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Psychometric Validation of the Stress and Wellness Assessment (SWA) in an Exercise-Focused Wellness Programme



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ABSTRACT

Introduction: The Stress and Wellness Assessment (SWA) was designed to measure perceived stress and wellness-based functioning.

Aim: To examine the validity and reliability of SWA. The sample consisted of 101 participants who currently participate in physical activity or exercise programme.

Methodology: The Cronbach alpha coefficient was used to test the reliability of internal consistency while face, factorial, convergent and discriminant validity was tested Data analysis was performed using IBM SPSS Statistics and Jamovi at a=5%.

Results: The "Stress" demonstrated high internal consistency (α = 0.85), satisfactory factor loadings (0.50–0.80) and acceptable item–total correlations (0.47–0.70). The "Wellness" demonstrated satisfactory internal consistency (α = 0.70), satisfactory factor loadings (0.34–0.85) and acceptable item–total correlations (0.33–0.62). The findings provided support for face validity (90.1%-99%). Exploratory Factor Analysis indicated statistical support for a two-factor solution, explaining 56.4% of the variance in scores and items loaded 0.34 to 0.85 on their respective factors. CFA provided preliminary support for the two-factor structure (p=0.151, *CFI*=0.97, *TLI*=0.97, *SRMR*=0.05, *RMSEA*=0.05, *AIC*=2508, *BIC*=2589). Convergent validity was partially supported for "Stress" (*AVE*=45.7%) while supported for the "Wellness" (*AVE*=51.0%). Discriminant validity evidence was supported (rho = -0.27).

Conclusion: The findings provided support for reliability of internal consistency, face validity, discriminant validity and factorial validity of SWA, while convergent validity was partially supported.

Keywords: Stress, Wellness, Validation, Exercise, Programme

1.Introduction:

Stress is increasingly seen as a contributing factor to significant distress, poorer wellbeing, difficulty in daily functioning, and increased healthcare costs. Mental health promotion, prevention of stress, and availability of community-based interventions feature prominently in the WHO definition of public health [1]. Occupational demands, sedentary lifestyles, economic uncertainty, and insufficient recovery time may contribute to increased stress exposure in adult populations. The early detection and alleviation of sources of stress are valuable goals of preventive health and wellness practice. Wellness is generally understood as broader than the absence of disease. Wellness refers to broader aspects of functioning, including energy levels, restorative sleep, regular movement, emotional and behavioural self-care, and life satisfaction. Modern models of health exercise emphasize not only in light of minimizing stress burden, but in capacity to build resources enabling resilience, functional coping and healthy quality of life over time [1].

Chronic stress can lead to decreased motivation to partake in physical activity, impaired sleep, extended periods of sedentary activity, and diminished emotional wellbeing. On the other hand, health-promoting behaviours can buffer against the stress response, and augment coping to concerning stressors. Assessing the burden of stress is therefore likely to yield a more useful profile alongside assessing wellness behaviour, than assessing either construct independently [2] Amongst lifestyle-based interventions, physical activity has specific relevance for stress regulation and mental wellbeing. Public Health guidelines promote regular physical activity as a key component of health promotion at all stages of life [3] and contemporary literature in psychiatric health and behavioural health view exercise as an important resource in support of psychological health [2,4]. Regular exercise is correlated with lower stress

reactivity, better mood, sleep, and wellbeing. Exercise-focused wellness programmes may therefore represent an appropriate setting for stress and health promotion interventions. [2,4].

In this context, physiotherapists and other professionals rooted in movement practices are becoming more engaged in our communities by prescribing exercise, behavioural activation, graded activity and self-management strategies over prolonged periods. These roles are particularly appropriate for people with high stress, low vitality, poor recovery or low confidence in physical activity participation [2-4].

Many validated self-report measures exist to assess stress or wellbeing separately, such as measures of perceived stress or measures of positive wellbeing, including the WHO-5 Well-Being Index [5]. Although widely used, these instruments assess separate constructs and may not fully represent the lifestyle and habitual characteristics underlying combined stress and wellness profiles that are relevant to exercise settings. However, few brief tools are specifically designed to jointly assess stress burden and wellness-related functioning in exercise-focused wellness programmes. In community and clinical settings, practitioners often require brief and practical instruments that can rapidly identify individuals who may benefit from personalized exercise planning, stress-management strategies, or behavioural support.

To meet this practical aim, the Stress and Wellness Assessment (SWA) is a brief self-administered questionnaire broadly measuring two complementary sets of variables: participants' relative stress burden (7 items) and their wellness-related functioning (3 items), as understood in relation to those engaged in exercise-based wellness programmes. While the 'wellness' items, taken in isolation, are separate from a 'stress' measure, their theoretical combination and use in one perspective is informed by current understanding of positive functioning. Wellbeing is increasingly seen as a dynamic state derived from other multi-dimensional clusters of physical, emotional, cognitive and behaviorial states, rather than only from one behavioural, psychological or personality attribute [1,5].

