Published in final edited form as:
J Immigr Minor Health. 2011 December ; 13(6): 1110–1115. doi:10.1007/s10903-010-9383-z.

Urinary Incontinence among older Mexican American men: Risk factors and psycho-social consequences

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Abstract

Extant literature on Urge Urinary Incontinence (UUI) focuses on women and non-Hispanic White and little is known about ethnic minority men. We analyzed 700 Mexican-American men aged 75 and older from the fifth Wave (2004/5) of the Hispanic Established Population for the Epidemologic Study of the Elderly. Logistic regression analyses examined risk factors for self-reported UUI and the impact of UUI on mental health and social support. Twenty-nine percent reported having difficulty holding their urine until they could get to a toilet. Men with more co-morbid conditionsand men with prostate problems were more likely to report UUI symptoms. Men with UUI were less likely to report having a confidant and had a higher risk of high depressive symptoms. This study is the first to examine risk factors for and consequences of self-reported UUI among older Mexican-American men using a large community-based survey.

Keywords

Urge urinary incontinence; Mexican-Americans; Male; Elders

INTRODUCTION

Urinary incontinence is a common health problem of old age across the world andhas significant social,psychological, economic and clinical implications. Involuntary loss of urine affects over 15 million persons in the United States (1), approximately 30–40% of the population aged 75 and over (2). Urinary incontinence can have a devastating impact on quality of life, and can affect the physical, social and psychological aspects of individuals' lives (3–5). Urinary incontinence is associated with urinary tract infections, skin breakdowns, falls, fractures and is a prognostic indicator of mortality (6–8). It can also impact their quality of life, due to decreases in psychological and social well-being (6;7). Additionally, urinary incontinence represents an economic burden. In the United States the economic cost of urinary incontinence has been estimated at $19.5 billion (year 2000 dollars)(9).

It is important to note that urinary incontinence is not a normal part of aging, but rather a consequence of physiological changes. Degenerative changes associated with age combined

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with certain medical conditions therefore predispose many older adults to suffer this condition. Urinary incontinence may vary by gender because aging-related conditions affect the lower urinary tract differently for men and women. In men, the bladder contractibility and capacity decrease and the prostate tends to enlarge with age, which are associated with becoming incontinent (7). Other factors associated with UUI among men include fecal incontinence, arthritis, stroke, limitations in activities of daily living, memory problems and the use of narcotics, laxatives and diuretics (for an overview, see references 7,10,11).

There are several types of urinary incontinence, including urinary urge incontinence (UUI), which is considered the most important type of incontinence among older adults(12)and impacts quality of life more than other types of urinary incontinence (13). UUIis defined as the involuntary leakage of urine, which can be either accompanied by or be directly preceded by urgency (14). Patients generally describe UUI as inability to hold their urine until they reach a toilet (14).

Although UUI among older adults is a well researched topic, a majority of the extant literature on this has focused on women and Non-Hispanic Whites. Little is known about UUI differences among older males and even fewer studies stratify such results by ethnicity. Although the prevalence of UUI is significantly lower among men than women, it is still a significant issue for men. Some research has examined risk factors for UUI among men, but few studies have examined the social consequences of the syndrome among men (for a review of the literature, see Farage, Miller, Berardesca and Maibach, 2008 (15). No research to date has examined risk factors of UUI and its social consequences among older Hispanic men specifically, despite their projected growth to nearly 17% of the US population by 2050(16). It is thus imperative to fill this gap in the literature. Below we examine the prevalence, risk factors, and consequences of self-reported UUI, among the large and rapidly growing population of older Mexican American men.

METHODS

Sample

This study selected males from the fifth Wave (2004/5) of the Hispanic Established Population for the Epidemiological Study of the Elderly (Hispanic EPESE),an on-going longitudinal community survey of the health and health care needs of Mexican American elders. The University of Texas Medical Branch (UTMB) Institutional Review Board (IRB) first approved the study on February 21, 1992 (IRB No. 92-85). Since that date, the study has been approved annually under continuing review procedures.

Area probability sampling was used to obtain the baseline sample in 1993/1994 of 3,050 Mexican Americans aged 65 and over from five Southwestern states (Texas, New Mexico, California, Arizona and Colorado) (For more information about the sampling methodology, please see Markides et. al 1999(17). Follow up surveys were conducted every two to three years. At Wave 5 in 2004–2005 there were 1,167 surviving subjects from the original cohort who were aged 75 and over. A new cohort of 902 Mexican Americans of the same age group was added to the sample from the five Southwestern states using similar sampling procedures as were used at baseline. This resulted in a combined cohort of 2,069 Mexican Americans aged 75 and older.

