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Gentle Gymnastics and Perceived Psychophysical Well-Being in Adults and Older Adults: An Exploratory Observational Study

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A B S T R A C T

Objective: This study aimed to explore the associations between age, duration, and frequency of participation in gentle gymnastics and the perceived psychophysical benefits in an adult and older population.

Methods and Materials: A cross-sectional observational study was conducted on a sample of adults and older adults aged 40 years and older engaged in gentle gymnastics. Data were collected using an ad hoc, non-validated self-report questionnaire assessing demographic characteristics, exercise practice patterns, and perceived physical and psychological benefits.

Findings: Eighty participants were included in the study. Overall, participants reported high levels of perceived psychological well-being, with 93.7% reporting improved mood after sessions and 92.5% reporting high overall satisfaction. Seventy-five percent of participants reported perceived improvements in sleep quality, while 90.1% reported a positive influence of physical activity on stress levels. Age was significantly and negatively associated with perceived improvements in sleep quality ($\rho = -0.37$; $p < .001$), mood ($\rho = -0.36$; $p < .001$), and fatigue reduction ($\rho = -0.29$; $p = .010$). No significant associations were found between age or weekly frequency of practice and most perceived physical capacities. However, practice duration showed a weak positive association with perceived physical endurance ($\rho = 0.28$; $p = .011$). A significant association was observed between initial motivation and the type of activity practiced ($\chi^2(1) = 13.47$; $p < .001$; $\varphi = 0.41$).

Conclusion: Gentle gymnastics was perceived by participants as mainly associated with psychological and general well-being benefits rather than marked improvements in perceived physical capacities. These findings highlight the importance of individualized and adapted physical activity programs in promoting psychophysical well-being and quality of life among adult and older populations.

Keywords: *Adapted Physical Activity, Gentle Gymnastics, Psychophysical Well-Being, Perceived Benefits, Active Aging*

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1. Introduction

Physical inactivity represents one of the main risk factors for functional decline in adult and older populations, contributing to the progressive loss of autonomy, deterioration in quality of life, and increased incidence of chronic diseases (1-3). According to the World Health Organization, a substantial proportion of individuals over the age of 60 do not meet the recommended levels of physical activity, with significant implications for public health and healthcare costs (4). A growing body of evidence indicates that sedentary behavior is a critical determinant of psychophysical decline and loss of functionality in older adults, increasing the risk of disability and limitations in activities of daily living (2, 5).

With advancing age, a progressive decline in functional parameters is observed, characterized by reductions in muscle strength, impairments in balance, decreased joint flexibility, and slower coordination abilities (6, 7). These changes compromise functional autonomy and increase the risk of falls, disability, and dependency, negatively affecting the quality of life of older individuals (8). In this context, maintaining residual physical capacities through adapted physical activity programs represents a key strategy to slow functional decline and preserve independence in later life (9, 10).

The scientific literature supports that adapted physical activity interventions, structured at low intensity with progressive workloads, are effective in counteracting these processes, promoting both functional maintenance and improvements in overall psychophysical well-being (11). These interventions act not only on motor capacities but also on body awareness and the perception of well-being (12, 13). Such evidence reinforces the role of adapted exercise in health promotion strategies for adult and older populations (14, 15). Moreover, the psychological benefits associated with physical activity include increased body awareness, improved health perception, and reduced perceived stress levels (16, 17). In the context of adapted physical activity, psychophysical well-being refers to the subjective perception of the interaction between physical, psychological, and emotional conditions associated with daily functioning and quality of life. Body awareness may be defined as the conscious perception of body posture, movement, and bodily sensations during both physical activity and everyday actions.

