

Applying diversified strategies to reduce the incidence of falls in hospitalized patients

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2023.
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INTRODUCTION

In-patients might encounter acute illness and severe cognitive impairment. With the interferences of illness symptoms, the medication had to be offered. However, most medication came with side-effects which brought about gait imbalance to in-patients and increased fall risks. Those factors, like patient's cognition impairment or self-esteems of the elderly, restrained patients to be unwilling to rely on others, which limited the self-awareness of accidental falls risk; besides, caregivers did not possess the ability and warning of telling accidental falls risk, so that the occurrence of accidental falls went up-rising. Based on the 2016 to 2020 statistics of Joint Commission of Taiwan, reports of accidental falls increased from 16,635 to 20,228 cases. This trend went up annually, and the accidental falls with damages took 52.3% of the total accidental falls. With 2020 analysis, the rate of accidental falls to in-patients is 0.08% (152/183,245 x 100%). The main factors in the analysis were: patients' health 55.2% ; ward with high risk (such as psychiatric and rehabilitation wards) 60%, falls with no caregivers' companion 73%, medication (like sedatives and hypnotic drugs) 30%, medium level of hurt in accidental falls was 8%. Thus, the reinforcement of relevant knowledge and techniques on accidental falls prevention in patients and caregivers, and the related preventive measures like fall prevention detector were offered to the units with high accidental fall risk.

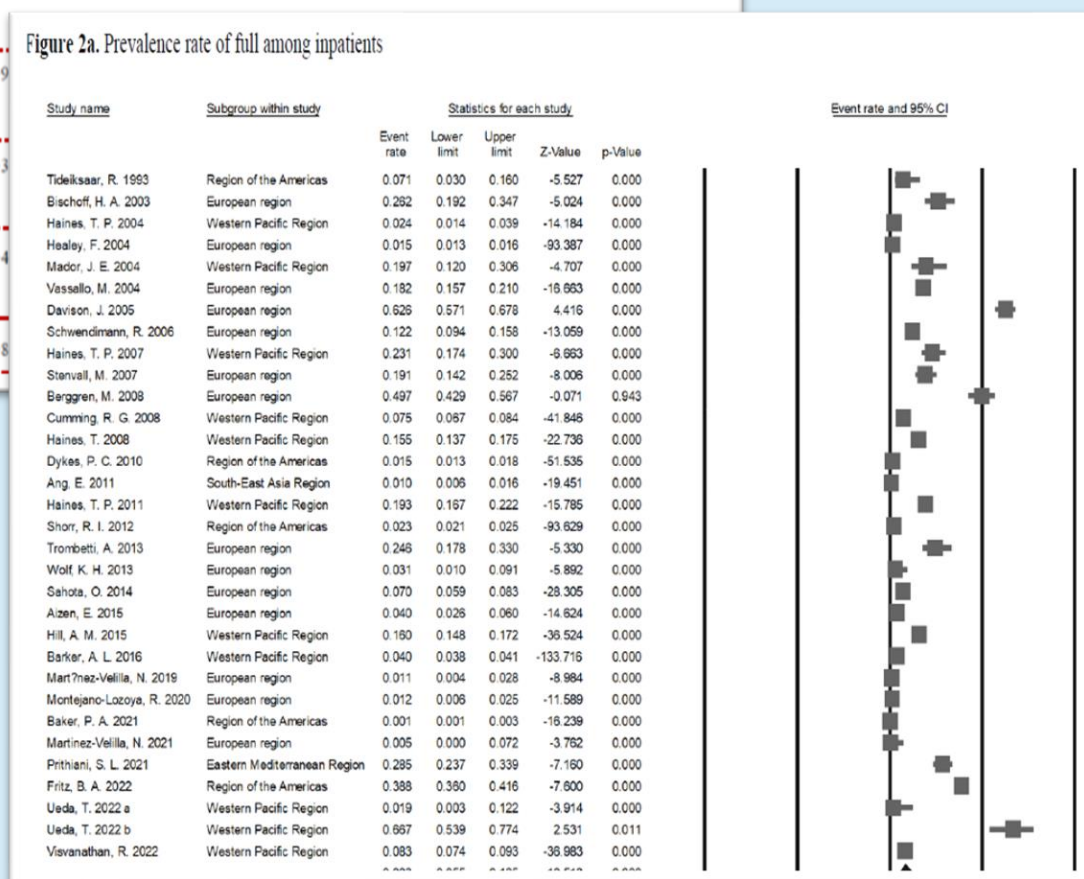
METHOD

Education on "Preventive Fall Risk Assessment and Care" was conducted. Executing the assessment and prevention guidelines should be correctly practiced by nurse practitioners. In-patients in high-risk wards had to finish the assessment within 8 hours. The conduct of group education on teaching fall prevention, teaching patients and caregivers about the importance of fall prevention, and moreover the usage of environmental safety and assistive devices to strengthen the understanding and skill on fall prevention. On the other hand, practicing visualization modules (Power BI Big Data Analysis) controlled related factors on fall accidents to handle and improve accidental falls effectively.



