Journal of Sports and Exercise Medicine

Perceived Physical Progress and Mental Improvement Among Midlife Women Practicing the 3D Movement Method: A Brief Report from a Cross-Sectional Survey

Zarina Manaenkova[1,*], Ekaterina A. Santanna[2]

[1]Independent Researcher, Newport Coast, USA

[2]Independent Researcher, Belo Horizonte, Brazil

Research Article

Open Access & Peer-Reviewed Article

DOI: 10.14302/issn.2694-2283.jsem-25-5827

Corresponding author:

Zarina Manaenkova, Independent Researcher, Newport Coast, USA

Keywords:

menopausal transition, 3D Movement Method, perceived progress, deliberate practice, women's health, mind–body practice

Received: November 06, 2025

Accepted: December 06, 2025

Published: December 10, 2025

Academic Editor:

Ian James Martins, Principal Research Fellow, Edith Cowan University

Citation:

Zarina Manaenkova, Ekaterina A. Santanna (2025) Perceived Physical Progress and Mental Improvement Among Midlife Women Practicing the 3D Movement Method: A Brief Report from a Cross-Sectional Survey. Journal of Sports and Exercise Medicine - 1(3):01-10. https://doi.org/10.14302/issn.2694-2283.jsem-25-5827

Abstract

Background

Mind–body exercises are frequently used to support well-being during the menopausal transition, but perceived physical and psychological outcomes associated with practices such as the 3D Movement Method have not been quantitatively assessed.

Objective

To examine associations between characteristics of the 3D Movement Method and women's self-reported physical and mental improvement during the menopausal transition.

Methods

Cross-sectional survey data from 330 women aged ≥ 35 years were analyzed using general linear models. Perceived physical progress and mental improvement were each assessed using single-item, 15-point scales. Independent variables included practice frequency, duration of experience, explanation clarity, satisfaction, baseline health status (SF-36 Physical and Mental Component Summary scores), age, and menopausal status.

Results

The model for physical progress was significant, $F(16, 144) = 6.26$, $p < .001$, $R^2 = .41$. Greater practice frequency, longer experience, clearer instructional explanations, and higher satisfaction were each independently associated with higher perceived physical progress. The mental improvement model was also significant, $F(16, 96) = 2.25$, $p = .008$, $R^2 = .27$, identifying satisfaction as the sole significant predictor. Baseline health, age, and menopausal status did not predict outcomes in either model.

Conclusions

Perceived physical progress was shaped by structured engagement parameters consistent with deliberate-practice principles, whereas perceived mental improvement was primarily linked to subjective satisfaction, a pattern compatible with

motivational accounts of engagement. The 3D Movement Method may support women's health across the menopausal transition when designed to optimize clarity, engagement, and experiential quality.

Introduction

The menopausal transition is a multidimensional life phase characterized by hormonal fluctuations and a range of commonly reported symptoms, including vasomotor disturbances, joint discomfort, sleep disruption, and affective instability such as mood variability and heightened emotional reactivity [1, 2]. Although hormone therapy can relieve symptoms, many women seek non-pharmacological strategies because of contraindications, personal preference, or perceived safety concerns [3, 4].

Evidence for physical activity and mind-body movement in midlife women has expanded, with interventions such as yoga, tai chi, and Pilates associated with improvements in mobility, emotional regulation, and sleep quality [5, 6]. Proposed mechanisms include physiological adaptation and attentional modulation, defined as shifts in focus and perceptual sensitivity that influence how movements are executed, as well as somatic awareness and enhanced emotional self-regulation [7, 8].

In this study, the 3D Movement Method created by Zarina del Mar is examined as an example of a contemporary mind–body practice (a detailed description is provided in the Overview section). Existing qualitative work has documented perceived benefits among long-term practitioners, including improvements in mobility, movement ease, and physical comfort, as well as emotional clarity, stress regulation, and a greater sense of internal balance [4]. To date, empirical evidence on the method derives from qualitative interview studies rather than quantitative survey designs.