Within this framework, gentle gymnastics can be understood as a form of low-impact adapted physical activity, characterized by exercises focusing on joint mobility, postural control, breathing, and coordination. This type of structured physical activity is particularly accessible and safe for adult and older populations and appears effective in maintaining functional capacities, preventing falls, and improving psychological and social well-being, especially when practiced regularly (18-20). A key factor in the effectiveness of physical activity interventions in this population is the possibility of tailoring gentle gymnastics sessions. Even in group-based settings, it is important to include exercise variations that can be adapted to individual participants, taking into account the heterogeneity of their functional and clinical characteristics. International guidelines emphasize the importance of adapting exercise to individual capacities, health status, and personal goals in order to maximize benefits and minimize the risk of adverse events (21). Non-individualized approaches may reduce adherence and limit the effectiveness of interventions, whereas personalized programs promote greater active participation, higher perceived self-efficacy, and the long-term maintenance of an active lifestyle (22-24). In this regard, adapted physical activity programs designed around individual characteristics are associated with better continuity of participation and a more positive impact on quality of life and perceived well-being (25, 26).

Despite the growing interest in low-intensity and adapted exercise programs, the current literature has primarily focused on objective physical outcomes, while relatively little attention has been paid to the subjective perception of psychophysical benefits, particularly in real-world settings. Moreover, the role of individual characteristics—such as age, motivation, and practice-related factors—in shaping these perceptions remains underexplored. In particular, the analysis of participants' perceived experiences, including well-being, satisfaction, and body awareness, represents a key aspect for evaluating the sustainability and long-term effectiveness of physical activity interventions (27, 28).

In light of these considerations, the present study aims to explore the associations between demographic and practice-related characteristics of gentle gymnastics and the perceived physical and psychological benefits reported by adult and older participants, in order to contribute to a better understanding of the role of adapted physical activity in promoting psychophysical well-being.

2. Methods and Materials

2.1 Study design

The study was conducted using a descriptive observational design with an exploratory approach, aimed at investigating the subjective perception of psychophysical benefits associated with the practice of gentle gymnastics in adult and older populations. No intervention was implemented or controlled by the researchers; the study was limited to the collection of self-reported data related to ongoing physical activity experiences.

2.2 Participants

The sample consisted of 80 participants aged 40 years and older, including adult and older participants, with a higher proportion of females (77.5%) compared to males (15.0%). Participants were recruited using a convenience sampling approach. All participants regularly practiced gentle gymnastics in various fitness centers located in Southern Italy.

Participants aged 40 years or older who regularly engaged in gentle gymnastics and provided informed consent were included in the study. Individuals who did not complete the questionnaire in full or who presented difficulties that could compromise the reliability of self-reported responses were excluded.

2.3 Data collection instrument

Data were collected through an ad hoc, non-validated, self-report questionnaire administered online. The questionnaire was designed to gather information on participants' sociodemographic characteristics, motivations for participation, duration and frequency of practice, as well as perceived physical benefits associated with gentle gymnastics.

The instrument was developed by researchers with expertise in sport sciences and adapted physical activity, based on existing literature on psychophysical well-being. Although not formally validated, the questionnaire was designed to ensure content coherence, clarity of items, and suitability for the target population. Prior to administration, the questionnaire was reviewed by researchers with expertise in adapted physical activity and psychophysical well-being in order to improve content relevance and item clarity. A preliminary pilot administration was also conducted on a small group of adults to verify comprehensibility and ease of completion. However, the instrument was not formally validated, and the findings should therefore be interpreted as subjective self-reported perceptions rather than objective measures of psychophysical well-being.

A specific section of the questionnaire was dedicated to the assessment of psychological and perceptual well-being, including aspects such as sleep quality, stress levels, mood, body awareness, and overall satisfaction with the activity. Responses were primarily collected using five-point Likert scales, where higher scores indicated a more positive perception of the construct being assessed.

Example items included: "How do you feel after the sessions?", "Have you perceived changes in your sleep quality since starting gentle gymnastics?", and "To what extent do you feel more aware of your body during daily activities?". Higher scores reflected more positive subjective perceptions.

