

# Effect of Jazz Dance on the sexual function of menopausal women: a randomized clinical trial with six and twelve-month follow-up

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## Aims of study

The climacteric period is a predictor of unwanted symptoms in most of the female population, especially in peri- and early post-menopause. These women are also sometimes exposed to genitourinary syndrome, for which age and aging are predictor factors. As conditions such as vaginal atrophy, dyspareunia, and urinary loss, among other symptoms, are common in these women, non-pharmacological therapies such as Physical Exercise (PE), combined with physiotherapy, are discussed in important documents, such as guidelines and consensuses related to public health. Non-conventional modalities have been studied to address the physical and psychological symptoms of menopause. While the mental health benefits of physical exercise are well-established [1], few studies have investigated exercise for sexual function during menopause. This study aims to analyze the short and long-term effects of Jazz Dance compared to a control group on the sexual function of menopausal women, hypothesizing that the Jazz Dance intervention group will experience greater benefits in sexual function compared to the control group post-intervention.

## Study design, materials and methods

A two-arm randomized clinical trial (Jazz Dance Intervention Group (JDIG) (n=23) and Control Group (CG) (n=24)) involving 47 women (average age 53.41±2.8 years) was conducted following CONSORT (Consolidated Standards of Reporting Trials) guidelines. The JDIG underwent a sixteen-week Jazz Dance protocol developed and published specifically for menopausal women [2], while the CG received monthly follow-up calls. Data collection occurred at baseline, post-intervention, six-month follow-up, and twelve-month follow-up. Instruments included a self-administered questionnaire covering personal and clinical questions (developed by the authors) and the Female Sexual Function Index. Descriptive statistics were used for baseline data including percentages, means, and standard deviations, with Chi-square and Fisher's exact tests used for group comparisons. Generalized Estimating Equation (GEE) with post hoc analysis of the Least Significant Difference assessed group x time interaction and isolated variable effects. Intent-to-Treat (ITT) analysis was conducted between exercise and control groups, with adherence to protocol analysis performed to evaluate potential bias from loss to follow-up or intervention protocol changes (significance level set at  $p < 0.05$ ).



Figure 1. Jazz Dance intervention.



Figure 2. Protocol evolution.

## Results

Participant characteristics were homogeneous. The average participant age was  $53.41 \pm 2.8$  years, with an average duration of amenorrhea of  $3.35 \pm 1.58$  years. Regarding sexual function, the orgasm domain showed improvement in the JDIG between baseline and post-intervention to twelve-month follow-up ( $p=0.012$  and  $p=0.012$ ). Satisfaction domain scores increased between baseline and six and twelve-month follow-ups ( $p=0.050$  and  $p<0.001$ , respectively), and between post-intervention and six and twelve-month follow-ups ( $p=0.045$  and  $p=0.003$ , respectively). The desire domain demonstrated higher scores in the JDIG ( $p=0.018$ ), with improvement from baseline to six and twelve-month follow-ups ( $p=0.006$  and  $p<0.001$ , respectively) in the satisfaction domain.

Table 1. Association of stress as predictors of sexual disfunction in the JDIG and CG

Sexual Function				
		B (CI 95%)	IF	$\beta$ ; P
Total	PSS	-0.47 (-0.76 - -0.19)	0.14	-0.47; <b>0.002</b>
	R <sup>2</sup> adjusted;		0.20; 0.22	
	F (df 1; df 2); P		F (1; 40)=11.43; 0.002	
JDIG	PSS	-0.59 (-1.1 - -0.9)	0.24	-0.48; <b>0.023</b>
	R <sup>2</sup> adjusted;		0.19; 0.23	
	F (df 1; df 2); P		F (1; 20)=6.04; 0.023	
CG	PSS	-0.42 (-0.77 - -0.06)	0.16	-0.50; <b>0.022</b>
	R <sup>2</sup> adjusted;		0.21; 0.25	
	F (df 1; df 2); P		F (1; 18)=6.28; 0.022	

## Discussion

With 85.62% participant adherence to the protocol and considering that is a non-invasive intervention with no complications, Jazz Dance emerged as a safe non-pharmacological therapy for this population. Dance has evidenced biopsychosocial benefits in older women [3], and in this study, Jazz Dance characteristics seemed to reflect in sexual function, offering an alternative for managing domains such as desire, satisfaction, and orgasm in the long term. These findings are significant considering the lack of studies addressing this intervention for sexual function outcomes in menopausal women, motivating further research with longer intervention durations for even more significant results. Other interventions like belly dance, focusing on pelvic movements, have shown positive outcomes for middle-aged women. Therefore, future studies could explore dance protocols with specific emphasis of this body part to benefit pelvic and pelvic floor structures.

## Conclusions

Jazz Dance proves to be a safe, effective, and cost-efficient practice for managing sexual function in menopausal women, though long-term benefits necessitate longer intervention periods. Even participants with less than 75% class attendance (analyzed by ITT) experienced symptomatology benefits, though greater adherence to the protocol yielded more significant results.

## References

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