GOCM Gynecology and Obstetrics Clinical Medicine

Current state and influencing factors of social alienation in patients with stress urinary incontinence

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To cite: Xing L, Bai L, Li S, *et al*. Current state and influencing factors of social alienation in patients with stress urinary incontinence. *Gynecology and Obstetrics Clinical Medicine* 2024;**4**:e000018. doi:10.1136/gocm-2024-000018

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Received 28 February 2024
Accepted 18 March 2024

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ABSTRACT

Objective To understand the current level of social alienation among patients with stress urinary incontinence (SUI) and analyse the influencing factors to provide a foundation for better clinical support for patients' reintegration into society.

Methods We conducted a comprehensive survey and analysis involving 230 patients with SUI using a general information questionnaire, a general sense of alienation scale and a social impact scale.

Results The general sense of alienation scale score of patients with SUI was 25.43±13.994, while the social impact score was 39.25±12.167. Multiple linear regression analysis revealed that marital status, primary caregiver, presence of concurrent illnesses and severity of urinary incontinence were the key influencing factors contributing to SUI-related social alienation ($p<0.05$).

Conclusion Patients who suffered from SUI experienced a moderate level of social alienation. Tailored interventions are recommended, especially for individuals who are divorced, rely on friends or relatives as primary caregivers, have concurrent illnesses or experience severe SUI, to enhance their social integration.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Stress urinary incontinence (SUI) is called 'social cancer', which brings great troubles to patients' daily life and is attracting more and more attention, and we need to focus on the psychological state of this population.

WHAT THIS STUDY ADDS

⇒ This article investigates patients with SUI using the 'General Alienation Scale' to discuss and analyse their current conditions and influencing factors.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ By analysing the influencing factors of social alienation in patients with SUI, this paper provides a theoretical basis for medical workers to more accurately identify and predict patients with SUI and provide personalised health education and nursing measures.

INTRODUCTION

Stress urinary incontinence (SUI) is the most common type of urinary incontinence in women. Its primary clinical manifestation is the involuntary leakage of urine from the urethral opening when intra-abdominal pressure increases, such as during activities like sneezing, coughing, laughing or physical exertion, and can have a negative impact on the physical and psychological well-being of affected individuals.[1] In China, the prevalence of SUI among adult women is as high as 18.9%,[2] significantly impacting their daily lives. This condition increases their psychological burden and leads to social alienation, causing them to withdraw from social activities.[3] Social alienation arises when individuals fail to engage effectively with the outside world, leading to unfulfilled social desires and subsequent negative emotions and behaviours, such as loneliness, helplessness, indifference and rejection.[4] Emotional and psychological distress can impact hospital attendance and compliance of patients with urinary incontinence, thereby affecting the effectiveness of treatment and the overall prevention and control of such conditions. Additionally, a sense of social isolation can heighten psychological barriers for patients, potentially leading to unexpected risks such as suicide.[5 6] Currently, research on social alienation has primarily focused on patients with cancer, and there is a lack of relevant studies concerning patients with SUI. Social alienation not only affects the physical and psychological health of the affected individual but can also result in family or societal dysfunction.[7–9] With various pressures and challenges from life, work and illness, patients with SUI often exhibit avoidance behaviours in social situations. This survey aims to analyse the current status of social alienation and its influencing factors in patients with SUI, providing intervention measures to facilitate patients' integration into society.

METHODS

Research subjects

We used a convenience sampling method to select female patients with SUI who sought medical care at our hospital's obstetrics and gynaecology department from December 2022 to February 2023 as research participants.

Inclusion criteria

Participants had to meet the diagnostic criteria for SUI[1] and provide informed consent to participate in this survey voluntarily. Patients should have undergone a standard questionnaire, specialist physical examination, 1-hour pad test or urodynamic examination. Patients must not have undergone pelvic organ prolapse surgery.

Exclusion criteria

Individuals with mental disorders or those unable to accurately express their personal thoughts were excluded.