2.4 Context and characteristics of the activity

Participants attended pre-existing gentle gymnastics classes offered in fitness centers and physical activity facilities, with no involvement of the researchers in the design or delivery of the sessions. Based on self-reported data, most participants reported practicing gentle gymnastics two to three times per week, although lower and higher weekly frequencies were also reported. Session duration generally ranged between 45 and 60 minutes.

Sessions primarily included exercises focusing on joint mobility, balance, functional strength, and postural control, as well as breathing and relaxation activities. In some cases, simple equipment such as sticks, fitballs, and elastic bands was used. Information regarding the characteristics of the activity was collected exclusively through participants' self-reported responses.

2.5 Procedure

The questionnaire was administered in a single session, anonymously and on a voluntary basis. Prior to completion, all participants were informed about the aims of the study and data handling procedures, and provided informed consent to participate.

2.6 Ethical considerations

All participants completed the same online questionnaire within the same data collection period. Standardized instructions regarding the study aims and questionnaire

administration procedures were provided prior to participation in order to ensure response consistency and facilitate informed understanding of the questionnaire. All participants provided informed consent prior to inclusion in the study. The research was conducted in accordance with the principles of the Declaration of Helsinki. The study is part of the research project entitled *"Psychophysical perception and body awareness in school and sports contexts through observational and non-invasive tools"*, approved by the Ethics Committee of Pegaso University (Prot./E 004726, 15/07/2025).

2.7 Statistical analysis

Statistical analyses were performed using JASP software. Descriptive statistics were used to summarize sample characteristics and describe the distribution of questionnaire responses through absolute frequencies and percentages. Missing data were retained in descriptive analyses and reported transparently in the tables. For inferential analyses, cases with missing values for the variables involved in a specific analysis were excluded using pairwise deletion.

Given the exploratory nature of the study and the type of variables, non-parametric analyses were conducted. Relationships between ordinal variables were examined using Spearman's rank correlation coefficient, in order to assess associations between age groups and subjective experience of practice, as well as between variables related to perceived psychophysical well-being.

Associations between selected categorical variables were analysed using Pearson's Chi-square test or Fisher's exact test when expected cell frequencies were low. In particular, the association between initial motivation and type of activity most frequently practiced was examined. Effect size was estimated using the phi coefficient. The test was applied only to contingency tables meeting the required validity assumptions.

All inferential analyses were conducted for exploratory purposes and interpreted with caution, in line with the observational design of the study. Statistical significance, where applicable, was set at $p < 0.05$.

3. Results

Overall, participants reported high levels of perceived psychological well-being, while improvements in physical capacities appeared more moderate. A total of 80 participants were included, whose characteristics are presented in Table 1. The sample consisted predominantly of females (77.5%), while males accounted for 15.0%; 7.5% of participants did not report sex.

The age distribution showed a higher representation of the 61–70 age group (57.5%), followed by the 51–60 (18.8%) and >70 (18.8%) groups, while the 40–50 age group was less represented (5.0%).

Regarding practice characteristics, the most frequent initial motivation was medical or physiotherapy advice (67.5%), whereas personal desire to stay fit was reported by 32.5% of participants. Most participants had been practicing gentle gymnastics for more than 2 years (65.0%), while 21.3% reported a duration of 1–2 years, 11.3% between 6 and 12 months, and 2.5% less than 6 months.

Participation frequency was mainly 2–3 sessions per week (90.0%); 5.0% reported more than 3 sessions per week and 3.8% once per week (1.3% missing data).

In terms of perceived outcomes (Likert scale 1–5), participants reported high median values for post-session mood improvement (median = 5; IQR = 4–5) and overall satisfaction (median = 4; IQR = 4–5). Perceived changes in strength (median = 4; IQR = 4–5) and endurance during activity (median = 4; IQR = 4–4) were also generally positive, whereas changes in sleep quality showed more moderate values (median = 3; IQR = 3–4).