The present study examines perceived physical progress and perceived mental improvement among midlife women engaging in the 3D Movement Method, using a quantitative approach to test associations between practice parameters and self-reported outcomes.

The primary objective was to determine whether practice characteristics predict perceived improvement. Specifically, we tested whether practice frequency, duration of experience, clarity of instructional explanation, and overall satisfaction predicted perceived physical progress after adjustment for baseline health status, age, and menopausal status. The same parameters were evaluated as predictors of perceived mental improvement under identical covariate controls. Patterns of association across physical and mental domains were compared to identify outcome-specific predictors.

We hypothesized that higher practice frequency, longer duration of engagement, clearer instructional delivery, and stronger satisfaction would each independently predict progress in both domains and that these associations would remain significant after covariate adjustment, indicating that perceived improvement is more closely linked to engagement-related factors than to participant characteristics.

Theoretical Framework

This study examines perceived change through the lenses of deliberate practice and self-regulated learning. Deliberate practice refers to structured, goal-directed attempts in which performance feedback informs subsequent refinement [9]. In movement contexts, concise task cues focus attention and support targeted adjustments to perceptual and motor representations. Meta-analytic evidence demonstrates that such adaptations depend on sustained attention and ongoing monitoring of execution [10].

Self-regulated learning describes the cycle through which these adaptations occur. Learners plan their approach, monitor performance, interpret discrepancies, and revise strategy [11]. These processes are especially relevant in self-directed formats that do not prescribe levels, progression steps, or externally defined performance criteria.

Overview of the 3D Movement Method

The 3D Movement Method is a self-directed mind-body approach available in multiple formats. Users may purchase recorded programs with structured verbal guidance, participate in online workshops, join monthly online meetings, or engage with freely available instructional material on social media. Session scheduling and duration are determined by the user. Practice may take the form of short movement segments performed as brief movement snacks, or users may combine sequences into longer sessions, repeat a sequence, or perform a single sequence slowly.

The method employs fluid, multi-joint movement patterns across sagittal, frontal, and transverse planes. Spiral motions, wave-like mobilizations, and reach-and-shift patterns illustrate its multiplanar organization. These patterns emphasize perceptual awareness, coordinated control, and qualitative refinement rather than repetition of fixed routines.

The method does not incorporate predefined levels, repetition targets, or prescribed progression schemes. Users adjust amplitude, sequencing, and pacing according to real-time perceptions of ease, clarity, and precision. Verbal cues provide the principal instructional framework, specifying directional intent, spatial orientation, and qualitative features of movement. In this unsupervised environment, improvement depends on the user's ability to interpret cues, monitor execution, and adjust strategy.

This structure aligns with deliberate practice and self-regulated learning and provides the rationale for examining practice frequency, experience, instructional clarity, and satisfaction as predictors of perceived improvement.

Methods

A cross-sectional survey design was employed as part of a larger mixed-methods investigation of the 3D Movement Method and women's health during the menopausal transition [13]. Women aged 35 years and older with prior experience practicing the 3D Movement Method and able to complete the survey in Russian or English were invited to participate. Recruitment occurred between April and May 2025 through posts on Instagram and Telegram and through direct email distribution to the instructor's subscriber list. The invitation described the study aims and provided a secure survey link. Because recruitment occurred through platforms associated with the 3D Movement Method, the cohort constituted a self-selected convenience sample of active or interested practitioners rather than a probability sample.

Participants

A total of 330 respondents completed the questionnaire. After listwise deletion of cases with missing data on model variables, analytic samples comprised 161 respondents for the physical-progress model and 113 respondents for the mental-improvement model. Descriptive characteristics for the full sample are reported elsewhere [13]; briefly, participants were predominantly university-educated and professionally employed, residing across Russia, the United States, and several European countries. Age was categorized as 35–44 years (n = 94), 45–54 years (n = 125), 55–64 years (n = 50), and 65 years or older (n = 18). Menopausal status was self-identified as premenopausal (n = 110; 33.3%), perimenopausal (n = 63; 19.1%), postmenopausal (n = 120; 36.4%), or unclear (n = 22; 6.7%).