Research tools

General information questionnaire

A general information questionnaire was designed by the investigators and includes demographic information such as age, educational level, primary caregiver, economic status, place of residence, concurrent diseases and severity of SUI.

General Alienation Scale

Developed by Jessor[10] and translated and revised by Wu *et al*,[11] the General Alienation Scale (GAS) consists of 15 items across four dimensions: self-alienation (three items), other-alienation (five items), suspicion (four items) and meaninglessness (three items). Each item is rated from 'strongly disagree' to 'strongly agree', with scores ranging from 1 to 4 and with the total score ranging from 15 to 60. Higher scores indicate higher level of social alienation. The Cronbach's α coefficient for this scale is 0.816.

Social Impact Scale

The Social Impact Scale (SIS) was developed by Fife and Wright[12] in 2000 to measure the stigma experienced by patients with chronic disease and cancer. Pan *et al*[13] translated the SIS into a Chinese version in 2007, comprising 24 items across four dimensions: social exclusion (nine items), economic discrimination (three items), internal shame (five items) and social alienation (seven items). The scale employs a 4-point rating system: 1 for strongly disagree, 2 for disagree, 3 for agree and 4 for strongly agree, resulting in a total score ranging from 24 to 96. Higher scores indicate greater perceived social impact, which signifies a more severe stigma. The Cronbach's α coefficient for this scale is 0.853.

Data collection method

Before the survey, the purpose and significance of the research were explained to the participants. They were informed about the specific requirements for completing the questionnaire and provided informed consent. Patients were guided using standardised instructions, and the completed questionnaires were collected on the spot, with two individuals verifying the questionnaire's completeness.

Statistical methods

Data analysis was performed using SPSS V.26.0 software. Continuous data conforming to a normal distribution were expressed as mean±SD. Statistical tests including t-tests, analysis of variance, Pearson correlation analysis and multiple linear regression analysis were conducted at a significance level of α=0.05.

RESULTS

A total of 235 questionnaires were distributed, and 230 valid responses were collected, resulting in a response rate of 97.8%. The ages of the participants ranged from 36 to 86 years, with an average age of 54.55±10.674 years. For the GAS and SIS scores of patients with SUI, see table 1.

We analysed and compared the GAS scores in patients with SUI based on various demographic factors. These factors include differences in educational level, marital status, concurrent diseases, family per capita income, primary caregivers and severity of SUI. The observed differences hold statistical significance. Detailed results can be found in table 2.

Table 1 GAS and SIS scores of patients with SUI (N=230)

Items	Total score	Average score for different items
Total score for GAS	25.43±13.994	2.12±0.589
Other-alienation	8.28±4.590	2.00±0.773
Self-alienation	4.98±2.300	1.98±0.725
Suspicion	6.79±3.619	2.03±0.769
Meaninglessness	6.59±3.302	2.60±0.849
Total score for SIS	39.25±12.167	1.64±0.507
Social exclusion	15.20±8.078	2.13±0.645
Economic discrimination	6.06±2.430	2.34±0.627
Social alienation	12.19±6.554	2.16±0.591

GAS, general alienation scale; SIS, social impact scale; SUI, stress urinary incontinence.

Table 2 Comparative analysis of the GAS scores in patients with SUI with different demographic and disease characteristics (N=230)

Items	n	GAS	*F*/t	P value
Educational level			7.488	0.000
Middle school and below	77	25.43±13.994		
High school or junior college	70	21.39±13.341		
Undergraduate	64	28.80±16.182		
Master's and above	19	35.63±13.994		
Marriage status			10.410	0.000
Unmarried	16	13.00±12.858		
Married	182	24.97±12.750		
Divorced	27	35.85±16.781		
Widowed	5	25.80±6.573		
Concurrent disease*			12.910	0.000
Yes	71	30.27±13.713		
No	159	23.27±13.613		
Residential places				
Town	179	25.07±14.295	2.074	0.128
Urban–rural fringe area	14	32.71±8.166		
Countryside	37	24.41±13.743		
Household income per capita (¥)				
<2500	25	25.68±13.704	4.089	0.007
2500–4999	66	25.27±13.166		
5000–10 000	90	22.46±13.490		
>10 000	49	30.98±14.881		
Primary caregiver			4.198	0.006
Spouse	131	24.34±12.997		
Children	54	28.31±12.512		
Parents	23	19.04±16.213		
Relatives or friends	22	31.55±17.503		
Severity of SUI			47.682	0.000
Mild	58	5.84±7.459		
Moderate	85	26.02±4.593		
Severe	87	37.91±6.884		