Table 1. Participant characteristics and practice profile (N = 80)

Variable	Category / Summary	n (%) or Median (IQR)
Sex	Female	62 (77.5)
	Male	12 (15.0)
	Missing	6 (7.5)
Age group	40–50 years	4 (5.0)
	51–60 years	15 (18.8)
	61–70 years	46 (57.5)
	>70 years	15 (18.8)
Initial motivation	Medical/physiotherapy advice	54 (67.5)
	Personal desire to stay fit	26 (32.5)
Practice duration	<6 months	2 (2.5)

	6–12 months	9 (11.3)
	1–2 years	17 (21.3)
	>2 years	52 (65.0)
Weekly frequency	1 session/week	3 (3.8)
	2–3 sessions/week	72 (90.0)
	>3 sessions/week	4 (5.0)
	Missing	1 (1.3)
Perceived outcomes (Likert 1–5)	Strength (self-rated change)	4 (4–5)
	Flexibility (current)	4 (3–4)
	Endurance (during activity)	4 (4–4)
	Sleep quality change	3 (3–4)
	Mood after sessions	5 (4–5)
	Overall satisfaction	4 (4–5)

Note. Categorical variables are reported as n (%). Likert-scale outcomes are reported as median (IQR). IQR = interquartile range. Percentages are calculated on the total sample (N = 80). Higher Likert scores indicate a more positive perceived outcome.

Regarding psychological responses and perceived physical capacities associated with the practice of gentle gymnastics, overall positive trends were observed.

With respect to sleep quality, 75% of participants reported improvements ranging from slight to marked, while 25% reported no significant changes. The majority of participants also indicated a positive influence of physical activity on stress levels, with 90.1% reporting a “quite” or “very” positive effect.

Notably, improvements in post-session mood were reported by 93.7% of participants, with 63.7% stating that they felt “much better” after the sessions. High levels of body awareness during the activity were reported by 92.6% of participants, while 86.3% indicated increased attention to their body outside the sessions, for example in daily posture.

Regarding organizational aspects, the initial assessment prior to starting the activity was most commonly conducted through observation and instructor interview (82.5%), whereas only a small proportion of participants reported the use of personalized functional tests (2.5%).

Regarding the subjective perception of how long positive sensations persisted during periods without activity, 58.8% of participants reported perceiving positive sensations for periods ranging from one to three months, while 16.3% reported perceptions lasting longer than three months. Overall, satisfaction with gentle gymnastics was high, with 92.5% of participants reporting that they were quite or very satisfied with the activity.

Descriptive data related to psychological responses and perceived physical capacities are presented in Table 2.

Table 2. Descriptive statistics of psychophysical well-being, body awareness, and overall satisfaction (N = 80)

Variable	Response category (Likert)	n	%
Change in sleep quality since starting gentle gymnastics	No change (2)	20	25
	Slightly improved (3)	21	26.3
	Moderately improved (4)	23	28.7
	Very improved (5)	16	20.0
Perceived influence of physical activity on stress level	No influence (2)	4	5.0
	Little (3)	4	5.0
	Quite a lot (4)	33	41.3
	Yes, positively (5)	39	48.8
Perceived mood improvement after sessions	No difference (3)	5	6.3
	Slightly better (4)	24	30.0
	Much better (5)	51	63.7
Body awareness during physical activity	Poorly aware (3)	5	6.3
	Quite aware (4)	53	66.3
	Very aware (5)	21	26.3
Increased body awareness outside the sessions (e.g., daily posture)	Not at all (2)	2	2.5
	A little (3)	9	11.3
	Partly (4)	25	31.3
	Very much (5)	44	55.0
Type of initial assessment before starting the activity	No assessment (3)	12	15.0
	Observation and interview with the instructor (1)	66	82.5

	Personalized functional tests (2)	2	2.5
Perceived persistence of positive sensations after periods without activity	Less than 1 month (1)	20	25.0
	Between 1 and 3 months (2)	47	58.8
	More than 3 months (3)	13	16.3
Overall satisfaction with gentle gymnastics	Poorly satisfied (2)	2	2.5
	Neither satisfied nor dissatisfied (3)	4	5.0
	Quite satisfied (4)	36	45.0
	Very satisfied (5)	38	47.5

Note. Data are reported as absolute frequencies (n) and percentages (%). All variables were measured using five-point Likert scales. Percentages are calculated on the total sample (N = 80). Response categories not shown in the table were available in the questionnaire but were not selected by any participant.