Of the 2,069 persons in Wave 5, 796 were males. After excluding men with a urinary catheter(4), those missing information on UUI (38), and those missing information on at least one of the other covariates, there were 700 men in the analytic sample. The excluded cases were significantly different on several variables that may increase the risk for urinary

incontinence; they were older, had a lower Mini Mental Status Exam (MMSE) score, had more ADL limitations and were more likely to be obese.

Measures

Self-reported UUI was measured by the question: "how often do you have difficulty holding your urine until you can get to a toilet". Such a question has been used in the literature to indicate urge incontinence, including among Mexican Americans (14,18). The response was a 5-point Likert-type item: never, hardly ever, some of the time, most of the time, or all of the time. All persons that responded either "some of the time" or "most of the time" were coded as having self-reported UUI.

Risk factors of self-reported UUI used in the analyses included sociodemographic and health variables. Sociodemographic variables examined were whether the person took the survey in English or in Spanish (as a proxy for level of acculturation), marital status (married versus not married), education (sixth grade or higher) and age (continuous). Physical health variables that have been previously reported as risk factors for urinary incontinence included measured obesity (BMI >30), having prostate problems (self-reported)and number of Activities of Daily Living (ADL) limitations (10). Having prostate problems was determined by a question that asks men in the study whether a doctor or other health care professional had ever told them that they had prostate problems. ADL limitations included bathing, dressing, eating, transferring from a bed to a chair and using the toilet. Additionally, the models controlled for co-morbidities, which were captured by creating a count of the number of medical conditions. Respondents were asked whether a Doctor had ever told them they had any the following: a hip fracture, other fracture, heart attack, stroke, hypertension, cancer, arthritis or diabetes. Additionally, whether or not the respondent had seen a physician in the past year was controlled for in the model. Cognitive function was measured by the total Mini Mental Status Exam (MMSE) (19)score, used as a continuous variable (range 0–30), with higher scores indicating better cognitive function.

The psycho-social consequences of self-reported UUI were measured with the Center for Epidemiological Studies Depression Scale (CES-D)and an item asking if the respondent had a confidante. The CES-D asks respondents to report on a scale from 0 (never) to 3 (most of the time) how often they had certain feelings in the past week. The responses to the 20 questions are then summed to create a scale ranging from 0 to 60, with higher scores indicating higher depressive symptomatology. This measure was dichotomized due to the highly skewed distribution of the variable. We used the standard cut off point of 16, which may be related to clinical depression (20–21). Following previous research, having a confidante was used to approximate social support(22). Having a confidante was measured by whether respondents said that they had family or friends to talk to about their deepest problems some or most of the time.

Analytic approach

Sample descriptive data were stratified by presence of self-reported UUI and significance was determined using t-tests for continuous variables or chi-square tests for categorical variables. Three separate logistic regression models were used. First, logistic regression analyses were used to examine risk factors for self-reported UUI, including psychosocial, demographic and health measures. Additional logistic regression models were used to identify the psycho–social correlates of self-reported UUI, including negative mental health outcomes (CES-D score >16) and having someone to talk to about their deepest problems. Odds ratios are reported rather than regression coefficients because they provide a more intuitive understanding of the statistical relationships. Thus, the logistic regression models presented in tables 2-4 present the odds of reporting UUI (table 2), having high depressive

symptoms (table 3) or having a confidante (table 3), controlling for other covariates. All data analyses were conducted using the Survey procedures in SASR 9.2 (23)to adjust for the complex sample design.

RESULTS

Table 1 shows the descriptive characteristics of the sample, stratified by whether or not the respondent reported UUI. Nearly one-third (29%) of respondents reported having difficulty holding their urine until they could get to a toilet at least some of the time. Respondents with self-reported UUI were significantly less likely to have a confidante and more likely to report high depressive symptomatology compared to men that did not report having UUI. Males with self-reported UUI were also more likely to have visited a physician in the last year, to report prostate problems, and to have a higher mean number of chronic conditions. Finally, respondents with self-reported UUI were significantly older and had a lower mean score on the MMSE compared to respondents without the condition.

Table 2 presents results from the logistic regression analyses predicting self-reported UUI. Men with more co-morbid conditions were more likely to report having problems holding their urine (OR. 1.31). Similarly, men with prostate problems were more than twice as likely to report UUI compared to those without prostate problems (OR=2.18). The odds of self-reported UUI increased for each additional ADL limitation (OR=1.16) as well as with each year increase in age (OR=1.05).