*Concurrent disease refers to the presence of one or more of the following conditions: hypertension, diabetes, tumours, blood system diseases, immune system diseases, cardiopulmonary insufficiency, etc.
GAS, general alienation scale; SUI, stress urinary incontinence.

Additionally, we found a positive correlation between GAS and SIS in patients with SUI (r=0.146, p<0.05).

In multiple linear regression analysis, we used GAS scores as the dependent variable, the significant variables identified in the single-factor analysis, and social impact scale score as the independent variable in a multiple linear regression analysis (α_{in}=0.05, α_{out}=0.10). The results indicate that concurrent disease (0 for no, 1 for yes), marital status (with unmarried as the reference for dummy variables), primary caregiver (with a spouse as the reference for dummy variables) and severity of SUI (with mild as the reference for dummy variables) were entered into the regression equation. These variables collectively explained 68.3% of the total variation in social alienation (table 3).

DISCUSSION

Current status of social alienation and disease stigma in patients

In this survey, the GAS score of patients with SUI is 25.43±13.994 and the average item score is 2.12±0.589, indicating that patients with SUI tend to fall into the

Table 3 Multiple linear regression analysis of factors affecting GAS in patients with SUI (N=230)

Variable	β	SE	β'	t	P value
Constant	38.714	2.316	–	17.117	0.000
Concurrent diseases*	−3.172	1.213	−0.098	−2.812	0.005
Marriage status	−4.364	2.312	−0.101	−3.012	0.002
Primary caregiver	−2.254	1.115	−0.076	−2.061	0.039
Severity of SUI	−3.156	1.254	−0.312	−4.812	0.000

R^2=0.492, adjusted R^2=0.482, F=83.425, p<0.001.
*Concurrent disease refers to the presence of one or more of the following conditions: hypertension, diabetes, tumours, blood system diseases, immune system diseases, cardiopulmonary insufficiency, etc.
GAS, general alienation scale; SUI, stress urinary incontinence.

moderate range of GAS scores. This observation might be associated with the prevalent belief among most patients that urinary incontinence is not a disease and is thus often overlooked.[14] The scores in our study are lower than those reported by Hong for older women with urinary incontinence (42.94±9.57). This difference could be attributed to variations in the age of the study participants. In Hong's[15] survey, the average age of the participants was 65.25±10.21 years, which is higher than the participants in our study, who have an average age of 54.55±10.67 years. Elderly individuals, compared with middle-aged individuals, are relatively on the fringes of society, potentially experiencing more social alienation and higher levels of loneliness, contributing to elevated levels of social alienation.

In our survey, the SIS score of patients with SUI is 39.25±12.167, which is lower than the previously reported score of 55.38±8.21.[16] This divergence can be attributed, in part, to the fact that our study participants, with an average age of 54.55±10.67 years, are primarily unemployed or retired. As a result, they may be less concerned about self-image and view urinary leakage as an inevitable consequence of ageing.[17] In contrast, the survey by Wang and colleagues[16] involved individuals with an average age of 46.23±13.68 years, a stage of life marked by more social interaction, making them more susceptible to feelings of low self-confidence and social alienation.