Subsequently, correlations between practice-related variables (age group, duration of practice, and weekly frequency) and various physical and psychosocial outcomes were analysed using Spearman's rank correlation coefficient.

With regard to age group, no significant correlations were found with strength, endurance, or flexibility. In contrast, age showed a significant negative correlation with perceived fatigue ($\rho = -0.29$; $p = .010$) and moderate negative correlations with improvements in sleep quality ($\rho = -0.37$; $p < .001$) and mood ($\rho = -0.36$; $p < .001$), indicating slightly lower perceived improvements in sleep quality, mood, and fatigue reduction in the older age groups. Practice duration was positively associated with perceived physical endurance ($\rho = 0.28$; $p = .011$), while no significant associations were found with fatigue, sleep, or mood. Finally, weekly participation frequency did not show statistically significant correlations with flexibility, endurance, fatigue, sleep, or mood, although a non-significant trend toward improved mood with increasing frequency was observed ($\rho = -0.20$; $p = .081$). The results of the correlation analyses are presented in Table 3.

Table 3. Spearman's rank correlations between practice-related variables and perceived physical and psychological outcomes

Independent variable	Outcome	Spearman's ρ	*p* value	Interpretation
Practice duration	Endurance	0.28	.011	Weak positive association
	Fatigue	0.07	.555	No association
	Sleep quality	0.11	.356	No association
	Mood	0.16	.158	No association
Weekly frequency	Flexibility	0.08	.496	No association
	Endurance	−0.16	.154	No association
	Sleep quality	−0.14	.212	No association
	Mood	−0.20	.081	Non-significant trend
	Fatigue	−0.03	.776	No association
Age group	Strength	-0.194	.084	No association
	Endurance	-0.200	.075	No association
	Flexibility	-0.053	.642	No association
	Fatigue	−0.29	.010	Lower perceived fatigue improvement in older age groups
	Sleep quality	−0.37	< .001	Lower perceived sleep improvement in older age groups
	Mood	−0.36	< .001	Lower perceived mood improvement in older age groups

Note. Spearman's rank correlation coefficient (ρ) was used to assess associations between ordinal variables. *p* values < .05 were considered statistically significant. Negative coefficients indicate that higher age-group categories were associated with lower perceived scores for the corresponding outcome variables.

Finally, as shown in Table 4, a significant association was found between initial motivation and the type of activity most frequently practiced.

Specifically, among participants who started based on medical or physiotherapy advice, the reported activity was exclusively postural gymnastics/stretching (54/54), whereas moderate walking/bodyweight exercises were reported only by those who started for personal reasons (6/26).

Since some expected frequencies were below 5 (and one cell had a zero count), the association was assessed using Fisher's exact test, which was found to be significant ($p < .001$). For descriptive purposes, Pearson's Chi-square test also indicated a significant association ($\chi^2(1) = 13.47$, $p < .001$; $\varphi = 0.41$).

The log odds ratio was −3.543 (95% CI: −6.464, −0.622), indicating a strong asymmetry in the distribution of responses between groups.

Table 4. Association between initial motivation and type of activity practiced

Initial motivation	Walking / bodyweight exercises	Postural gymnastics / stretching	Total
Medical or physiotherapeutic advice	0	54	54
Personal desire to stay fit	6	20	26
Total	6	74	80
Test	Value	df	*p*
Pearson's χ^2	13.47	1	< .001
Fisher's exact test	—	—	< .001
φ (phi)	0.41	—	—

Note. Observed frequencies are reported. The type of activity refers to the predominant modality reported within the broader gentle gymnastics program. Pearson's chi-square test was applied, and Fisher's exact test was also reported due to the presence of low expected frequencies. Effect size was estimated using the phi coefficient.