The three wellness items were selected to capture complementary dimensions that are particularly relevant within exercise-focused settings. Participation in physical activity reflects participation in a primary health-related behaviour which corresponds to greater physical and psychological wellbeing [3–4]. Engagement in stress relief activities reflects active coping and self-management behaviours enhancing individuals' resilience and recovery from everyday stress [2,4]. Finally, optimism for the future relates to a psychological wellbeing component of health associated with hopefulness, motivation, adaptive coping and quality of life perceptions more generally [1,5].

Although conceptually distinct, these dimensions are theoretically interconnected; those who regularly exercise tend to engage in other healthy behaviours and report better psychological health functioning, positive future expectations may tend to preserve healthy behaviours, whilst their own effectiveness in managing stress may be related both to emotional wellbeing and consequent behaviours. Components of exercise-related wellness programmes are intended to function synergistically, feeding into a profile of overall wellness. Consequently, the wellness subscale was designed to capture a broader construct of positive health functioning rather than a narrowly defined psychological trait [1–5].

Possible applications for the SWA include screening, tailoring programmes, assessing progress, and evaluating services. New measures require psychometric evaluations before they can be put into routine use to determine whether or not they are 'good enough' in terms of feasibility, reliability, and validity. Established methodological guidance recommends testing to assess respondent comprehension, usability, internal consistency, and preliminary dimensional structure prior to larger validation studies [6,7]. The present study aims to examine the preliminary psychometric properties of the SWA in a sample of adults participating in an exercise-focused wellness context.

2. Materials and Methods

2.1. Instrument: The Stress and Wellness Assessment (SWA) is a newly developed self-administered questionnaire created by the Scientific Society for Health Education "BIOAGOGHI" for use in a wellness-focused exercise programme. The questionnaire includes demographic items and 10 core items assessing stress-related symptoms and wellness behaviours over the previous 7 days. The 10 core items comprise seven stress-related items and three wellness-related items. Responses are recorded on a five-point Likert scale ranging from "Not at all" to "Every day." Higher scores indicate greater symptom frequency or more frequent engagement in health-promoting behaviours, depending on item directionality. The full questionnaire of this study is included in Appendix A. Authorization to use the SWA scale was granted by BIOAGOGHI.

2.2. Participants, sample characteristics and procedure: Participants were recruited via social media using convenience sampling, a non-probability sampling approach commonly used when participants are selected based on accessibility and willingness to participate [8]. The questionnaire was distributed anonymously through Google Forms on social media platforms. Participation was voluntary, and electronic informed consent was obtained before survey completion, in accordance with established ethical principles for research involving human participants [9]. No personally identifiable information was collected. According to local institutional requirements, formal ethics committee approval was not required for this anonymous, voluntary, non-interventional survey. The inclusion criteria were: (a) participation in any physical activity or exercise programme, and (b) provision of electronic informed consent before completing the questionnaire.

The sample consisted of 101 participants which was considered acceptable for preliminary exploratory psychometric evaluation of a 10-item instrument, corresponding to approximately 10 participants per item [7].

Most participants were aged 25–54 years (70.2%, n = 71), female (53.5%, n = 54), and live in urban areas (72.3%, n = 73). Regarding educational level, the majority held either a master's degree (43.6%, n = 44) or a bachelor's degree (35.6%, n = 36). In terms of employment status, participants were primarily employed full-time (39.6%, n = 40) or self-employed (32.7%, n=33). Most participants reported an annual household income of up to USD 49,999 (59.4%, n = 60). With respect to marital status, 42.6% (n = 43) were married, 28.7% (n = 29) were single, and 18.8% (n = 19) were divorced.

Table 1: Demographics

Demographics	Category	N	%
Age	18-24	6	5.9
	25-34	17	16.8
	35-44	26	25.7
	45-54	28	27.7
	55-64	16	15.8
	65+	8	7.9
Gender	Male	43	42.5
	Female	54	53.5
	Non-binary	2	2.0
	Prefer not to say	2	2.0
Occupation	Student	5	5.0
	Employed full-time	40	39.6
	Employed part-time	10	9.9
	Self-employed	33	32.7
	Unemployed	3	3.0
	Retired	10	9.9
Education Level	High school	5	5.0
	Bachelor's degree	36	35.6
	Master's degree	44	43.6
	Doctorate or higher	16	15.8
Location	Urban	73	72.3
	Suburban	22	21.8
	Rural	6	5.9
Marital Status	Single	29	28.7
	Married	43	42.6
	Divorced	19	18.8
	Widowed	1	1.0
	Prefer not to say	9	8.9
Household Income	Less than $25,000	32	31.7
	$25,000 - $49,999	28	27.7
	$50,000 - $74,999	15	14.9
	$75,000 - $99,999	3	3.0
	$100,000 and above	4	4.0
	Prefer not to say	19	18.8

2.3. Face Validity Assessment: Face validity was assessed based on participant perceptions regarding: (a) ease of understanding each item, (b) ease of responding to each item, (c) relevance of items to personal experience, and (d) clarity of the response scale [7].

