612

Tsai C[1], Lee Y[2], Kuo H[3]
1. *Tzu-Chi University,* ***2.*** *Tzu-Chi Hospital, Hualien,* ***3.*** *Tzu Chi Hospital Hualien*

LOWER URINARY TRACT PROBLEMS, BLADDER MANAGEMENT RELATED SELF-EFFICACY AND QUALITY OF LIFE AMONG SPINAL CORD-INJURED PATIENTS-A CORRELATIONAL STUDY

Hypothesis / aims of study
Patients with spinal cord injury may suffer from a variety of lower urinary tract symptoms due to nerve damages. If the problems are not controlled properly, they will often lead to complications such as infection and impaired renal function. Movement difficulty caused by spinal cord injury will not only restrict patients' mobility but also lead to incontinence, causing inconvenience and hampering life quality. This study aims to investigate lower urinary tract problems, self-efficacy of urination behaviour, and their quality of life among Taiwan's patients with spinal cord injury.

Study design, materials and methods
The participants in this study were spinal cord injured patients referred from a medical center in the eastern Taiwan. Purposive sampling was used and structured questionnaires and retrospective tracking on past medical records were utilized to review LUT symptoms and urodynamic findings. Urinary catheter self-efficacy (C-SE) was used to measured catheter related self-efficacy (1) and self-management of urinating behaviour self-efficacy (UBSE) was developed based on previous literature search. In addition, incontinence impact questionnaire (IIQ-7) and urinary distress index (UDI-6) were used to measure quality of life.(2)

Results
From May 2014 to September 2015, 116 cases were recruited and the average age is 43±13.73 years. Among the participants, 91 (78.44%) of them are male and mostly unmarried (60.34%). The injury parts are mostly cervical vertebra (48, 41.37%); most of them are confined to wheelchairs (89, 76.72%); more completely damaged patients (63, 54.31%); and only 42 (36.20%) participants are independent in most daily activities. Participants reported higher Urinary Catheter Self-efficacy(C-SE) than Urinating Behaviour Self-efficacy(UBSE), scoring 5.33±3.28 and 2.94±2.85 respectively. As for the quality of life, the average score of UDI-6 is 11.6 ± 4.57, of IIQ-7, 15.9 ±7 .25, indicating that patients are slightly or moderately afflicted by lower urinary tract problems.

The results of inferential statistics reported significant differences between different ages, careers and educational degrees in response to CSE and UBSE ($p<0.05$). CSE has a slight negative correlation with urinary problems and the quality of life. Self-efficacy for "water drinking correctness" has a significant negative correlation with SF36 ($r = -0.19$, $p < 0.05$). In addition, "medical communication" of urinary catheter self-efficacy has a significant negative correlation with Physical Component Score ($r = -0.19$, $p<0.05$). Self-efficacy plays a direct medium in the relationship between daily activities and urinary tract infection. The prediction of the relation between self-efficacy and the urinary problem, "urinary tract infection" reach significance, ($\beta = 0.34$, $p = 0.03$) indicating self-efficacy will directly influence the lower urinary tract problems. Self-efficacy plays an indirect mediated effect on quality of life. Moreover, age ($\beta = -1.37$, $p = 0.00$), mobile capability ($\beta = -0.85$, $p = 0.05$), daily activities ($\beta = -0.36$, $p = 0.01$) and medical convenience ($\beta = -1.22$, $p = 0.01$) have significant relations with quality of life. The statistics show that age ($\beta = -1.40$, $p = 0.00$), mobile capability ($\beta = -0.86$, $p = 0.05$), daily activities ($\beta = -0.37$, $p = 0.01$) and medical convenience ($\beta = -1.03$, $p = 0.04$) have indirect influences on quality oflife.

Interpretation of results
The results of the study show that patients with spinal cord injury have lower scores in urinary CSE, scoring 4.40 to 6.47; self-efficacy for taking care of the catheters obtained the lowest average score, 4.40 (SD ± 3.62); and UBSE on urination behaviour scored 2.16 (SD ± 2.30). These results are similar to that of the national spinal cord injury rehabilitation self-efficacy study. Therefore, Effective clinical education of self-care behaviours should pay more attention on their self-efficacy. Including urinary catheter self-efficacy questionnaire as part of the routine assessment could enhance participants' treatment outcome. Continuous keep tracking on patients urinating behaviours could further maintain lower urinary tract health and improve life quality.

Concluding message
Although permanent indwelling catheterisation is a convenient option of management of spinal injured patient, it also leads to numerous tasks that needed to be learned and performed with confidence. Fail to do so will impact on quality of life due to poor self-management skills. This study supported the relationship between self-efficacy and the incidence of urinary tract infection. As the results, effective clinical education should incorporate self-efficacy enhancement coaching, rather than only focusing on the self-care skills. Improving self-efficacy will decrease the impacts of urinary incontinence and symptoms distress.

References
1. Wilde, Mary H., et al. "Self-care management questionnaire for long-term indwelling urinary catheter users." Neurourology and urodynamics (2015).

Disclosures
Funding: no **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Research Ethics Committee **Helsinki:** Yes **Informed Consent:** Yes