1. Discussion and Conclusion

The present study examined, in a real-world practice context, the associations between individual characteristics, participation patterns in gentle gymnastics, and the perceived psychophysical benefits in an adult and older population. Descriptive statistics indicated that the sample consisted predominantly of women and individuals belonging to older age groups, with a higher representation of participants aged 61–70 and over 70 years. This demographic imbalance should be considered when interpreting the findings, as perceptions related to adapted physical activity and psychophysical well-being may differ according to sex and age-related characteristics. Moreover, most participants had been engaged in gentle gymnastics programs for more than two years and reported a weekly frequency of two to three sessions, thus characterizing a sample largely composed of regular practitioners consistently involved in adapted physical activity programs.

In this context, the high values observed in descriptive measures related to mood, overall satisfaction, and perceived psychological well-being suggest that gentle gymnastics is experienced as a consolidated and positively integrated activity within daily routines, rather than as an intervention aimed at improving physical performance. This interpretation is consistent with recent evidence highlighting the central role of low-intensity physical activity in promoting psychological well-being, body awareness, and quality of life in older populations, particularly when the practice is continuous and tailored to individual characteristics (29).

The presence of high median values for subjective well-being indicators, alongside more moderate values for certain perceived physical dimensions, may be explained by the non-competitive and low-impact nature of gentle gymnastics, which prioritizes safety, gradual progression, and the quality of the movement experience (4, 30), rather than improvements in physical performance parameters. Recent studies highlight that, in adult and older populations, low-impact physical activity programs tend to produce more pronounced benefits at the psychological and perceptual level (31), whereas physical adaptations are often less marked or less clearly perceived, particularly in the absence of specific and progressive training stimuli (32).

The analyses revealed several noteworthy correlations. In particular, age was significantly associated with certain dimensions of subjective well-being. Specifically, older participants reported slightly lower perceived improvements in sleep quality, mood, and fatigue reduction. Although the correlations were moderate, these findings may reflect age-related differences in subjective perception, functional condition, or expectations regarding the benefits of physical activity. Therefore, the results should be interpreted as subjective self-reported perceptions rather than objective indicators of psychophysical adaptation.

These findings are consistent with the literature indicating that adapted physical activity promotes emotional regulation, sleep quality, and perceived vitality in older adults, even without exposure to high-intensity exercise stimuli (16, 17, 33, 34)). From this perspective, gentle gymnastics appears to function more as a supportive tool for emotional regulation, subjective well-being, and daily fatigue management than as a stimulus for physical performance enhancement per se. This interpretation is consistent with both the descriptive findings and the existing

literature on adapted physical activity in older populations (35).

In contrast, no significant correlations were found between age and variables related to perceived physical capacities, such as strength, endurance, and flexibility. These findings should be interpreted cautiously, as the study relied exclusively on subjective self-reported perceptions and did not include objective functional or physiological assessments. The relatively moderate perception of physical changes may reflect the low-impact and non-performance-oriented characteristics of gentle gymnastics, which are generally focused on controlled movement, body awareness, and perceived well-being rather than measurable performance outcomes (36). In this regard, the literature indicates that meaningful functional adaptations in terms of strength and endurance typically require specific and progressive training stimuli, which are less likely to be present in low-intensity physical activity programs such as gentle gymnastics (2, 37-39). Furthermore, previous literature suggests that subjective perceptions of physical capacity do not always correspond to objectively measurable functional changes, particularly in older adult populations engaged in adapted physical activity programs (24, 40).