2.4. Statistical analysis: Data analysis was performed using IBM SPSS Statistics (version 26) and Jamovi software. Categorical variables were presented as frequencies and percentages, ordinal variables as means, standard deviations, and percentages, and continuous variables as means and standard deviations [10]. Statistical significance was set at 5% ($p < 0.05$).

Exploratory Factor Analysis (EFA) was conducted to examine the underlying structure of the SWA using minimum residual extraction, parallel analysis and oblimin rotation [11]. Factor loadings greater than 0.30 were considered acceptable [12].

Confirmatory Factor Analysis (CFA) was used to test the factor structure of the SWA. Model fit was evaluated using the Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Standardized Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA), Akaike Information Criterion (AIC), and Bayesian Information Criterion (BIC) [11].

Convergent and discriminant validity were evaluated using the Average Variance Extracted (AVE) via the CFA standardized loadings. AVE values greater than 50% were considered indicative of acceptable convergent validity, while evidence of discriminant validity was considered present when the square root of each construct's AVE exceeded its correlations with other constructs [13].

Internal consistency was assessed using Cronbach's alpha, with values above 0.70 considered acceptable and values between 0.60 and 0.70 considered moderate for early-stage instrument development [14]. Item–total correlations greater than 0.30 were considered acceptable [15].
Normality of factor distributions was assessed using the Shapiro–Wilk test [16]. Spearman correlation analysis was used to examine the relationship between the "Stress" and "Wellness Assessment" factors [11].

3. Results

3.1. Descriptive Statistics

3.1.1. Stress and Wellness Assessment (SWA) : Most participants reported feeling positive about the future (M = 3.36, 80.3%) and engaging in physical activity (M = 3.13, 72.3%) or stress-relief activities (M = 3.09, 73.2%) at least sometimes. Stress-related symptoms were generally reported at low-to-moderate frequency. The most frequently reported stress-related item was anxiety and worry (M = 2.91), followed by bad mood and low energy due to stress (M = 2.79), withdrawal from social interactions (M = 2.75), physical symptoms of stress (M = 2.69), difficulty relaxing (M = 2.61), feeling overwhelmed (M = 2.60), and sleep disruptions (M = 2.54).

Table 2: Descriptive statistics for Stress and Wellness Assessment (SWA)

Question	M	SD	Not at all	Rarely	Sometimes	Often	Every day
Feel positive about the future	3.36	1.01	3.0%	16.8%	34.7%	32.7%	12.9%
Physical activity levels	3.13	1.06	6.9%	20.8%	33.7%	29.7%	8.9%
Engaged in stress-relief activities	3.09	1.02	6.9%	19.8%	37.6%	28.7%	6.9%
Anxiety and worry	2.91	0.92	5.0%	27.7%	42.6%	20.8%	4.0%
Bad mood and low energy due to stress	2.79	0.84	4.0%	33.7%	43.6%	16.8%	2.0%
Withdraw from social interactions	2.75	0.98	10.9%	28.7%	36.6%	21.8%	2.0%
Physical symptoms of stress	2.69	0.89	5.9%	38.6%	38.6%	13.9%	3.0%
Difficulty relaxing	2.61	1.01	11.9%	36.6%	34.7%	11.9%	5.0%
Feeling overwhelmed	2.60	1.00	13.9%	31.7%	38.6%	11.9%	4.0%
Sleep disruptions	2.54	0.90	10.9%	39.6%	34.7%	13.9%	1.0%

3.1.2. Face validity of Stress and Wellness Assessment (SWA): Face validity was confirmed for Stress and Wellness Assessment (SWA). The vast majority understood all questions of SWA (97.0%-99.0%) and the numerical values assigned to each response option (96.0%). Ease of responding to items ranged from 95.1% to 99.0%, perceived relevance to recent personal experiences ranged from 90.1% to 97.0%, and clarity of the scoring system ranged from 96.0% to 99.0%.

