



# Effectiveness of Message Framing on Adherence to Fall Prevention Advice Among Elderly Patients: A Pilot Study



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## Introduction

Prevention of falls and its related injuries continue to be a major challenge for healthcare institutions world-wide. Falls remain as the most frequent adverse event among adults in the inpatient setting <sup>1</sup>. According to the Joint Commission, fall-related injuries add 6.3 days to the hospital stay and cost an average of USD14k <sup>2</sup>.

Falls are also well-known as a nursing sensitive indicator, given the key role that nurses play in this domain of patient care. Most falls are multifactorial in nature, and associated with patient specific, staff-related (usually nursing staff) and environmental factors.

In Singapore General Hospital (SGH), falls related injuries accounted for up to 20% of all serious-reportable events (SREs), submitted to Ministry of Health.

One potential way in which falls may be prevented is through increasing patients' adherence to fall prevention advice, and adherence to advice could be influenced by the way in which the fall prevention information is presented <sup>3</sup>.

According to the Prospect Theory, people interpret information based on potential losses and gains; while adherence decisions are made based on implicit cost-benefit analyses. If people do not view the information as important or relate it with some form of loss, they are likely to be non-adherent <sup>3</sup>. The same information can be framed either in positive words or in negative words.

## Objectives

This pilot study aimed to explore effects of positively-framed or negatively-framed fall prevention educational messages on patient's adherence to fall prevention advice.

## Methodology

Fourteen participants (7 male, 7 female) aged 65 and above (M = 73.7), with a Morse fall risk scale of  $\geq 30$  were recruited from an acute medical ward, equipped with the Hillrom 1000 Medical Surgical beds and the Adroit call bell system.

Participants were randomly assigned to one of three groups: (1) Positively-framed fall prevention message (N = 4), (2) Negatively-framed fall prevention message (N = 4), or (3) Control group (N = 6).

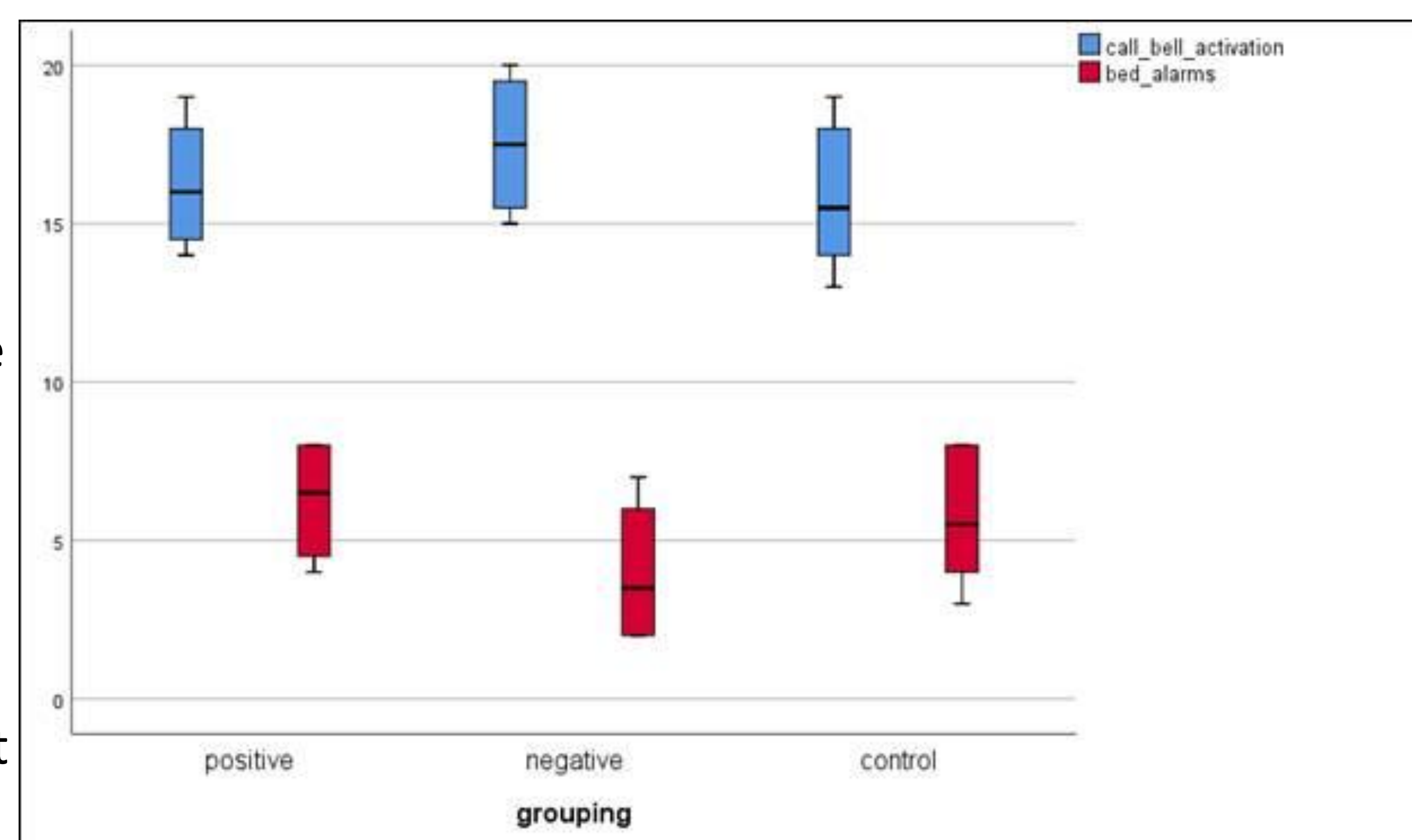
For the first and second group, participants were presented with a 5-minute video on fall prevention upon admission. The video content was developed by the research team, and was either positively-framed (**"If you call for the nurse when you need help, you can ambulate safely"**) or negatively-framed (**"If you do not call for the nurse when you need help, you are likely to fall"**).

Participants in the control group were given standard fall prevention advice (**"You can press the call bell if you need any help"**).

Adherence to fall prevention advice was assessed 2 days later by extracting data on the number of times call bell was pressed and the incidences of bed alarm activation calls.

## Results

Of the 14 participants, 3 had a history of fall within the past 3 months. 4 were assessed to be at high risk for fall, while 10 were assessed to be at moderate risk. The percentage of bed alarm calls was measured using the following formula: (number of bed alarm calls) / ((sum of bed alarm calls and call bells) \* 100%). Results revealed that participants in the negatively-framed message group had the lowest percentage of alarm calls (M = 18.5%) as compared to the positively-framed message group (M = 27.8%) and controls (M = 26.4%). However, the difference was not statistically significant.



## Implications and Conclusion

This pilot study is the first study in Singapore to evaluate the impact of message framing on adherence to fall prevention advice. Results from this pilot study indicate a trend for negative message framing eliciting more call bell activation and lower bed alarms, as compared to the positive message framing and control group. In line with past research suggesting negative message framing to be more effective among elderly patients with pneumonia <sup>4</sup>, the findings from this pilot study suggests that message framing, specifically, negative message framing may potentially influence adherence to fall prevention advice among elderly patients. While not statistically significant in this pilot study, more data can be collected in future studies, to replicate and confirm the findings from this pilot study. If confirmed, these findings have the potential to change the way in which nurses educate patients in inpatient settings, which would in turn reduce number of hospital falls and improve patient experience and outcomes.

## References

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