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## THE EFFECTS OF WECHAT OFFICIAL ACCOUNT BASED OSTEOPOROSIS EDUCATION FOR PATIENTS WITH FRAGILITY FRACTURE IN CHINA

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### INTRODUCTION

This study was based on the current situation of osteoporosis among Chinese elderly and the widespread use of WeChat to delivery education , evaluate the effectiveness of a WOA-based osteoporosis educational intervention on osteoporosis knowledge in mainland China.

### AIM

The purpose of this study was to evaluate the effectiveness of a WOA-based osteoporosis educational intervention on osteoporosis knowledge among inpatients with fragility fractures in an orthopedic ward in mainland China.

### RESULTS

- 1.General characteristics of the patients :  
•51 inpatients with fragility fractures from a tertiary hospital in central China .  
•The mean age was 63.4 years  
• 74.5% of the patients were female, of which 91.9% were postmenopausal.  
• Most were married and lived with their spouses.  
•Nearly half of the patients reported that they had osteo-porosis.  
•The mean length of hospitalization was 12.2 days  
2.Differences in accuracy on self-developed questions: the findings are listed in Table 1.  
3.Differences in the OKAT questionnaire: the findings are listed in Table 2.  
12 of the items on the OKAT scale showed sig- nificant improvement.

| items                                                                                                      | Pre        | Post       | P value |
|------------------------------------------------------------------------------------------------------------|------------|------------|---------|
| The fracture increases the risk of future fractures                                                        | 24 (47.1%) | 33 (68.8%) | 0.059   |
| The fracture related to osteoporosis                                                                       | 31 (60.8%) | 43 (89.6%) | 0.002   |
| Osteoporosis                                                                                               | -          | -          | -       |
| It is a disease of the bones.                                                                              | 18 (50.0%) | 31 (70.5%) | 0.092   |
| It is a crippling or resulted in a crooked spine but does not refer to a disease of bones                  | 24 (66.7%) | 36 (81.8%) | 0.754   |
| It is related to arthritis or other disease.                                                               | 33 (91.7%) | 39 (88.6%) | 1.000   |
| Osteoporosis resulted in bone or calcium loss, weakening/thinning of the bones, or bones becoming porous   | 27 (75.0%) | 43 (97.7%) | 0.016   |
| To prevent fall                                                                                            | -          | -          | -       |
| Use assistive service to help walking.                                                                     | 16 (44.4%) | 35 (76.1%) | 0.004   |
| Keep my home safety such as installing bright lights, adding supports in my bathroom, wearing sturdy shoes | 30 (83.3%) | 44 (95.7%) | 0.203   |
| Keep stairs and walkway clear                                                                              | 19 (52.8%) | 39 (84.8%) | 0.003   |
| Keep frequently used items nearby                                                                          | 13 (36.1%) | 41 (89.1%) | P<0.001 |
| Focus on my medication and prevent the medication-related falls                                            | 13 (36.1%) | 34 (73.9%) | 0.004   |
| Be aware of where and keep travel safety                                                                   | 27 (75.0%) | 40 (87.0%) | 0.125   |
| Ask your doctor and nurse                                                                                  | 15 (41.7%) | 27 (58.7%) | 0.146   |

Table 1 Comparison of Knowledge correct rate between pre and post education.

| items                                                                                                                         | Accuracy rate pre-intervention | Accuracy rate post-intervention | Chi square P |
|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------|--------------|
| 1.Osteoporosis leads to an increased risk of bone fractures                                                                   | 43(84.3%)                      | 47(97.9%)                       | 0.031        |
| 2.Osteoporosis usually causes symptoms(e.g.pain)before fractures occur.                                                       | 24(47.1%)                      | 34(70.8%)                       | 0.056        |
| 3.Having a higher peak bone at the end of childhood gives no protection against the development of osteoporosis in later life | 14(27.45%)                     | 27(56.3%)                       | 0.002        |
| 4.Osteoporosis is more common in men                                                                                          | 23(45.1%)                      | 40(83.3%)                       | 0.001        |
| 5.Cigarette smoking can contribute to osteoporosis                                                                            | 28(45.1%)                      | 45(93.8%)                       | 0.001        |
| 6.White women are at highest risk of fracture as compared to other races.                                                     | 21(41.2%)                      | 37(78.7%)                       | 0.001        |
| 7.A fall is just as important as low bone strength in causing fractures.                                                      | 45(88.2%)                      | 46(97.9%)                       | -            |
| 8.By age 80, the majority of women have osteoporosis                                                                          | 45(88.2%)                      | 44(93.6%)                       | -            |
| 9.From age 50, most women can expect at least one fracture before they die.                                                   | 15(29.4%)                      | 31(66.0%)                       | 0.004        |
| 10.Any type of physical activity is beneficial for osteoporosis                                                               | 7(13.7%)                       | 29(61.7%)                       | P<0.001      |
| 11.It is easy to tell whether I am at risk of osteoporosis by my clinical risk factors                                        | 26(51.0%)                      | 39(83.0%)                       | 0.003        |
| 12.Family history of osteoporosis strongly predisposes a person to osteoporosis.                                              | 36(70.8%)                      | 39(83.0%)                       | 0.189        |
| 13.An adequate calcium intake can be achieved from two glasses of milk a day.                                                 | 25(49.0%)                      | 12(25.5%)                       | 0.008        |
| 14.Sardines and broccoli are good sources of calcium for people who cannot take dairy products.                               | 43(84.3%)                      | 41(87.2%)                       | 0.767        |
| 15.Calcium supplements alone can prevent bone loss.                                                                           | 24(47.1%)                      | 36(76.6%)                       | 0.005        |
| 16.Alcohol in moderation has little effect on osteoporosis.                                                                   | 28(54.9%)                      | 30(63.8%)                       | 0.149        |
| 17.A high salt intake is a risk factor for osteoporosis.                                                                      | 36(70.6%)                      | 41(87.2%)                       | 0.189        |
| 18.There is a small amount of bone loss in the ten years following the onset of menopause                                     | 35(69%)                        | 24(51.1%)                       | P<0.001      |
| 19.Hormone therapy prevents further bone loss at any age after menopause                                                      | 16(31.4%)                      | 35(74.5%)                       | 0.004        |
| 20.There are no effective treatments for osteoporosis available in China.                                                     | 14(27.5%)                      | 23(48.9%)                       | 0.083        |

Table 2 Compare accuracy of the OKAT before and after intervention.

### METHOD

- Research design: Inclusion criteria and Exclusion criteria.
- Data collection
- The osteoporosis education intervention
- Assessment tool:demon- graphic data and osteoporosis knowledge. (OKAT)
- Data analysis
- Ethical considerations

### CONCLUSIONS

The findings from our study showed that the WOA-based osteoporosis educational intervention had positive effects in enhancing knowledge about osteoporosis among inpatients with fragility fractures during the admission. The intervention program could be added into patient education routine for orthopedic inpatients with fragility fractures. Further research with compared groups, post-discharge follow-up study and a larger, more diverse sample is required to explore more outcomes of this inpatient education method.

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