Table 3 shows that the risk of having high depressive symptoms was much higher for men with self-reported UUI than men without (OR=2.92), controlling for a number of relevant correlates. This model also showed that not being married, having ADL limitations, having prostate problems and lower MMSE scores were also significant predictors of high depressive symptomatology. Similarly, Table 4 indicates that men with self-reported UUI were less likely to report having a confidante (OR=0.51) compared to men not reporting UUI, after controlling for additional factors. The only additional covariates that remained significant in the model predicting having a confidante were marital status and number of ADL limitations. Men who were married were more likely to report having a confidante. Those reporting a higher number of ADL limitations were less likely to have a confidant.

DISCUSSION

We found that self-reported UUI is highly prevalent among Mexican men aged 75 and over, with nearly one-third reporting having difficulty holding their urine. General population prevalence estimates vary widely due to a lack of standardized measures (24)and, very few studies have broken prevalence rates down by ethnicity and age, making it difficult to compare our prevalence findings to previously cited estimates. A previous analysis on urinary incontinence prevalence in the United States showed that the overall prevalence of urinary incontinence among men aged 60 and older (regardless of ethnicity) was 17%(25). The same study examined prevalence rates for Mexican American men separately and reported a prevalence of only 14% in this group (25). Rates were not broken down for those aged 75 and older.

The predictors of self-reported UUI in this population were consistent with those reported in previous literature on urinary incontinence in older males. Factors associated with self-reported UUI included increased numbers of co-morbidities and number of ADL limitations, having prostate problems and age. We also found that self-reported UUI has some of the same potentially devastating effects on quality of life for older Mexican American men, as have been reported in studies of other population groups (1;13). Self-reported UUI was

associated with lower odds of having a confidante, possibly due to the stigma associated with the condition or the embarrassment related to it(4). Additionally, the fear and anxiety about going outside of the home because of the frequent need to use a toilet may cause individuals to limit interaction with family and friends or avoid social contacts entirely (2;26). However, such detailed measures on social interaction were not available in this survey.

Our results also show that men with self-reported UUI were significantly more likely to report high depressive symptoms compared to those without self-reported UUI, after controlling for other correlates of depressive symptomatology. One possible explanation is that having UUI causes problems with self-esteem and can cause mental anguish. Studies of women have shown that women with urinary incontinence report higher anxiety and altered quality of life due to the urinary symptoms(2). Assuming self-reported UUI renders the same feelings of mental anguish in men, it could explain their increased likelihood of reporting high depressive symptoms. Such feelings may be particularly pronounced in the Mexican American culture, where attitudes associated with the male role(27), may increase feelings of anxiety and distress.

Limitations

This study has several limitations. First, the sample excluded cases with missing values, which were significantly different from those included in the analyses. Second, the question used to measure self-reported UUI does not evaluate clinical aspects, and there may be bias associated with self-report. We were unable to determine the length of time the condition existed, and the results may have been different for persons depending on the duration of the condition. Third, using self-reported measures of possible risk factors related to UUI, such as prostate problems, could result in biased estimates. Given that reports of such conditions are given only by men that have been seen by a health professional, this is likely to result in an undercount of prostate problems and an underestimate of the association between prostate problems and UUI.

Finally, the outcome measures (depressive symptoms and having a confidante) had some limitations. Although the CES-D is a commonly used tool to measure depressive symptoms, it is not a diagnostic tool for clinical depression. However, increased depressive symptoms observed in men with self-reported UUI highlight the psychological effect this condition can have and underscores the importance of developing appropriate interventions. Having a confidante was measured with only one item asking respondents if they had someone to talk to about their problems, and a majority (90%) of the sample responded that they did have someone to talk to about problems. Although previous research has used this measure as a proxy for social support and research has demonstrated that having a confidante is a key element in social support (28), it does not capture the intricacy involved in the concept of social support. Additionally, to date there is contradicting literature on whether depressive symptoms occur as a cause of incontinence, or vice versa (2;29). Some research has found evidence that a decline in serotonin function (commonly seen in depression) can impact bladder regulation and contribute to bladder over activity (30).