Table 3: Face validity of Stress and Wellness Assessment (SWA)

Question	Understanding	Easy to answer	Relevant to experience	Scoring
Feeling overwhelmed	99.0%	98.0%	90.1%	98.0%
Physical symptoms of stress	99.0%	97.0%	91.1%	98.0%
Anxiety and worry	99.0%	99.0%	97.0%	99.0%
Sleep disruptions	99.0%	98.0%	91.1%	97.0%
Difficulty relaxing	99.0%	98.0%	93.1%	97.0%
Engaged in stress-relief activities	98.0%	97.0%	97.0%	97.0%
Bad mood and low energy due to stress	99.0%	99.0%	94.1%	97.0%
Withdraw from social interactions	97.0%	97.0%	95.1%	97.0 %
Physical activity levels	99.0%	97.0%	96.0%	96.0%
Feel positive about the future	98.0%	95.1%	95.1%	98.0%
Numerical values to each response	96.0%	–	–	–

3.2. Inferential Statistics

3.2.1. Exploratory Factor Analysis (EFA) for Stress and Wellness Assessment (SWA): Exploratory Factor Analysis identified a two-factor solution explaining 56.4% of the total variance. The Kaiser-Meyer-Olkin (KMO) coefficient indicated satisfactory sampling adequacy (*KMO* = .81), and Bartlett's test of sphericity was significant (χ^2 (45) = 354, $p < .001$)

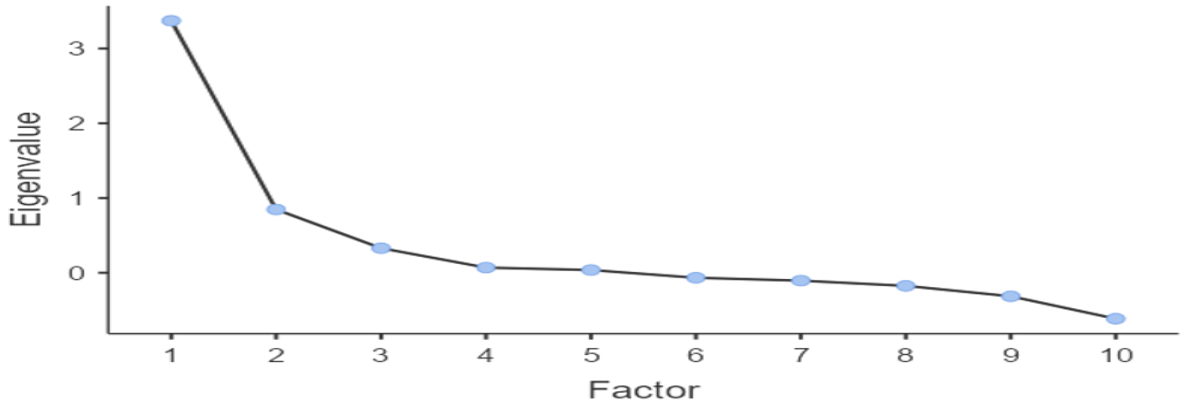


Figure 1: Scree Plot of Exploratory Factor Analysis (EFA)

Table 4: Exploratory Factor Analysis (EFA) for Stress and Wellness Assessment (SWA)

Question	Factor	
	Stress	Wellness
Feeling overwhelmed	.80 (.70)	
Physical symptoms of stress	.77 (.68)	
Bad mood and low energy due to stress	.72 (.68)	
Anxiety and worry	.69 (.63)	
Difficulty relaxing	.66 (.63)	
Withdraw from social interactions	.53 (.47)	
Sleep disruptions	.50 (.47)	
Engaged in stress-relief activities		.85 (.62)
Physical activity levels		.81 (.62)
Feel positive about the future		.34 (.33)
Variance (%) **Cronbach Alpha** **Shapiro Wilk** **M** **SD**	**36.8%** **.85** **W (101) =.98** **p=.237** **2.70** **.68**	**19.6%** **.70** **W (101) =.97** **p=.016** **3.19** **.81**

Extraction: Minimum residuals, based on parallel analysis. Pattern matrix loadings are presented.
Rotation: Oblimin, KMO= .81, χ^2 (45) =354, p<.001
Values in parentheses indicate item total correlation

The 1st factor explained the 36.8% of the total variance and included items such as "Feeling overwhelmed", "Anxiety and worry", "Difficulty relaxing".

This factor was labelled "Stress". The factor demonstrated high internal consistency (α = 0.85), satisfactory factor loadings (0.50 –0.80) and acceptable item–total correlations (0.47–0.70). "Stress" was rated below average (M=2.70, SD=.68) and was normally distributed (W (101) = .98, p=.237).