Measures

Two outcome variables were analyzed. Perceived physical progress was assessed with a single 0–15 item prompting participants to rate physical changes they felt had occurred since starting the practice. Perceived mental improvement was assessed with an analogous 0–15 item capturing self-perceived changes in mental or emotional well-being. Single-item evaluations were used to minimize respondent burden and to capture participants' global appraisal of change.

Practice-related indicators included current frequency of practice, duration of experience with the method, perceived clarity of instructional explanations, and satisfaction with the practice. Frequency was recorded on a three-level ordinal scale distinguishing occasional or rare use, several times per week, and daily or nearly daily engagement. Duration of experience was reported as ordered categories ranging from less than one month to more than three years. Instructional clarity was assessed with a single item asking participants to rate how clear and comprehensible the instructor's verbal explanations were during practice. Satisfaction was measured with a single-item rating scale. Objective adherence was not monitored; participants provided retrospective reports of their typical practice frequency and perceived engagement.

Baseline health status was measured using the Short Form-36 Health Survey, which yields norm-referenced Physical and Mental Component Summary scores [12]. Age group and menopausal status were included as categorical covariates.

Procedure

The questionnaire was administered online using Google Forms and Yandex Forms, accessible on mobile and desktop devices. Electronic informed consent was obtained prior to survey access. Participants generated unique anonymous codes to preserve confidentiality. Ethical approval was granted by the Center of Science and Ethics, TSU (Protocol No. 25410_A1_38).

Data analysis

Associations between practice-related indicators and perceived outcomes were examined using univariate general linear models estimated separately for physical progress and mental improvement. Each model included practice frequency, duration of experience, instructional clarity, satisfaction, SF-36 Physical and Mental Component Summary scores, age group, menopausal status, and the Age × Menopausal Status interaction. Ordinal predictors were entered as linear trends; continuous predictors were mean-centered prior to estimation. Type III sums of squares were used to evaluate the unique contribution of each term. Statistical significance was defined as $\alpha = .05$ (two-tailed). Effect sizes were reported as partial η^2, and coefficients as unstandardized regression weights with 95% confidence intervals.

Model assumptions were evaluated using Levene's test, Q–Q plots and histograms of residuals, and variance inflation factors. Missing data were handled via listwise deletion. Analyses were conducted in IBM SPSS Statistics version 27, and no custom scripts were used.

Results

Descriptive statistics

Descriptive characteristics of the full cohort (N = 330) were reported elsewhere [13]. Here we summarize the variables used in the present models. In the analytic subsamples, the perceived physical progress score averaged 9.2 (SD = 3.5) on the 0 to 15 scale (n = 161), and the perceived mental improvement score averaged 8.7 (SD = 3.8) (n = 113). Practice frequency was distributed across three tiers, with most respondents reporting several times per week or daily engagement. Duration of experience ranged from less than one month to more than three years, with a median category of 6 to 12 months.

Instructional clarity, rated on a 1 to 10 scale, showed a pronounced ceiling pattern, with most respondents providing high ratings (mode 10, median 10). The mean clarity score was 9.12 (SD = 1.74), with strong negative skew (skewness −2.74, SE 0.14) and marked leptokurtosis (kurtosis 8.12, SE 0.27). Mean satisfaction with the method was consistently high across subsamples. Baseline SF-36 Physical and Mental Component Summary scores indicated generally good health, with averages near or slightly above population norms.