The shame associated with illness is a significant psychological characteristic of patients dealing with a disease and can have considerable impact during the illness. Research has shown that the higher a patient's sense of shame, the more prominent their psychological issues and the lower their quality of life.[18] Therefore, healthcare professionals should have a deep understanding of the social alienation experiences of patients with SUI experiences with SIS. Approaching it from a positive psychology perspective, comprehensive team psychological therapies,[19] mindfulness-based stress reduction therapies[20] and other psychological measures can be employed to stimulate positive emotions, explore patients' inner potential, alleviate mental and physical stress, and reduce their level of social alienation.

Influencing factors of social alienation in patients with SUI

Marriage status

This survey reveals that divorced individuals exhibit the highest level of social alienation, while unmarried patients experience the lowest level. This finding is consistent with the results of a study conducted by Hao *et al*[21] that analysed why unmarried patients may tend to be younger and less burdened with spousal-related pressures. Consequently, their thought burdens are likely lighter, leading to lower levels of social alienation.

On the other hand, individuals who have experienced divorce often grapple with varying degrees of psychological frustration and a sense of loss due to the failure of their marriage. When they also have SUI, which involves privacy-related issues, their levels of social alienation tend to rise. Coping with illness is typically a shared responsibility in a marital context. The marital discord theory underscores the importance of a supportive and intimate relationship as a beneficial resource to help patients confront their illnesses and manage stress.[22] However, divorced patients lack the encouragement and companionship of a spouse and may adopt negative social attitudes, frequently remaining distant and evasive. This contributes to their relatively high levels of social alienation.

This highlights the importance of healthcare professionals actively bolstering patients' psychological well-being. Guidance on effective emotional regulation, deconstructing negative emotions and providing psychological counselling can all be instrumental in reducing their levels of social alienation.

Primary caregiver

In this survey, the level of social alienation is highest among patients whose primary caregivers are friends or relatives, while those whose caregivers are their parents exhibit the lowest level. This contrast may be because when primary caregivers are friends or relatives, patients, constrained by social expectations and the lack of an intimate relationship, may hesitate to express their true feelings. They may be unwilling to engage in deep conversations and display insecurity or low self-esteem when interacting with their

caregivers. This internalisation of shame contributes to an increase in social alienation. In contrast, when caregivers are parents, the bond of kinship and selfless love from parents tends to mitigate patients' worries and feelings of oppression. Parental support becomes a stabilising force, empowering patients to confront their condition with confidence, ultimately reducing their sense of social alienation. This underscores the importance of healthcare professionals thoroughly assessing patients' social support systems in clinical practice. An integrated care approach involving hospitals, communities and families can be employed to engage caregivers and provide patients with more care and companionship.[23] Encouraging patients to bravely communicate their inner feelings to their caregivers, rebuilding emotional connections and helping patients cope with the emotional distress, guilt and low self-esteem caused by urinary incontinence can gradually enhance their social adaptability.[24]

Other concurrent diseases

Urinary incontinence is one of the five major chronic diseases that pose a significant threat to women's physical and mental health.[25] Often colloquially referred to as 'social cancer', this survey indicates that patients with concurrent medical conditions tend to experience higher levels of social alienation. The combination of multiple health issues inevitably results in physical discomfort and heightened patient stress. This, in turn, leads to a severe lack of self-confidence, prompting them to withdraw from social interactions and become more introverted, ultimately elevating their levels of social alienation.

Whether it is other medical conditions or SUI, although people often shy away from discussing them to avoid embarrassment, research has shown that discussing one's illness can be a positive experience and serve as an emotional release.[26] Therefore, healthcare professionals should approach patients empathetically, actively listen and communicate effectively. Activities such as support group sessions or peer discussions can be organised to enhance patients' self-management capabilities.