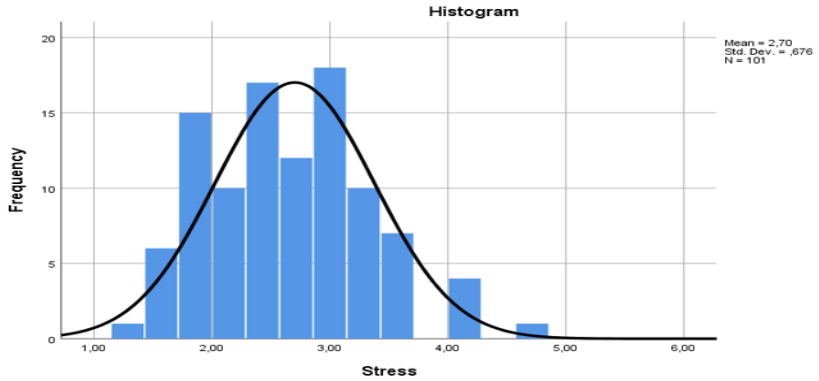


Figure 2: Histogram of factor "Stress"

The second factor explained 19.6% of the total variance and included items such as Physical activity levels, Feel positive about the future. This factor was labelled "Wellness". The factor demonstrated satisfactory internal consistency (α = 0.70), satisfactory factor loadings (0.34–0.85) and acceptable item–total correlations (0.33–0.62). Mean factor score was above the scale midpoint (M = 3.19, SD = 0.82). The distribution significantly deviates from normality (W (101) = 0.97, p = 0.016).

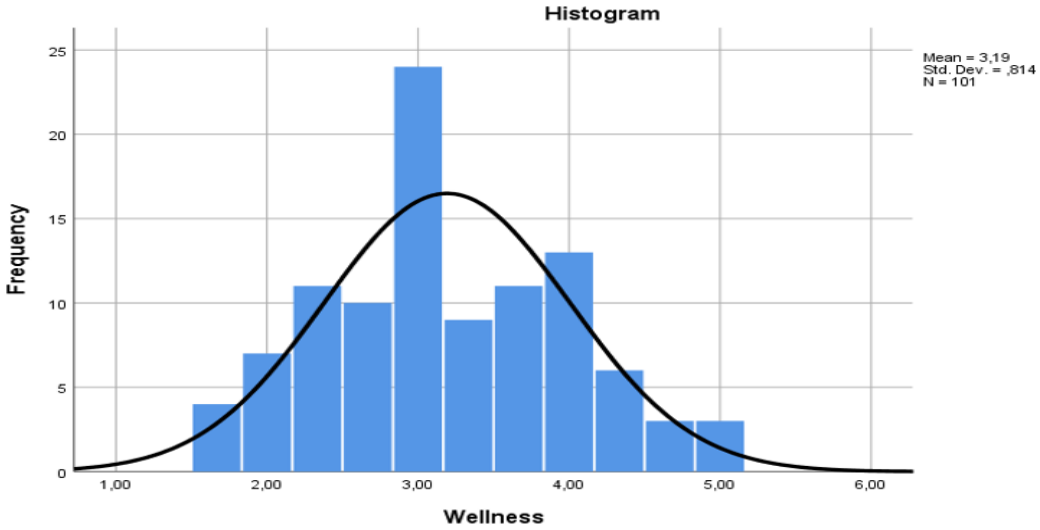


Figure 3: Histogram of factor "Wellness"

3.2.2. Confirmatory Factor Analysis (CFA) for Stress and Wellness Assessment (SWA): According to Table 5, the chi-square test was non-significant (X^2 (34) =42.5, p=0.151). Model fit results indicated *CFI*=0.97, *TLI*=0.97, *SRMR*=0.05, *RMSEA*=0.05, *AIC*=2508 and *BIC*=2589. All items were significant for "Stress" ($p<.001$) and for "Wellness" ($p\leq.001$). Convergent validity was partially supported for "Stress" (*AVE*=45.7%) while the "Wellness" factor met the conventional AVE threshold (*AVE*=51.0%).

Table 5: Confirmatory Factor Analysis (CFA) for Stress and Wellness Assessment (SWA)

Factor	AVE	Indicator	Stand-ardized loading	SE	Z	p
Stress	45.7%	Feeling overwhelmed	.78	.09	8.89	< .001
		Physical symptoms of stress	.78	.08	8.75	< .001
		Anxiety and worry	.66	.09	7.03	< .001
		Sleep disruptions	.49	.09	4.90	< .001
		Difficulty relaxing	.68	.09	7.34	< .001
		Bad mood and low energy due to stress	.74	.08	8.24	< .001
		Withdraw from social interactions	.54	.10	5.43	< .001
Wellness	51.0%	Engaged in stress-relief activities	.75	.12	6.53	< .001
		Physical activity levels	.92	.13	7.48	< .001
		Feel positive about the future	.36	.11	3.21	.001