Assumption checks

Model assumptions were evaluated prior to inference. Levene's tests for homogeneity of variance were nonsignificant for both outcomes (physical progress: $p = .265$; mental improvement: $p = .721$). Visual inspection of residual plots did not indicate material departures from normality. Variance inflation factors for continuous predictors were below 2.5, indicating no problematic multicollinearity. Ordinal predictors were entered as linear trends.

Physical progress model

The model predicting perceived physical progress was statistically significant, $F(16, 144) = 6.26$, $p < .001$, with $R^2 = .41$ (adjusted $R^2 = .35$). Higher practice frequency was associated with higher perceived physical progress (B = 0.87, 95% CI [0.13, 1.61], $p = .021$, partial $\eta^2 = .036$). Longer duration of engagement was also associated with higher perceived physical progress (B = 0.85, 95% CI [0.39, 1.32], $p < .001$, partial $\eta^2 = .083$). Greater instructional clarity predicted higher perceived physical progress (B = 0.46, 95% CI [0.10, 0.82], $p = .013$, partial $\eta^2 = .042$). Satisfaction showed the largest unique association with the outcome (B = 0.15, 95% CI [0.09, 0.21], $p < .001$, partial $\eta^2 = .135$). Baseline health indicators were not significant after adjustment: the SF-36 Physical Component Summary was not associated with perceived physical progress (B = 0.05, $p = .236$), nor was the SF-36 Mental Component Summary (B = 0.02, $p = .581$). Demographic and life-stage factors were also nonsignificant at the omnibus level for either outcome, including age group ($p = .126$), menopausal status ($p = .507$), and the Age × Menopausal Status interaction ($p = .810$). Results for individual predictors are presented in Table 1.

Table 1. Predictors of Perceived Physical Progress (0–15): Univariate GLM Results (n = 161)

Predictor	**B**	**SE**	**95% CI**	**p**	**Partial η^2**
Practice frequency (1–3)	0.871	0.373	[0.133, 1.609]	.021	.036
3D-experience (ordered)	0.851	0.235	[0.386, 1.317]	<.001	.083
Explanation clarity (1–10)	0.458	0.182	[0.097, 0.818]	.013	.042
Satisfaction (continuous)	0.149	0.032	[0.087, 0.212]	<.001	.135
SF-36 PCS	0.053	0.044	[−0.035, 0.141]	.236	.010
SF-36 MCS	0.016	0.029	[−0.041, 0.073]	.581	.002
Age group (omnibus)	—	—	—	.126	.039
Menopausal status (omnibus)	—	—	—	.507	.016
Age × Status (omnibus)	—	—	—	.810	.011

Note. B = unstandardized regression coefficient; SE = standard error; CI = confidence interval. Positive coefficients indicate that higher predictor values are associated with higher perceived physical progress. Overall model: $F(16, 144) = 6.26$, $p < .001$, $R^2 = .41$ (adjusted $R^2 = .35$). Levene's test: $p = .265$.

Mental improvement model

The model predicting perceived mental improvement was statistically significant, $F(16, 96) = 2.25$, $p = .008$, with $R^2 = .27$ (adjusted $R^2 = .15$), indicating that 27% of the variance in perceived mental improvement was explained. Results for individual predictors are summarized in Table 2. Practice-related indicators did not show independent associations with perceived mental improvement, with the exception of satisfaction. Practice frequency was not a significant predictor ($B = 0.25$, $p = .600$). Duration of engagement with the method was likewise nonsignificant ($B = -0.10$, $p = .744$). Instructional clarity did not reach significance ($B = 0.21$, $p = .292$). In contrast, satisfaction was significantly and positively associated with perceived mental improvement ($B = 0.13$, 95% CI [0.06, 0.21], $p = .001$, partial $\eta^2 = .110$), indicating that approximately 11% of the variance in the outcome was uniquely explained by satisfaction.

