

## 1. Abstract

**Objective:** Previous studies examining the effects of dance on older adults' well-being have paid little attention to the influence of social interactions, which can vary considerably between different dance forms such as solo, partner or group dancing. Furthermore, no studies have yet been identified that have investigated affective reactions before, during, and after dancing using a dimensional approach. This study aimed to investigate whether the nature of social interactions in different dance forms affects the affective well-being of older adults during and after dancing differently. In addition, it was explored whether the fit between personal motives and incentives provided in the dance sessions and the experience of competence are further factors influencing affective responses.

**Methods:** As part of the dance course at the University for Senior Citizens in Berne, an intervention was conducted that included three dance sessions. Session A comprised exercises and dance combinations performed as solo dance forms. Session B integrated partner exercises involving frequent physical contact, including leading and following. Session C focused on dance sequences performed in group formations with occasional physical contact.

In a preliminary survey, participants' motives for dancing were assessed using the adapted Bernese Motive and Goal Inventory for seniors (BMZI-Seniors). Affective valence and arousal were measured before, during, and immediately after dancing using single-item scales: the Feeling Scale (FS) and the Felt Arousal Scale (FAS), respectively. Immediately after dancing, perceived incentives in line with the BMZI-Seniors, experienced competence, enjoyment, and perceived intensity were assessed using single-item scales from the Flow State Scale (FSS), the Exercise Enjoyment Scale (EES), and the Borg Scale, respectively.

A two-way mixed analysis of variance (ANOVA) was conducted to investigate whether affective well-being was influenced differently in the three dance sessions. Correlation and regression analyses were conducted to control for the potential influence of experienced competence and motive-incentive fit.

**Results:** Overall, there were no significant differences in changes in affective well-being between solo, partner, or group dance sessions (interaction effect). However, the temporal change in well-being varied considerably between individuals. Affective well-being improved significantly across all three dance sessions (main effect of time). Additionally, affective well-being showed higher values in the partner and group dance conditions compared to solo dance. Statistically, a significant difference was found only for affective arousal between the solo and group dance conditions (main effect of session).

Experienced competence emerged as a crucial factor influencing affective well-being positively, showing a strong and statistically significant correlation. Participants exhibited the highest motive scores in the dimension of pleasant and aesthetic movement experiences, which were highly satisfied in all three sessions. However, the fit between personal motives and provided incentives showed only a weak relationship with affective well-being.

**Conclusion:** The results confirmed the findings of previous studies on the overall positive effects of dancing on affective well-being. The study suggests that while the temporal changes in affective responses do not differ significantly between solo, partner, and group

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dancing, dance forms that facilitate frequent social interactions tend to lead to higher overall well-being compared to those with limited social interaction. Whether dancing in a group, in pairs or alone: Experiencing competence seems to be an important prerequisite for positively influencing affective well-being through dancing in all forms of dance – more important than a good motive-incentive fit.

Since dance programs appear to be particularly attractive to people who find intrinsic motivation in the activity itself, they tend to attract people who are better able to maintain their motivation to stay active in the long term compared to those motivated by external factors. This promises long-term participation in a dance program. Considering sustainable health promotion in old age, a dance program that enables frequent social interaction and the experience of competence may therefore be a valuable alternative to other forms of physical activity. Future studies to verify and deepen the results obtained in this pilot study would have to differentiate the different social interactions in dance in more detail in a larger-scale intervention study with repeated measures design.