Note: X^2 (34) =42.5, p=.151, CFI=.97, TLI=.97, SRMR=.05, RMSEA=.05, AIC=2508, BIC=2589

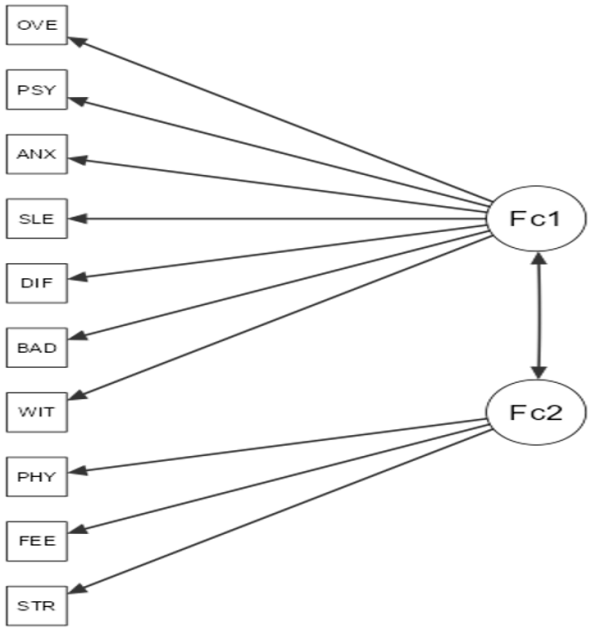


Figure 4: Factor structure for "Stress and Wellness Assessment (SWA)"

Note: Fc1= "Stress", Fc2= "Wellness", OVE= "Feeling overwhelmed", PSY= "Physical symptoms of stress", ANX= "Anxiety and worry", SLE= "Sleep disruptions", DIF= "Difficulty relaxing", BAD= "Bad mood and low energy due to stress", WIT= "Withdraw from social interactions", PHY= "Physical activity levels", FEE= "Feel positive about the future", STR= "Engaged in stress-relief activities"

3.2.3. Discriminant validity of Stress and Wellness Assessment (SWA):

According to Table 6, the $\sqrt{AVE}$ of "Stress" is 0.68 and the $\sqrt{AVE}$ of "Wellness" is 0.71, i.e., both values exceeded the absolute magnitude of the correlation between the two factors (*rho (99)* = -0.27). These results indicate the existence of discriminant validity of Stress and Wellness Assessment (SWA).

Table 6: Discriminant validity of Stress and Wellness Assessment (SWA)

Factors	Stress	Wellness
Stress Wellness Assessment	.68(1) -.27**	.71(1)

****p<0.01, Note: Values in the main diagonal present the square root of AVE**

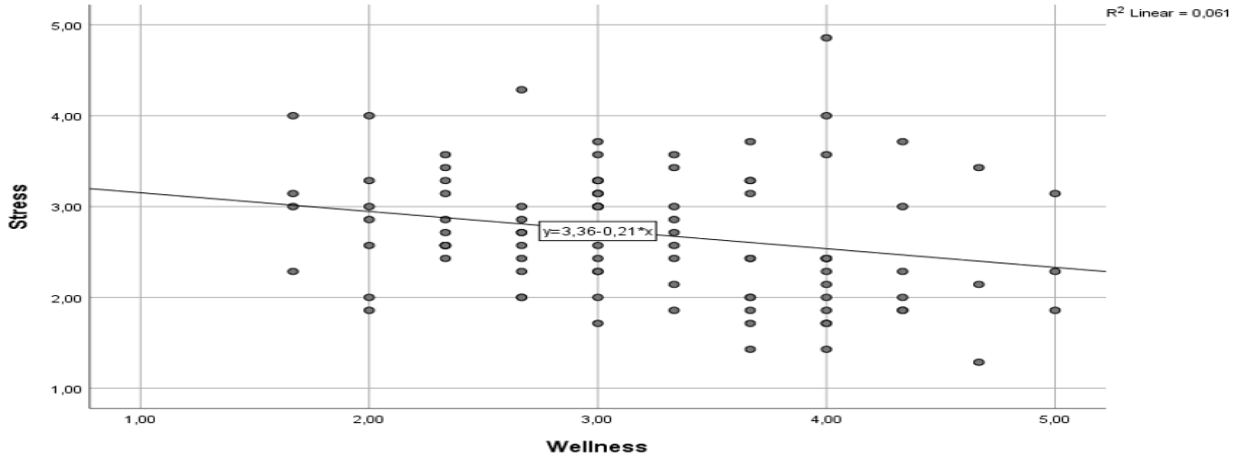


Figure 5: Relationship between "Stress" and "Wellness"

4. Discussion :

The aim of the current study was to examine the validity and reliability of Stress and Wellness Assessment (SWA). The sample consisted of 101 participants who currently participate in physical activity or exercise programme.