Baseline health indicators did not contribute meaningfully to perceived mental improvement after adjustment. The SF-36 Physical Component Summary showed a marginal, nonsignificant trend ($B = -0.10$, $p = .079$), and the SF-36 Mental Component Summary was not associated with the outcome ($B = -0.03$, $p = .389$).

Demographic and life-stage variables were not significant at the omnibus level. Age group ($p = .276$), menopausal status ($p = .163$), and the Age × Menopausal Status interaction ($p = .189$) did not reach statistical significance, suggesting a broadly similar pattern of perceived mental improvement across age categories and hormonal stages in this sample.

Table 2. Predictors of Perceived Mental Improvement (0–15): Univariate GLM Results (n = 113)

Predictor	**B**	**SE**	**95% CI**	**p**	**Partial η²**
Practice frequency (1–3)	0.246	0.467	[−0.681, 1.173]	.600	.003
3D-experience (ordered)	−0.104	0.317	[−0.733, 0.525]	.744	.001
Explanation clarity (1–10)	0.214	0.202	[−0.188, 0.616]	.292	.012
Satisfaction (continuous)	0.131	0.038	[0.055, 0.207]	.001	.110
SF-36 PCS	−0.096	0.054	[−0.203, 0.011]	.079	.032
SF-36 MCS	−0.030	0.035	[−0.100, 0.039]	.389	.008
Age group (omnibus)	—	—	—	.276	.039
Menopausal status (omnibus)	—	—	—	.163	.052
Age × Status (omnibus)	—	—	—	.189	.061

Note. B = unstandardized regression coefficient; SE = standard error; CI = confidence interval. Positive coefficients indicate that higher predictor values are associated with higher perceived mental improvement. Overall model: $F(16, 96) = 2.25$, $p = .008$, $R^2 = .27$ (adjusted $R^2 = .15$). Levene's test: $p = .721$.

Discussion

This study examined associations between routine practice characteristics and women's perceived physical and mental improvement during the menopausal transition. A divergence in predictor patterns between physical and mental outcomes was observed. Perceived physical progress was associated with multiple practice parameters, whereas perceived mental improvement was predicted only by satisfaction

These findings align with established frameworks of self-regulated and motivated engagement: physical progress with deliberate practice and self-regulated learning processes, and mental improvement with satisfaction-driven motivational pathways. Consistent with Ericsson's account, physical progress appears to arise from structured repetition guided by clear cues and performance monitoring [9,10]. Practice frequency and duration index repeated task exposure, and explanation clarity likely serves as an informational scaffold that facilitates error detection and corrective adjustment. The pattern also reflects self-regulated learning processes, in which cycles of planning, monitoring and reflection are supported by instructional clarity and sustained motivation [11].

The lack of predictive value for baseline physical and mental health supports the interpretation that perceived physical improvement was driven primarily by task engagement rather than pre-existing capacity. The nonsignificant effects of age and menopausal status indicate that perceived physical benefits were reported consistently across midlife stages.

For mental improvement, structural practice variables (frequency, duration and clarity) did not account for significant variance. Instead, perceived improvement was uniquely predicted by satisfaction. This pattern diverges from a strict deliberate-practice interpretation and is more consistent with self-determination theory, which holds that well-being is supported when activities satisfy autonomy, competence and relatedness needs [16]. The absence of dose–response relationships suggests that psychological outcomes depended less on the amount or form of engagement and more on the affective meaning derived from participation.

This interpretation aligns with prior work on movement-based and mind–body interventions. Elavsky and McAuley (2005) and Bondarev et al. (2020) similarly indicate that, in midlife women, physical activity relates to menopause-related quality of life and mental well-being mainly through affective and psychosocial pathways rather than direct fitness change. Similarly, research on yoga, tai chi, and other mind–body movement practices demonstrates psychological benefits associated with increased self-awareness and embodied engagement [5]. These mechanisms align with motivational processes described in self-determination theory [17].

The consistent absence of age and menopausal status effects suggests that perceived benefits generalized across midlife stages and that a structure combining expert verbal instruction with autonomous pacing may meet the needs of women during the menopausal transition.