Table 2. Meta-analysis and meta-analysis according to subgroup need to identify factors affecting heterogeneity within the selected studies

Variable	No. of study	Sample	Precision (95% CI)	p-value	Confidence interval	Standard error	Heterogeneity	p-value
Prevalence rate of fall	12	148,036	0.137 (0.125-0.15)	<0.001	99.55			
Intervention group	12	148,036	0.137 (0.125-0.15)	<0.001	99.55			
Control group	12	148,036	0.137 (0.125-0.15)	<0.001	99.55			
Fall prevention strategy	12	148,036	0.137 (0.125-0.15)	<0.001	99.55			
Fall prevention device	7	10,007	0.137 (0.125-0.15)	<0.001	99.55			




Make individualized fall risk assessment tool



Education on teaching fall prevention



Broadcast alert



Bed-exit alarm system

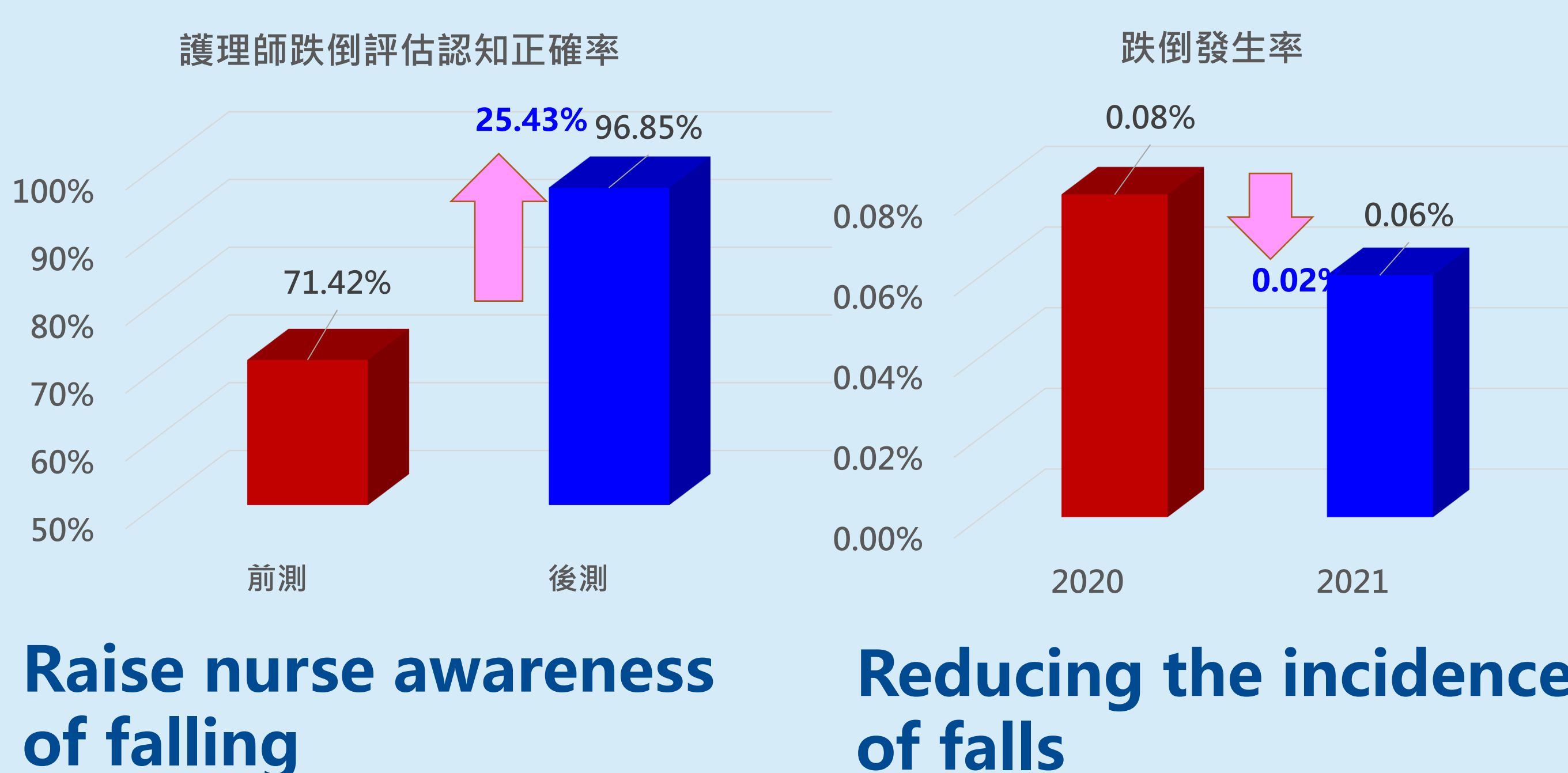


Using assistive devices& multimedia education

Using evidence-based nursing to improve the incidence of falls

Results

- In-patients with accidental falls went down from 0.08% in 2020 to 0.06% in 2021.
- Nurse practitioners on fall risk assessment and nursing awareness were improved from 71.42% to 96.85% (125.39%).
- Inpatients' awareness of fall prevention from 78% to 100% (122%).



CONCLUSIONS

The multiple fall prevention strategies are far more effective than a single prevention program. This study provides scientific evidence to support clinical practice and the design of protocols to prevent fall in and manage the wellbeing of inpatient. Through diverse fall prevention strategies reduced falls in hospitalized patients.