The Stress factor demonstrated high internal consistency, whereas the Wellness factor showed acceptable internal consistency for an early-stage brief instrument [14]. Results indicated that both factors' items measure coherent constructs related to perceived psychological-somatic stress and well-being correspondingly for the factors Stress and Wellness. However, item "Feel positive about the future" presented moderate item-total correlation, indicating that items "Engaged in stress-relief activities" and "Physical activity levels" appeared to be more strongly associated with the "Wellness" factor. This finding may be theoretically reasonable as these 2 items are related to activities that may contribute to stress regulation while the 3rd item with the lowest item total correlation refers to the level of optimism.

Face validity of SWA was supported as the vast majority of participants understood all questions of SWA and the numerical values assigned to each response option. Ease of responding to items perceived relevance to recent personal experiences and clarity of the scoring system were highly rated [7]. The findings from the exploratory and preliminary confirmatory factor analyses [11] support a two-factor structure comprising Stress and Wellness, which is consistent with the conceptual framework underpinning the instrument. Convergent validity was confirmed for Wellness while it was partially supported for Stress [13]. In addition, SWA demonstrated acceptable discriminant validity [13], suggesting that it may capture the two related but distinct constructs of stress and wellness. The weak negative correlation between these two constructs aligns with theoretical logic: high stress reduces individuals' engagement in health-promoting behaviors and undermines positive functioning. Similarly, participants with high levels of wellness, i.e. engagement with physical activities indicated lower stress [1-5].

5.Limitations and Future Research :

This study still has several limitations that must be explicitly acknowledged.

First, the Wellness factor consisted of only three items, which may restrict the content coverage and psychometric stability of this subscale. Although the factor demonstrated acceptable preliminary psychometric properties, a three-item structure may not fully capture the multidimensional nature of wellness in exercise -focused and health-promotion settings. Future research should consider expanding this domain with additional items reflecting broader aspects of positive health functioning, such as vitality, recovery, sleep quality, emotional balance, self-care, perceived physical health, and social functioning.

Second, participants were recruited using convenience sampling through invitations distributed primarily via social media. This recruitment approach may have introduced self-selection bias and may have favored individuals who were more digitally engaged, health-conscious, or already interested in wellness-related topics. As a result, the findings may not be fully representative of the general population. Future studies should aim to recruit participants through broader and more systematic sampling strategies.

Third, participants were drawn from a specific wellness-focused context, which may limit the applicability of the findings to other populations, such as clinical groups, older adults, or individuals with lower levels of physical activity. Future research should examine the performance of the instrument across a wider range of demographic, community, and clinical settings.

Fourth, the SWA is based on self-reported responses and may therefore be subject to common sources of response bias, including recall bias and social desirability bias. Although the questionnaire was completed anonymously through Google Forms and no personally identifiable information was collected, such biases cannot be fully excluded. Future studies may benefit from combining questionnaire findings with objective indicators, clinician-rated outcomes, or behavioural measures.

Fifth, the cross-sectional design prevented the assessment of temporal stability and responsiveness to change. As a result, test –retest reliability, predictive validity, and sensitivity to intervention effects could not be examined. Longitudinal studies are needed to determine whether the SWA can reliably detect changes over time, particularly during exercise-based or stress-management interventions.

Sixth, although the two-factor structure was supported, one item of the Wellness Assessment domain showed a comparatively lower factor loading. This suggests that additional refinement of the wellness subscale may improve the overall psychometric performance of the instrument.

Seventh, the present study did not examine criterion-related validity against established measures of perceived stress, wellbeing, anxiety, depression, or quality of life. Therefore, although the internal structure of the SWA was supported, further evidence is needed to determine how SWA scores relate to widely used validated instruments. Future studies should examine convergent, discriminant, and criterion validity using established external measures.

Eighth, convergent validity was only partially supported. The AVE value for the Stress factor was slightly below the recommended .50 threshold, although the factor showed strong reliability and generally acceptable standardized loadings. This finding suggests that further validation is required, preferably through comparison with established stress and wellbeing instruments, in order to provide stronger evidence of convergent validity.

Ninth, EFA and CFA were conducted using the same sample. Although this approach may be acceptable in preliminary psychometric studies, it limits the strength of the confirmatory evidence because the factor structure was not tested in an independent validation sample. Future studies should replicate the two-factor model in a separate and larger sample in order to confirm the stability and generalizability of the SWA factor structure. Future research should therefore aim to evaluate measurement invariance across demographic groups, establish test–retest reliability, examine criterion validity against established measures of stress and wellbeing, and further optimize the item structure of the questionnaire. Larger and independent samples are required to confirm the stability of the factor structure and to support broader generalizability.