Limitations

This study has several limitations. The cross-sectional design precludes causal inference, and perceived improvement may influence engagement rather than the reverse. Reliance on self-reported data introduces potential recall bias and social desirability effects.

Key constructs, including perceived physical progress, mental improvement, instructional clarity and satisfaction, were assessed using single-item measures. Although suitable for reducing respondent burden in this brief report, single-item indicators limit precision and narrow the range of detectable variation, particularly for psychological outcomes.

The analytic sample was self-selected from individuals already following the 3D Movement Method. This recruitment strategy improves ecological validity but likely introduced selection bias, as participants who found the method unclear or unhelpful may have disengaged before encountering the survey. The absence of a comparison group limits the ability to distinguish method-specific influences from general effects of self-directed movement.

The questionnaire was administered in Russian and English. Despite attention to translation consistency, variation in language proficiency and interpretation cannot be excluded, particularly for subjective terms embedded in single-item scales. Finally, although validated instruments were used for baseline health, the study did not include objective behavioral data or more comprehensive psychometric assessments, which limits the identification of specific mechanisms.

Future studies

Future research should extend these preliminary findings by addressing several outstanding questions regarding instructional delivery and measurement. Comparisons of different instructional formats, including varying degrees of verbal cueing, structure and guidance, may help identify which elements best support learning and engagement. The inclusion of objective behavioral indicators, such as movement characteristics or adherence metrics, would enable more comprehensive evaluation of practice-related mechanisms. Future studies also should examine the influence of language and cultural context. The method is practiced across multiple linguistic and regional settings, and culturally distinct samples will be required to determine whether perceived benefits generalize across contexts. Cross-cultural comparisons, supported by language-specific measurement tools, would clarify whether instructional clarity, satisfaction, and perceived improvement function similarly across diverse populations.

Conclusion

This brief report provides an initial quantitative account of perceived changes among women practicing the 3D Movement Method. Physical progress was associated with practice frequency, duration of engagement, instructional clarity, and satisfaction. Mental improvement was predicted primarily by satisfaction, suggesting that psychological benefit was linked more closely to subjective appraisal than to procedural structure. Further research using longitudinal designs, refined measurement approaches, and more diverse samples is needed to clarify these pathways.

Acknowledgments

The authors express their deep appreciation to the women who generously contributed their time and effort by completing the detailed online questionnaire. Their participation was essential to this research, and their input is sincerely valued.

Editorial assistance from OpenAI’s ChatGPT-4 was used solely to enhance grammar and readability.

Author Contributions

Zarina Manaenkova: Conceptual framework, resource provision, critical manuscript review and editing.

Ekaterina A. Santanna: Methodological development, statistical analysis, initial drafting of the manuscript.

Funding Statement

This study did not receive financial support from any external agency or funding source.

Data Availability

Deidentified data supporting the findings of this study are available from the corresponding author upon reasonable request.

Conflict of Interest Statement

Ekaterina A. Santanna has provided consulting services to LLC Zarina del Mar. Zarina Manaenkova, founder of the 3D Movement Method, was not involved in the processes of data collection, analysis, or interpretation to reduce the risk of bias in this study.

Ethical Approval

The research protocol (No. 25410_A1_38) received approval from the Ethics Committee of the Center of Science and Ethics, TSU, and was conducted in accordance with institutional and international ethical guidelines.