With regard to practice-related characteristics, neither overall duration of activity nor weekly frequency showed significant correlations with most of the physical and psychological variables considered. However, the analysis of the association between initial motivation and the type of activity most frequently practiced revealed a significant relationship. Participants who started gentle gymnastics based on medical or physiotherapy advice reported postural gymnastics and stretching as the predominant activity modality, whereas walking and bodyweight exercises were reported only by participants motivated by a personal desire to stay fit. This finding suggests that healthcare or rehabilitation-related referral may influence not only participation in adapted physical activity programs, but also the type of exercise modality selected or recommended, highlighting the role of healthcare professionals in guiding appropriate physical activity choices in adult and older populations (41, 42).

Overall, the findings of this study support the hypothesis that gentle gymnastics appears to be mainly associated with perceived psychological well-being, quality of life, and perceived health, rather than in enhancing perceived physical capacities. This reinforces the importance of a person-centered and individualized approach, in which the goals of physical activity are tailored to the functional, emotional, and motivational needs of the individual, rather than being oriented toward performance-related parameters, as suggested by contemporary models of exercise for health and active aging (14, 43). Furthermore, the importance of considering the perceptual dimension of physical activity is highlighted, as it may influence both adherence to practice and the overall quality of program delivery (44).

1.1 Study limitations

This study presents several limitations that should be considered when interpreting the findings. First, the cross-sectional observational design does not allow causal inferences to be established. Second, the use of an ad hoc non-validated questionnaire may have introduced measurement limitations and subjective interpretation bias. The findings therefore reflect self-reported perceptions rather than objectively measured psychophysical outcomes. In addition, no objective assessments of strength, balance, flexibility, sleep quality, or stress were performed. The use of a convenience sample, the predominance of female participants, and the heterogeneity of age groups further limit the generalizability of the results. Finally, the absence of a control group prevents comparisons with individuals not engaged in gentle gymnastics practice. In addition, the predominance of female participants and the uneven distribution across age groups may have influenced the perceived responses and reduced the representativeness of the sample. Variables related to the persistence of perceived benefits were based exclusively on retrospective subjective perceptions and did not derive from longitudinal follow-up assessments.

1.2 Implications and future directions

Despite these limitations, the study provides useful insights for adapted and preventive practice, suggesting that gentle gymnastics may be perceived as a supportive adapted physical activity practice associated with psychophysical well-being. Future research should incorporate objective measures of physical performance, expand the sample size, and adopt longitudinal or experimental designs to further investigate the effectiveness of personalized gentle gymnastics programs.

2. Conclusion

Overall, the findings suggest that gentle gymnastics is primarily associated with psychological and general well-

being benefits, rather than with marked improvements in perceived physical capacities. The lack of significant relationships between practice frequency and duration and most of the variables considered indicates that, in this context, the quality of the experience and individual characteristics may play a more relevant role than the quantity of exercise performed. The significant association between initial motivation and the type of activity practiced further highlights the important role of healthcare professionals in guiding the choice of adapted physical activity modalities.

Overall, these findings reinforce the value of gentle gymnastics as an adapted physical activity practice associated with perceived psychological well-being and quality of life, emphasizing the importance of individualized and person-centered approaches in physical activity programs for adult and older populations. Future studies, involving larger samples and incorporating objective measures of functional capacity, may further clarify the role of gentle gymnastics in active and healthy aging pathways.

Authors' Contributions

F.D.D. and T.D.I. conceived and designed the study. G.G., M.T., V.S., and C.G. contributed to data collection and organization. G.G. and V.S. performed the statistical analyses. F.D.D., G.G., C.G., M.T., V.S., and T.D.I. contributed to the interpretation of the results. F.D.D. drafted the manuscript. All authors contributed to manuscript revision, approved the final version, and agreed to be accountable for all aspects of the work.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data sharing is available upon request from the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The research was conducted in accordance with the principles of the Declaration of Helsinki. The study is part of the research project entitled "Psychophysical perception and body awareness in school and sports contexts through observational and non-invasive tools", approved by the Ethics Committee of Pegaso University (Prot./E 004726, 15/07/2025).

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