Conclusion

This study reported a high prevalence of self-reported UUI among older Mexican American men. It is essential that clinicians be aware of the heightened risk among this group of elders, and appropriate intervention stargeted towards them. One of the unique aspects of the Hispanic population is the high prevalence of non-English speakers, making interventions that are culturally and linguistically sensitive imperative. This study also found that the consequences of self-reported UUI include both higher depressive symptomatology as well

as increased risk of not having a confidante. Such findings may be useful in developing clinical interventions for this population. Counseling individuals and family members about UUI and its consequences may reduce some of the embarrassment and stigma associated with it, which could increase the likelihood of individuals reporting those problems to physicians, leading to better treatment. Additionally, creating training courses for caregivers about UUI management could greatly decrease the stress associated with care giving for a person with the condition. Finally, general public education on the nature of the condition and the associated personal, social, and economic costs will be vital for encouraging the development of effective public policy supporting research and treatment efforts.

Acknowledgments

This research was supported by grants from the National Institutes of Health, the National Institute on Aging and the National Institute on Disability and Rehabilitation Research (5 T32 AG000270-10,R01-AG010939 and H133PO40003), and the UCLA Network for Multicultural Research funded by the Robert Wood Johnson Foundation.

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Table 1

Descriptive characteristics of Mexican American men 75 years and older

	Not Incontinent	Incontinent
Percent with a confidante	92.3	85.8**
Percent with CES-D >16	9.2	28.9***
Percent Married	66.6	66.6
Percent who visited their MD in the past year	84.5	92.8**
Percent obese	20.0	19.4
Percent with prostate problems	30.3	49.0***
Percent who took the survey in Spanish	79.2	71.3
Mean number of ADL limitations Range	0.6 (0–7)	1.3*** (0–7)
Mean Age Range	80.8 (75–95)	82** (75–97)
MMSE Score Mean Range	22.5 (0–30)	20.8*** (0–30)
Number of chronic conditions Mean Range	1.9 (0–5)	2.5*** (0–8)
Hip fracture	4.1	5.3
Other fracture	15.7	24.6*
Heart Attack	16.8	27.1
Stroke	10.6	20.9**
Hypertension	61.9	70.5
Cancer	6.6	9.3
Arthritis	47.5	60.1*
Diabetes	30.2	37.8
Total N (weighted)	487 (71%)	201 (29%)
Total N (unweighted)	521	179

Note: Data weighted

*** p≤.001;

** p≤.01;

* p≤.05

Table 2

Logistic Regression analysis predicting self-reported UUIamong Mexican American men aged 75 and older

		95% Wald		
	Odds Ratio	**Confidence Limits**		**P-value**
Married	0.88	0.58	1.33	0.536
Number of Doctors visits	1.61	0.86	3.00	0.138
Took survey in Spanish	0.60	0.38	0.96	0.032
Obese	1.00	0.61	1.66	0.993
Co-morbid conditions	1.31	1.16	1.47	<.0001
Number of ADL limitations	1.16	1.06	1.26	0.001
Prostate problems	2.18	1.52	3.14	<.0001
Age	1.05	1.01	1.09	0.015
MMSE score	0.97	0.95	1.00	0.054

Note: Data weighted

Table 3

Logistic Regression analysis predicting high depressive symptomatology among Mexican American men aged 75 and older

	Odds Ratio	95% Wald Confidence Limits		P-value
Self-reported UUI	2.92	1.73	4.94	<.0001
Married	0.37	0.23	0.58	<.0001
Number of Doctors Visits	0.75	0.39	1.43	0.383
Took survey in Spanish	0.74	0.38	1.46	0.390
Obese	0.74	0.42	1.31	0.301
Co-morbid conditions	1.09	0.89	1.34	0.402
Number of ADL limitations	1.25	1.14	1.38	<.0001
Prostate problems	1.83	1.18	2.83	0.007
Having a confidante	0.52	0.21	1.3	0.161
Age	0.97	0.92	1.02	0.174
MMSE score	0.93	0.9	0.97	0.000

Note: Data weighted

Table 4

Logistic Regression analysis predicting having a confidante among Mexican American men aged 75 and older

		95% Wald		
	Odds	**Confidence Limits**		**p-value**
Self-reported UUI	0.51	0.30	0.86	0.012
Married	2.04	1.24	3.35	0.005
Number of Doctors Visits	0.93	0.40	2.15	0.856
Took survey in Spanish	0.70	0.27	1.86	0.475
Obese	0.60	0.34	1.08	0.088
Co-morbid conditions	0.92	0.76	1.11	0.364
Number of ADL limitations	0.84	0.70	1.00	0.048
Prostate problems	0.96	0.59	1.57	0.867
CES-D Score	1.03	1.00	1.06	0.067
Age	0.94	0.88	1.01	0.073
MMSE score	0.99	0.95	1.02	0.551

Note: Data weighted