

## The Mode of “Psychosomatic Rehabilitation of Dementia” Overcomes the Fear of Falls: A Case Report of Alzheimer's Disease

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### Abstract

Fear of falling (FOF) is a phenomenon in patients with Alzheimer's disease (AD), which results in degenerated physical and mental status, also increases the burden on caregivers. However, rapid and satisfactory interventions are lacking. Here, we propose the mode of “Psychosomatic Rehabilitation of Dementia”, emphasizing the reactivation of personal internal motivation. In this mode of intervention, Granny Chen walked on his own with a smile a week later. This mode may open up a new idea for FOF of AD.

**Keywords:** Fear of falling; Alzheimer's disease; Mind Body Therapies

### Introduction

Some patients with Alzheimer's Disease (AD) Exhibit Fear of Falls (FOF). FOF is defined as cautious concern with falling that leads to an individual losing confidence and avoiding activities associated with daily life [1], that eventually results in degenerated physical and mental status [2]. Some researchers reported the effect of intervention on FOF. Padala, et al. [3] test the efficacy of an 8-week Wii-Fit program for improving balance in older Veterans with balance problems. At the end of the 4th week, the balance function (Berg Balance Scale) was improved. However, at the end of the 8th week, the FOF and self-confidence (Activities-Specific Balance Confidence, ABC) slightly improved. They also reported mild AD patients with Wii-Fit had improvement in ABC scale at 8 weeks. However, this effect was not sustained at 16 weeks [4]. Kumar, et al. [5] reported that exercise interventions probably reduce fear of falling to a small to moderate degree in community-living older people. There was a small, but not statistically significant effect in the longer term. The above research suggests that the current intervention methods have a slow and unsustainable effect on fear of falling, especially on the establishment of self-confidence. There, we proposed an innovative mode that organically integrates psychological care and limb rehabilitation, namely, the "psychosomatic rehabilitation of dementia" mode,

helping AD patient with FOF stand and walk confidently, opening up a new idea for FOF of AD.

### **Case Presentation**

Granny Chen, 89 years old, was an Alzheimer's disease patient for 2 years. In the past two months, her worry symptoms were increasingly obvious: she was afraid of walking out of bed at home, and gradually lost confidence in herself. After repeated persuasion without success, her family brought Granny Chen to the geriatric ward for treatment. When Granny Chen first entered the hospital, she was lying in bed. When asked if she was ill, she repeatedly said in a panic expression that I would not get up, I would not get up, and I was afraid of wrestling. She had no confidence and was still anxious and unwilling to communicate and cooperate with the treatment. Our medical team immediately carried out a detailed analysis and discussion on Grandma Chen's situation, and believed that Grandma Chen's worried and anxious behavior had caused her not to walk, so we decided to intervene with the innovative model " psychosomatic rehabilitation of dementia ". It mainly includes the following three steps. First of all, we helped Granny Chen strengthen her yearning for a better life and rebuild her confidence. This includes two aspects: emotional confidence and physical function confidence. "Are you worried about staying in bed and not walking?" We sat beside her and communicated patiently. She turned to look at us and whispered that she was afraid of wrestling. "In fact, you want to stand up and desire a better quality of life, right?" She nodded silently. "You lie on the bed and stretch your legs, let's have a look, OK?" She nodded her consent. "Please lift your right leg off the bed first", She slowly raise her right leg. "You're great!" We gave her encouragement. "Please put it down slowly." She slowly lowered her right leg to the bed. "Will you lift your right leg again?" She nodded and slowly raised her right leg. "Please raise it a little, try it?" She raised her legs a little higher than the first time. We continued to encourage her, and her mood gradually relaxed. "Will you please lift your legs a third time?" With encouragement, it was better to raise the height and keep the leg longer after lifting. In this way, asked her to lift and lower her right leg for 10 times, and then do the same with her left leg. The whole process takes about 10 minutes. In the afternoon, Grandma Chen took a second exercise with our encouragement. Granny Chen was lying in bed, her mood is stable, and she has a new understanding of her lower limb strength. We asked Grandma Chen if she would stand by the bed with our help tomorrow, just standing, not walking. Grandma Chen's face was worried at first, but soon disappeared, and she nodded her head in agreement.

Second, we personally help Grandma Chen practice standing behavior. The next morning, we came to Grandma Chen's ward and found her half lying in bed, neatly dressed. When we arrived, she smiled warmly. When we asked about yesterday's exercise experience, Granny Chen replied that although she was a little tired, she felt more comfortable. We told her that today we helped her get up from bed and gradually stand on the ground. The length of standing time was determined by herself according to her own situation. Grandma Chen agreed, and her face showed both excitement and worry. We helped Grandma Chen gradually stand from the bed to the ground. At the beginning of standing, Grandma Chen's legs trembled and her heart was nervous. We told her to take a rest by the bed first, and then stand up for exercise. Later, Grandma Chen, with our help and encouragement, stood for many times. Slowly, her legs did not tremble, and nervousness disappeared, more importantly her standing time was extended (**Figure 1**). The whole exercise process is about 10 minutes. Grandma Chen did not stay in bed any more, but sat on the chair beside the bed. We made an appointment to continue to exercise in the afternoon, Grandma Chen readily agreed. In the afternoon, Grandma Chen, with our

help, stood longer and became more stable. We gave Grandma Chen full recognition and encouragement. Grandma Chen had gradually built up her confidence in standing and walking. We have an agreement with Grandma Chen that she will exercise standing and walking tomorrow. Grandma Chen was worried and looking forward to it.



