.373
BIS	.046	-.178, .270	.053	.41	.682	.040	.579
CICS	-.126	-.447, .196	-.096	-.79	.436	-.076	.630
HADSA	.386	-.027, .799	.303	1.88	.066	.182	.360
HADSD	-.730	-1.211, -.249	-.517	-3.05**	.004	-.295	.326
SQLF	.113	.062, .163	.600	4.46***	.000	.432	.518

Note. CI = confidence interval; CSI = Couples Satisfaction Index; SES = Self Esteem Scale; BIS = Body Image Scale; CICS = Couples' Illness Communication Scale; HADSA = HADS Anxiety; HADSD = HADS Depression; SQLF = Sexual Quality of Life Female.

* $p < .05$ level.

** $p < .01$ level.

*** $p < .001$ level.