Sigma's 30th International Nursing Research Congress Activities of Daily Living and Quality of Life of Older Patients Undergoing Hip Fracture Surgery

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Background:

Older people often suffer from hip fractures, resulting in severe pain, poor daily physical activity, or even death, and very few patients could regain sufficient physical function. Therefore, hip fracture not only decreases older patients' quality of life but also increases medical costs. However, very few studies investigate the daily living activities and quality of life of older patients with hip fractures.

Purpose:

The study aimed to evaluate the relationships of activities of daily living and quality of life in Chinese older patients undergoing hip fracture surgery.

Methods:

A cross-sectional prospective study was conducted among Chinese older patients due to undergo hip fracture surgery in two big teaching hospitals in Taiwan. The inclusion criteria were participants (1) aged >60 years old, and (2) requiring hip fracture surgery as advised by an orthopedist. A sample of 60 patients completed three valid questionnaires, demographic questionnaire, Barthel Index (BI) questionnaire, and quality of life (SF-36 short-form health survey), at one month after hip fracture surgery. The BI questionnaire has 10 questions for assessing activities of daily living. The SF-36 questionnaire constitutes 36 questions, dividing into Physical Component Summary (PCS) and Mental Component Summary (MCS), for evaluating quality of life. The Chronbach- α of BI and SF-36 were .750 and .931, respectively, showing good reliability. Pearson's correlations, independent *t*-tests and Chi-square test were used for data analysis.

Results:

The 60 participants were predominantly female (71.7%) with a mean (SD) age of 76.8 (SD: 9.5) years old. Most participants (83.3%) had comorbidities, and hypertension (50.0%) and diabetes mellitus (35%) were the most common comorbidities. Most patients (61.7%) in this study had open reduction internal fixation in their hip fracture surgeries.

The mean (SD) scores of activities of daily living, quality of life in PCS and MCS, were 61.33 (27.41), 35.86 (12.68), and 55.24 (19.37), respectively. Activities of daily living (BI score) was positively related to PCS(r=0.729) and MCS(r=0.716), but negatively related to age(r=-0.303) and length of hospital stay (r=-0.288). PCS was positively related to MCS(r=0.818), but negatively related to age (r=-0.384) and length of hospital stay (r=-0.388). MCS was negatively related to length of hospital stay (r=-0.350). Older patients who did not have renal failure with routine hemodialysis had better activities of daily living. Older patient with Parkinson's disease had lower physical quality of life (PCS) than who did not. Patients who returned home after discharge had better activities of

daily living and quality of life than those who were sent to nursing home. Patients with age group of 60-69 years old had better physical and psychological quality of life than group of 80-89 years old (all *p*<0.05).

Conclusion:

Older patients who were younger or without renal failure or Parkinson's disease, returned home for further care, had better daily living and quality of life. The older and longer hospital stays of the patients, the lower the daily activity and physical quality of life. Therefore, care for hip-fracture older patients with these issues, the clinical staff should arrange the continuous rehabilitation plan for promoting the recovery of physical activity, provide holistic cares through multidisciplinary team and develop an individual care plan for older patients in reducing hospitalization days and helping the older patients return home safely. Our study is the first and recent related nursing study in Taiwan. Since the data were only collected from two large hospitals in the middle of Taiwan, the generalization of our results may be limited.

Title:

Activities of Daily Living and Quality of Life of Older Patients Undergoing Hip Fracture Surgery

Keywords:

quality of life, activities of daily living and older patients with hip fracture surgery

References:

- 1.Guerra, M. T., Viana, R. D., Feil, L., Feron, E. T., Maboni, J., & Vargas, A. S. (2017). One-year mortality of elderly patients with hip fracture surgically treated at a hospital in Southern Brazil. *Revista Brasileira de Ortopedia, 52*(1), 17-23. doi:10.1016/j.rboe.2016.11.006
- 2.Jurisson, M., Pisarev, H., Kanis, J., BorgstrĶm, F., Svedbom, A., Kallikorm, R., & Uusküla, A. (2016). Quality of life, resource use, and costs related to hip fracture in Estonia. *Osteoporosis International, 27*(8), 2555-2566. doi:10.1007/s00198-016-3544-4 3.Mariconda, M., Costa, G. G., Cerbasi, S., Recano, P., Orabona, G., Gambacorta, M., & Misasi, M. (2016). Factors predicting mobility and the change in activities of daily living after hip fracture: a 1-year prospective cohort study. *Journal of Orthopaedic Trauma, 30*(2), 71-77.
- 4.Moerman, S., Vochteloo, A. J., Tuinebreijer, W. E., Maier, A. B., Mathijssen, ., & Nelissen, R. G. (2016). Factors associated with the course of health-related quality of life after a hip fracture. *Archives of Orthopaedic and Trauma Surgery, 136*(7), 935-943. 5.Papadimitriou, N., Tsilidis, K. K., Orfanos, P., Benetou, V., Ntzani, E. E., Soerjomataram, I., & Trichopoulou, A. (2017). Burden of hip fracture using disability-adjusted life-years: a pooled analysis of prospective cohorts in the CHANCES consortium. *The Lancet Public Health, 2*(5), e239-e246.

Abstract Summary:

The study aimed to evaluate the relationships of activities of daily living and quality of life in Chinese older patients undergoing hip fracture surgery. The older and longer hospital stays of the patients, the lower the daily activity and physical quality of life.

Content Outline:

Introduction:

- (A)Older people often suffer from hip fractures, resulting in severe pain, poor daily physical activity, or even death, and very few patients could regain sufficient physical function.
- (B)Hip fractures not only decreases older patients' quality of life but also increases medical costs.

Body:

- (A). The study aimed to evaluate the relationships of activities of daily living and quality of life in Chinese older patients undergoing hip fracture surgery.
- (B). The included participants were (1) aged >60 years old, and (2) requiring hip fracture surgery as advised by an orthopedist.
- (C)A sample of 60 patients completed three valid questionnaires, demographic questionnaire, Barthel Index (BI) questionnaire, and quality of life (SF-36 short-form health survey), at one month after hip fracture surgery. Conclusion:
- (A)Older patients who were younger or without renal failure or Parkinson's disease, sent back to home for further care, had better daily living and quality of life.
- (B)The older and longer hospital stays of the patients, the lower the daily activity or physical quality of life.

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