**Figure 1:** Grandma Chen gradually stand from the bed to the ground.

Third, Grandma Chen walked with help. On the third day, we met Grandma Chen. She said that she had calmed down a lot when she saw us and agreed to continue to exercise. With our help, Grandma Chen stood up. When she was stable, we suggested Grandma Chen lift her right foot first. When she just lifted her right foot off the ground with difficulty, we encouraged her and suggested her to put down her right foot and stand again. Next, with our encouragement, she gradually raised her right foot again and again, and her height gradually increased. Then, in the same way, she practiced lifting her left foot. In the next few days, Grandma Chen practiced standing and leg lifting in the ward with a walking aid, and gradually walked slowly (**Figure 2**). A week later, Grandma Chen can walk in the corridor (**Figure 3**) and ask for a group photo with the medical staff to show a happy smile (**Figure 4**).



**Figure 2:** Grandma Chen practiced standing and walking in the ward.



**Figure 3:** Grandma Chen walked in the corridor.



**Figure 4:** Grandma Chen and head nurse Xia took a group photo and smiled happily.

## Discussion

The "psychosomatic rehabilitation of dementia" model is an innovative model combining psychological support and functional rehabilitation, which was proposed by the senior cognitive impairment team of Tongde Hospital, inspired by "Mind Body Therapies", considering the interactions between brain, mind, body, and behavior and understand that emotional, mental, social, and spiritual factors can directly affect health <sup>[6]</sup>. However, "Psychosomatic Rehabilitation of Dementia" pays more attention to the key role of psychological factors in physical rehabilitation, at the same time, it also emphasizes the positive feedback effect of rehabilitation exercise on mental and psychological state. Dementia patients are afraid to stand and walk because they are worried about their physical functions. First of all, we use "Motivational support" - to mobilize the patient's initiative and internal motivational force through a series of words and behaviors, so that they can actively face difficulties or diseases, and then relieve negative emotions, rebuild self-confidence, so as to improve the patient's enthusiasm. These come from Rogers theory. Rogers presented a view of human nature in which becoming fully functioning was a state toward which people were intrinsically motivated. Rogers referred to this as the actualizing tendency, a universal human motivation resulting in growth, development, and autonomy of the individual. The actualizing tendency, Rogers argued, was the one natural motivational force of human beings

and which is always directed toward constructive growth [7]. Therefore, stimulating the motivational force of Grandma Chen is the key first step of intervention.

At the same time, she cooperated with limb rehabilitation training to increase the strength of limb rehabilitation step by step. Whenever she completed a set of movements, she will be given a positive encouragement, and let her see the whole process of action, thus forming positive biofeedback. Rogers believed that the organism itself had the ability to evaluate experience. In the process of growth, individuals constantly interacted with reality. Individuals constantly evaluated the experience in interaction. This evaluation did not rely on external standards, but was based on the sense of satisfaction generated by their own organism, which led to the approach or avoidance attitude to this experience and related events. Therefore, the purpose of giving physical exercise to Grandma Chen was not only to improve muscle movement and balance function, but also to positively evaluate her own behavior and attitude based on the satisfaction obtained from her own experience.

A very important phenomenon should attract our attention. From the case, we found that Grandma Chen was afraid to walk at first, just as previous surveys have shown that anxiety and depression were independent associates of FOF [8,9]. The above information seemed to improving the emotional state can improve the patient's standing and walking. Previous studies have shown that music therapy can relieve anxiety and depression in patients with AD [10]. In fact, we also give music therapy to Grandma Chen, which could also reduce her anxiety. However, when it came to standing and walking, she was still afraid and avoid. Therefore, anxiety might be only a superficial phenomenon of Grandma Chen, not the main target of intervention.

## Conclusion

Fear of falling is multifactorial in AD patients. Psychological factor is the key that cannot be ignored. Stimulating the internal driving force of individuals is the starting point of intervention and continues throughout the whole intervention process. The mode of “psychosomatic rehabilitation of dementia” not only enables us to have a deeper understanding of the mental activities of dementia patients who are afraid of falling, but also provides a quick and effective intervention method.

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### **Citation of this Article**

Xia H and GuoZ. The Mode of “Psychosomatic Rehabilitation of Dementia” Overcomes the Fear of Falls: A Case Report of Alzheimer's Disease. *Mega J Case Rep.* 2022; 1: 2001-2006.

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