Although the present study has the limitations noted above, the findings provide a useful basis for the continued development of

the SWA instrument, as well as for its further evaluation as a screening and outcome measurement tool in exercise and health-promotion contexts.

6. Conclusions:

Using a sample of adults who participated in a exercise-focused wellness programme, the study tested the preliminary psychometric properties of the Stress and Wellness Assessment (SWA) Scale. The findings provided support for face validity. Exploratory and confirmatory factor analyses supported a preliminary two-factor structure. The reliability of the two subscales met acceptable reliability standards for newly developed measurement tools. Construct validity was partially supported through evidence of convergent and discriminant validity. The SWA may have potential utility for screening, progress monitoring, and inter-

Author Contributions: Stavros Stathopoulos conceptualized the study, oversaw data collection, contributed to the interpretation of the findings, and prepared the manuscript.

Funding: This research received no external funding

Informed Consent Statement: According to local institutional requirements, formal ethics committee approval was not required for this anonymous, voluntary, non-interventional survey. Electronic informed consent was obtained from all participants before participation.

Data Availability Statement: The anonymized raw data and analysis syntax supporting the findings of this study are available from the corresponding author upon reasonable request and may be provided as supplementary material where permitted by the journal.

Acknowledgments: Statistical analysis was conducted/reviewed by an independent statistician who was not involved in the development or ownership of the SWA instrument. The author thanks Vasileios Eleftheriadis for his assistance with statistical analysis.

Conflicts of Interest: The author serves as Chief Knowledge Officer of BioAgoghi, the organization that holds the intellectual property rights to the SWA instrument. This relationship constitutes a potential conflict of interest. Permission to use and evaluate the SWA for research purposes was formally granted by BioAgoghi. The study procedures, statistical analyses, findings, and limitations are reported transparently, and the raw anonymized data are available from the corresponding author upon reasonable request.limitations are reported transparently, and the raw anonymized data are available from the corresponding author upon reasonable request.

Appendix A Stress and Wellness Assessment (SWA): The questionnaire was developed in English and underwent expert review for face validity prior to testing.

Demographic Information: To better understand our diverse community, please provide the following information. Your responses are confidential and used solely for research purposes.

1. Please select your age group

18-24
25-34
35-44
45-54
55-64
65 and above

2. Please specify your gender

Male
Female
Non-binary
Prefer not to say

3. Occupation

Student
Employed full-time
Employed part-time
Self-employed
Unemployed
Retired
Other (please specify)

4. Education Level

High school diploma or equivalent
Bachelor's degree
Master's degree
Doctorate or higher
Other (please specify)

5. Location

Urban
Suburban
Rural

6. Marital Status

Single
Married
Divorced
Widowed
Prefer not to say

7. Household Income

Less than $25,000
$25,000 - $49,999
$50,000 - $74,999
$75,000 - $99,999
$100,000 and above
Prefer not to say

Stress and Wellness Check-In Questionnaire: Please answer the following questions based on your experiences over the past 7 days. Your responses will help us better understand your current stress levels and wellness habits.

Rating Scale:

Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Often (5-6 times)
Every day

1. Feeling Overwhelmed

How often did you feel overwhelmed or unable to cope with daily tasks?
Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Often (5-6 times)
Every day

2. Physical Symptoms of Stress

How often did you experience physical symptoms of stress (e.g., headaches, muscle tension, fatigue)? Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Often (5-6 times)
Every day

3. Anxiety and Worry

How often did you feel anxious or worried about things out of your control?
Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Often (5-6 times)
Every day

4. Sleep Disruptions

How often did you have trouble sleeping due to stress?
Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Often (5-6 times)
Every day

5. Difficulty Relaxing

How often did you find it difficult to relax or wind down?
Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Often (5-6 times)
Every day

6. Stress-Relief Activities

How often did you engage in activities to help manage stress (e.g., exercise, meditation, hobbies)?
Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Often (5-6 times)
Every day

7. Mood and Energy

How often did you feel low in energy or depressed due to stress?
Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Every day

8. Social Interactions

How often did you withdraw from social interactions or prefer to be alone?
Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Often (5-6 times)
Every day

9. Physical Activity Levels

How often did you engage in physical activity that energized or relaxed you?
Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Often (5-6 times)
Every day

10. Positive Outlook

How often did you feel hopeful or positive about the future?
Not at all
Rarely (1-2 times)
Sometimes (3-4 times)
Often (5-6 times)
Every day

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