References

1. Hickey, M., LaCroix, A. Z., Doust, J., Mishra, G. D., Anderson, D., & Hunter, M. S. (2024). An empowerment model for managing menopause. *The Lancet*, 403(10430), 947–957. https://doi.org/10.1016/S0140-6736(23)02799-X
2. Thavabalan, K., Ovenell, A., Pierce, P., Sutaria, A., Parkhouse, A., Baydemir, N., & Lally, T. (2025). Barriers to the safe discussion of the experience and management of menopausal symptoms: A systematic literature review. *Maturitas*, 201, 108683. https://doi.org/10.1016/j.maturitas.2025.108683
3. Rostami-Moez, M., Masoumi, S. Z., Otogara, M., Farahani, F., Alimohammadi, S., & Oshvandi, K. (2023). Examining the health-related needs of females during menopause: A systematic review study. *Journal of Menopausal Medicine*, 29(1), 1–20. https://doi.org/10.6118/jmm.22033
4. Manaenkova, Z., & Santanna, E. (2025a). Movement Snacks as a Non-Pharmacological Approach to Symptom Management and Lifestyle Adaptation in Menopausal Transition: A Qualitative Study. *Frontiers*, *5*(3), 150-158. https://doi.org/10.11648/j.frontiers.20250503.16
5. Xu, H., Liu, J., Li, P., & Liang, Y. (2024). Effects of mind-body exercise on perimenopausal and postmenopausal women: A systematic review and meta-analysis. *Menopause*, 31(5), 457–467. https://doi.org/10.1097/GME.0000000000002336
6. Godoy-Izquierdo, D., de Teresa, C., & Mendoza, N. (2024). Exercise for peri- and postmenopausal women: Recommendations from synergistic alliances of women's medicine and health psychology for the promotion of an active lifestyle. *Maturitas*, 185, 107924. https://doi.org/10.1016/j.maturitas.2024.107924
7. Pimenta, F., Ramos, M. M., Silva, C. C., Costa, P. A., Maroco, J., & Leal, I. (2020). Self-regulation model applied to menopause: A mixed-methods study. *Climacteric*, 23(1), 84–92. https://doi.org/10.1080/13697137.2019.1640196

8. Yue, H., Yang, Y., Xie, F., Cui, J., Li, Y., Si, M., Li, S., … Yao, F. (2025). Effects of physical activity on depressive and anxiety symptoms of women in the menopausal transition and menopause: A comprehensive systematic review and meta-analysis of randomized controlled trials. *International Journal of Behavioral Nutrition and Physical Activity*, 22, 13. https://doi.org/10.1186/s12966-025-01712-z

9. Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review, 100*(3), 363–406. https://doi.org/10.1037/0033-295X.100.3.363

10. Macnamara, B. N., Hambrick, D. Z., & Oswald, F. L. (2014). Deliberate practice and performance in music, games, sports, education, and professions: A meta-analysis. *Psychological Science, 25*(8), 1608–1618. https://doi.org/10.1177/0956797614535810

11. Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice, 41*(2), 64–70. https://doi.org/10.1207/s15430421tip4102_2

12. Ware, J. E., & Sherbourne, C. D. (1992). The MOS 36-item short-form health survey (SF-36): I. Conceptual framework and item selection. *Medical Care, 30*(6), 473–483. https://doi.org/10.1097/00005650-199206000-00002

13. Manaenkova, Z., & Santanna, E. A. (2025b). Socio-demographic and health profile of women practicing the 3D Movement Method. *American Journal of Health Research*, 13(6). (in press)

14. Bondarev, D., Sipilä, S., Finni, T., Kujala, U. M., Aukee, P., Laakkonen, E. K., Kovanen, V., & Kokko, K. (2020). The role of physical activity in the link between menopausal status and mental well-being. *Menopause*, 27(4), 398–409. https://doi.org/10.1097/GME.0000000000001490

15. Elavsky, S., & McAuley, E. (2005). Physical activity, symptoms, esteem, and life satisfaction during menopause. *Maturitas, 52*(3-4), 374–385. https://doi.org/10.1016/j.maturitas.2004.07.014

16. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

17. Teixeira, P. J., Carraca, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: A systematic review. *International Journal of Behavioral Nutrition and Physical Activity, 9*, 78. https://doi.org/10.1186/1479-5868-9-78