Title: Shifting the Paradigm: A Person-Centered Strategy to Reclaim Posture in the Older Adults

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Abstract

Postural misalignment is a common musculoskeletal disorder among older adults. Malalignments in posture can lead to decreased mobility, higher fall risk, and lower quality of life. Traditional posture correction methods often apply a one-size-fits-all approach, overlooking individual needs and preferences. This paper introduces a person-centered model to improve postural alignment in elderly adults. This approach focuses on individualized assessments, personalized interventions, and active engagement. The goal is to increase adherence and effectiveness of the interventions by addressing physical, psychological, and social factors. Core elements of this model include thorough assessment, tailored exercise programs, psychological support, social involvement, and ongoing monitoring. It provides a holistic framework to tackle the specific challenges faced by elderly adults, fostering lasting improvements in posture and overall well-being.

Keywords: Posture, Elderly, Therapeutic Exercises, Psychology, Individuality

Aging is associated with physiological changes that may affect postural alignment. These changes may be muscle loss, decreased bone density, and reduced proprioception (1). It is shown that postural malalignment in older adults may threaten independence by raising the risk of falls, chronic pain, and functional limitations. Most conventional interventions, such as postural correction exercise programs or physiotherapy, ignore individual differences. Therefore, they may show less effective results and low adherence. A person-centered approach is planned in a way that focuses on Individual needs, takes into account each person's unique preferences and circumstances, and improves interventions' adherence to and effectiveness (2). This paper presents a person-centered model aimed at improving postural alignment in older adults, describing its components and possible impact. The model forms a comprehensive, adaptable framework to combine physical, psychological, and social strategies to manage postural issues in elderly people.

The main components of the person-centered model:

the person-centered strategy for enhancing postural alignment in older adults consists of five key elements: comprehensive evaluation, customized exercise programs, psychological support, social interaction, and continuous observation. Each of these components helps to design a posture correction program based on the individual's personal needs and will improve the effectiveness and increase the elderly's compliance with postural correction programs.

A. Comprehensive Assessment

A thorough evaluation is necessary in order to create a person-centered model, including the physical, functional, and psychosocial elements that may affect postural alignment. Important components of the assessment are:

-Physical Evaluation: Evaluation of muscle strength, joint mobility, balance, and proprioception is essential among the participants to detect some malalignments, such as hyperkyphosis or forward head posture.

-Functional Assessment: To examine how postural malalignments may affect mobility and independence, activities of daily living (ADLs) should be assessed.

-Psychosocial Factors: To evaluate motivation, self-efficacy, and participation barriers, including social isolation or fear of falling, appropriate questionnaires or assessment instruments should be used.

By using this multifaceted evaluation, therapies are customized to each person's distinct profile, addressing both psychological and physical constraints.

B. Customized Exercise Programs

Exercise is essential for improving postural alignment. However, classic programs may fail to benefit senior citizens (3). So it seems that the person-centered approach to prescribing postural correction interventions creates customized exercise programs that include:

- Strength Training: Depending on the individual's level of fitness, low-resistance exercises that strengthen the back and core muscles to support spinal alignment should be recommended. Exercises like seated leg lifts and resistance band workouts may fall under this category.
- Stretching and multimodal exercises, like chair-based yoga or modified yoga or tai chi, can be recommended to enhance range of motion, improve flexibility, and address joint stiffness.
- Balance training: exercises such as dynamic balance movements or single-leg standing can help lower the risk of falls. Seniors' abilities should guide the design of these exercises, which can be advanced by enhancing balance.

Corrective postural programs can be developed with the participation of the individual to ensure that activities are practical given their physical and environmental limitations and fit their interests (dancing, for example).

C. Psychological Support

Psychological factors can strongly influence adherence to postural correction interventions (4). The person-centered model components are:

- Motivational Interviewing: To address uncertainty regarding exercise and increase intrinsic motivation, motivational interviewing techniques can be used. In this regard, cooperative goal-setting of therapeutic interventions and presenting the importance of maintaining personal health in the elderly to participants can be useful.
- Cognitive-Behavioral Strategies: These employ cognitive restructuring to target bad ideas such as "I'm too old to exercise". The cognitive-behavioral strategies should address fear of falling or negative beliefs about physical activity.

- Mindfulness Practices: According to existing evidence, stress reduction with mindfulness-based exercises may increase physical exercise engagement by lowering anxiety and improving body awareness.

By empowering elderly people to overcome psychological issues, it seems that they can be expected to participate in training programs for longer.

D. Social Interaction

It seems that a main barrier to sustained health interventions among elderly adults is social isolation (5). The person-centered model includes:

- Group-Based Activities: Participating in structured group exercise sessions, such as tai chi classes, can foster social bonds and accountability. These exercises can also be easily customized. There is also the possibility of virtual participation in this sport.
- Family Involvement: To enhance motivation and create a supportive environment, encouraging family members to participate in or support exercise routines may be helpful.
- Community Resources: It is suggested that people's interaction with local resources should be strengthened, such as senior centers or walking groups. It is recommended that, even after the end of the training period, this may increase adherence to the interventions.

It seems that emphasizing social interactions may improve adherence to the postural correction interventions.

E. Continuous Observation

Continuous assessment and feedback during the implementation of the intervention program is needed (6). The person-centered model includes:

- Regular Follow-Ups: Pre-scheduled reassessments should be used to track participants' progress in older adults' posture, strength, and function during interventions. This can be achieved using tools such as wearable sensors or smartphone apps.
- Feedback to Performance: It appears that ongoing feedback on participants' performance and progress can reinforce positive changes and increase their motivation to participate in

interventions. Studies have shown that providing constructive feedback from therapists, including visual (e.g., body posture images) or verbal feedback, can be helpful (7).

- Adaptive Interventions: Based on the participant's progress, when prescribing and designing postural correction interventions, the intensity, frequency, or type of exercise should be modified. For example, increasing resistance can be performed when strength improves, or destabilizing the level of balance exercises when balance is enhanced.

Continuous observation throughout the implementation of the intervention ensures that it remains relevant, effective, and adapted to the individual's needs.

The person-centered corrective interventions offer a comprehensive approach for improving postural alignment in elderly adults. This approach addresses physical, psychological, and social dimensions. Unlike traditional models, this model prioritizes individualization of interventions and also strengthens adherence to interventions (McCormack & McCance, 2018). However, implementation challenges of this approach should also be considered. It appears that this approach may have limitations, such as the difficulty of accessing trained professionals or the need for technology to continuously monitor the implementation of interventions. Future research should evaluate the effectiveness of the model through randomized controlled trials. These studies should also assess their long-term outcomes and cost-effectiveness. It should be noted that integrating these methods with telehealth monitoring platforms could increase access to interventions.

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