Non-surgical treatments

Research has indicated a possible association between changes in pelvic floor muscles and the onset of SUI.[27] Non-surgical treatments can significantly alleviate the condition by strengthening pelvic floor muscles and enhancing urethral closure function. The 2017 version of the 'Guidelines for Diagnosis and Treatment of Female Stress Urinary Incontinence' by the Chinese Society of Obstetrics and Gynecology and the Subcommittee on Female Pelvic Floor Disorders strongly recommends non-surgical treatment as the primary approach for urinary incontinence patients.[2] This involves lifestyle interventions, pelvic floor muscle exercises, biofeedback therapy, electromagnetic stimulation and other treatments to alleviate patients' symptoms and reduce their levels of social alienation.

Furthermore, pregnant women are also a population that needs attention as pregnancy has been identified as a risk factor for pelvic floor dysfunction (PFD), with the incidence of SUI at 6–8 weeks post partum reported to be 25.7%.[28] Chinese expert consensus on primary prevention for PFD during pregnancy has recommended that through incorporation of exercise tolerance, obstetric considerations and personalised pregnancy exercise programmes, healthcare professionals can ensure the safety and health of pregnant women and their infants.[29]

CONCLUSION

The overall level of social alienation in patients with SUI is moderate and is influenced by marital status, primary caregivers, concurrent medical conditions and the everity of SUI. Healthcare professionals should conduct thorough assessments and follow-up care, focusing on promoting better communication and interaction with the outside world to reduce social alienation.

It is important to note that this survey only included patients with SUI from one hospital, which presents certain limitations and potential selection bias. Expanding the sample size in future research can further investigate the social alienation situation of patients with SUI.

Contributors LX, LB and SL performed the formal analysis, visualisation and original draft. LX, LB and SL contributed equally to this work and share first authorship. TC and XW performed the data curation and methodology. LL performed the conceptualisation. JG performed the review and editing. XL performed the supervision, project administration and was responsible for the overall content as the guarantor.

Funding The project was supported by Peking University People's Hospital Research and Development Funds (RDGS2022-12,2021-702).

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not required.

Ethics approval This study involves human participants and was approved by the Ethics Committee of Peking University People's Hospital (ethics number: 2021PHB449-001). Informed consent was obtained from all patients. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request. All data relevant to the study are included in the article or uploaded as supplementary information.

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REFERENCES

1 Kobashi KC, Vasavada S, Bloschichak A, *et al*. Updates to surgical treatment of female stress urinary Incontinence (SUI): AUA/SUFU guideline. *J Urol* 2023;209:1091–8.

2 Urogynocology subgroup,Chinese society of obstetrics and Gynocology, Chinese Medical Association. update of guideline on the diagnosis and treatment of female stress urinary Incontinence (2017). *Zhonghua Fu Chan Ke Za Zhi* 2017;52:289–93.
3 Grzybowska ME, Wydra D, Smutek J. Analysis of the usage of continence pads and help-seeking behavior of women with stress urinary Incontinence in Poland. *BMC Womens Health* 2015;15.
4 Xu F CC. Study on the status quo and influencing factors of social distancing of stroke Convalescent patients. *Chin Nurs Res* 2022;36:835–9.
5 Laugesen K, Baggesen LM, Schmidt SAJ, *et al*. Social isolation and all-cause mortality: a population-based cohort study in Denmark. *Sci Rep* 2018;8.
6 Courtin E, Knapp M. Social isolation, loneliness and health in old age: a Scoping review. *Health Soc Care Community* 2017;25:799–812.
7 Campo RA, Bluth K, Santacroce SJ, *et al*. A mindful self-compassion Videoconference intervention for nationally recruited posttreatment young adult cancer survivors: feasibility, acceptability, and Psychosocial outcomes. *Support Care Cancer* 2017;25:1759–68.
8 Azuero A, Benz R, McNees P, *et al*. Co-morbidity and predictors of health status in older rural breast cancer Survivors[J]. *Springerplus* 2014;3.
9 Howard AF, Tan de Bibiana J, Smillie K, *et al*. Trajectories of social isolation in adult survivors of childhood cancer. *J Cancer Surviv* 2014;8:80–93.
10 Jessor R. Problem-behavior theory, Psychosocial development, and adolescent problem drinking. *Br J Addict* 1987;82:331–42.
11 Wu S, Li YZ, Zhao XL, *et al*. Reliability and validity analyses of the generalized social alienation scale among the elderly. *J Chengdu Med College* 2015;10:751–4.
12 Fife BL, Wright ER. The Dimensionality of stigma: a comparison of its impact on the self of persons with HIV/AIDS and cancer. *J Health Soc Behav* 2000;41:50–67.
13 Pan A-W, Chung L, Fife BL, *et al*. Evaluation of the Psychometrics of the social impact scale: a measure of Stigmatization. *Int J Rehabil Res* 2007;30:235–8.
14 Perera J, Kirthinanda DS, Wijeratne S, *et al*. Descriptive cross sectional study on prevalence, perceptions, predisposing factors and health seeking behaviour of women with stress urinary Incontinence. *BMC Womens Health* 2014;14:78.
15 Hong XQ. Analysis of the current situation of social detachment and influencing factors of middle-aged and elderly female urinary Incontinence patients. *Pract Clin J Integ Trad Chin and Western Med* 2023;23.
16 Wang QJ, Wu MX, Du WN, *et al*. Study on the status of stigma and its influencing factors in pelvic floor dysfunction diseases. *Chin J Human Sex* 2020;29:135–8.
17 Wu C, Wang K, Sun T, *et al*. Predicting help-seeking intention of women with urinary Incontinence in Jinan, China: a theory of planned behaviour model. *J Clin Nurs* 2015;24:457–64.
18 Eloranta S, Rantanen V, Kauppila M, *et al*. Pelvic floor disorders and health-related quality of life in older women: results from the women's gynaecological health study in Lieto, Finland. *Arch Gerontol Geriatr* 2019;82:226–31.
19 Roberts JP. Group psychotherapy. *Br J Psychiatry* 1995;166:124–9.
20 Reich RR, Lengacher CA, Alinat CB, *et al*. Mindfulness-based stress reduction in post-treatment breast cancer patients: immediate and sustained effects across multiple symptom clusters. *J Pain Symptom Manage* 2017;53:85–95.
21 Hao LM, Han WP, Han HQ, *et al*. Study on the current status and influencing factors of social detachment in postoperative chemotherapy patients with ovarian cancer. *Chin Nurs Res* 2023;37:1713–8.
22 Chen M, Gong J, Cao Q, *et al*. A literature review of the relationship between Dyadic coping and Dyadic outcomes in cancer couples. *Eur J Oncol Nurs* 2021;54.
23 Howell KE, Saulsberry-Abate AC, Mathias JG, *et al*. Transition care continuity promotes long-term retention in adult care among young adults with sickle cell disease. *Pediatr Blood Cancer* 2021;68:e29209.
24 Zhou Q, Zhan HX, Jing SB, *et al*. Meta-integration of qualitative studies of women's experience of stress urinary Incontinence. *J Nurse Sci* 2022;37:31–5.
25 Nikjooy A,G, Amiri A, *et al*. Proprioception in stress urinary Incontinence: A narrative review. *Med J Islam Repub Iran* 2019;33:60.
26 Jackson CB, Botelho EM, Welch LC, *et al*. Talking with others about Stigmatized health conditions: implications for managing symptoms. *Qual Health Res* 2012;22:1468–75.
27 Yang X, Wang X, Gao Z, *et al*. The anatomical pathogenesis of stress urinary Incontinence in women. *Medicina (Kaunas)* 2022;59:5.
28 Qi X, Shan J, Peng L, *et al*. The effect of a comprehensive care and rehabilitation program on enhancing pelvic floor muscle functions and preventing postpartum stress urinary Incontinence. *Medicine (Baltimore)* 2019;98:e16907.
29 Sun X, Gao L, Zhu H, *et al*. Chinese expert consensus on primary prevention for pelvic floor dysfunction during pregnancy. *Gynecology and Obstetrics Clinical Medicine* 2023;3:133–9.