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Mental Well-Being, Optimism, and Psychological Performance in Competitive Athletes: A Measurement-Sensitive Reanalysis

Nathanael Adu[13], Kofi Nyantakyi Appiah[12]*, Divyanshu Kumar Singh[1], and Edward Edem Nartey[4]

[1] *School of Physical Education, Lovely Professional University, Punjab, India*
[2] *Physical Education Department, Wesley College of Education, Kumasi, Ghana*
[3] *Physical Education Department, Mampong Technical College of Education, Ashanti, Ghana*
[4] *Sports Section, University of Cape Coast, Cape Coast, Ghana*

Corresponding author:

Kofi Nyantakyi Appiah*
nyantakyi.appiah@gmail.com
kofinyantakyi2025@lpu.in

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Abstract

Background: Apparent statistical suppression may reflect mistaken construct identification. Objective: To reassess optimism in associations between mental well-being and self-reported psychological functioning among athletes. **Methods**: We reanalysed cross-sectional responses from 739 athletes in Türkiye. One record with age below the stated eligibility threshold and two records with invalid optimism items were excluded (N = 736). We verified instrument definitions and applied the official transformed scoring for the seven-item Short Warwick–Edinburgh Mental Well-being Scale (SWEMWBS). Regression and 5,000-sample bootstrap analyses assessed statistical indirect associations. **Results**: A previously labelled well-being variable was mathematically derived from optimism and pessimism, rather than measuring well-being. Scored SWEMWBS was negligibly correlated with the unweighted 32-item psychological-performance composite (r = −.010). The covariate-adjusted indirect estimate through optimism was positive (B = .0085, 95% bootstrap CI [.0044, .0131]), whereas the direct estimate was nonsignificant (B = −.0041, p = .439). Anxiety, motivation, and confidence showed different associations with well-being. **Conclusions**: The original negative suppression claim was not replicated after measurement correction. The cross-sectional associations do not establish causal mediation or actual sporting performance.

Keywords: Athlete psychological performance; construct overlap; mental well-being; optimism; secondary data analysis

Abstrak

Latar belakang: Supresi statistik dapat muncul akibat kesalahan identifikasi konstruk. Tujuan: Menilai kembali hubungan optimisme dengan kesejahteraan mental dan fungsi psikologis yang dilaporkan sendiri oleh atlet. **Metode**: Kami menganalisis ulang survei potong lintang terhadap 739 atlet di Türkiye. Satu catatan dengan usia di bawah kriteria dan dua catatan dengan respons optimisme tidak valid dikeluarkan (N = 736). Kesejahteraan mental dihitung menggunakan skor metrik konversi resmi dari tujuh butir Short Warwick–Edinburgh Mental Well-being Scale (SWEMWBS). Regresi dan bootstrap 5.000 kali digunakan untuk mengevaluasi hubungan tidak langsung secara statistik. **Hasil**: Variabel yang sebelumnya disebut kesejahteraan mental ternyata merupakan gabungan matematis optimisme dan pesimisme. Skor SWEMWBS hampir tidak berkorelasi dengan rerata mentah 32 butir performa psikologis (r = −0,010). Hubungan tidak langsung melalui optimisme bersifat positif setelah penyesuaian kovariat (B = 0,0085; IK bootstrap 95% [0,0044; 0,0131]), sedangkan hubungan langsung tidak signifikan (B = −0,0041; p = 0,439). Kecemasan, motivasi, dan kepercayaan diri menunjukkan hubungan berbeda. **Simpulan**: Klaim supresi negatif awal tidak terdukung setelah koreksi pengukuran. Data potong lintang tidak membuktikan mediasi sebab-akibat atau prestasi pertandingan.

Kata Kunci: Analisis data sekunder; kesejahteraan mental; optimisme; performa psikologis atlet; tumpang tindih konstruk

Introduction

Mental well-being and performance-related psychological functioning are important but distinct constructs in competitive sport. Well-being describes positive mental functioning, whereas questionnaires of sport-related psychological functioning may combine anxiety, motivation, and confidence. These measures do not directly record wins, times, rankings, or objective competition achievement. Literature on athlete mental health stresses the importance of distinguishing symptom burden from positive functioning and performance (Gouttebarge et al., 2019; Reardon et al., 2019; Rice et al., 2016).

Well-being has been distinguished from the absence of mental disorder within the dual-continua framework (Keyes, 2002, 2005). In competitive sport, conceptual reviews urge researchers to specify whether they are measuring positive well-being, distress, symptoms, or performance rather than treating these as interchangeable labels (Lundqvist, 2011; Lundqvist & Andersson, 2021). Reviews of elite-athlete mental health also document different risk and protective factors across sporting settings, further discouraging one-size-fits-all interpretations (Küttel & Larsen, 2020; Moesch et al., 2018).

Recent syntheses underline the problem of heterogeneous outcome measures. Peris-Delcampo et al. (2024) examined positive psychological factors and sporting performance but found varied assessment approaches, whereas Reinebo et al. (2024) restricted an intervention review to studies with quantitative competitive-performance outcomes. These are different endpoints from a self-report scale of anxiety, motivation, and confidence. Studies and reviews of athlete well-being interventions likewise evaluate mental well-being as its own outcome (Purcell et al., 2019; Wang et al., 2025).

Dispositional optimism represents a relatively stable tendency to anticipate favourable future outcomes and has been studied in relation to coping, effort and persistence (Scheier & Carver, 1985). Positive expectancy is conceptually linked to well-being, and an example item in the short Warwick–Edinburgh instrument itself concerns optimism about the future. However, conceptual overlap is not equivalent to mathematical dependence. In regression and indirect-association models, overlapping indicators may yield counterintuitive conditional coefficients, particularly when a composite predictor already contains the putative mediator (MacKinnon et al., 2007; Paulhus et al., 2004).

Generalized optimism is a positive expectancy disposition, but it is neither the same construct as psychological well-being nor a guarantee of success in a specific competitive episode (Carver et al., 2010). Qualitative work with Olympic champions identifies appraisal, coping, confidence and social resources together in resilience, illustrating why one trait cannot be presumed to explain objective sporting outcomes (Fletcher & Sarkar, 2012).

The original study by Arındı et al. (2025b) examined mental well-being, optimism and pessimism in a cross-sectional sample of Turkish athletes and reported a small positive indirect association via optimism. Our previously submitted manuscript argued instead for a negative indirect association, using the variable SİVKÖ_Ortalama as if it measured general mental well-being. The present revision tests that account at its most basic level: whether the archived variables actually correspond to independent instruments, whether scores were accurately calculated, and whether inconsistent associations persist in transparent models. Re-use of the same data is explicit. The scientific contribution is a measurement and reproducibility audit, not another independent sample.

The reanalysis asks whether (a) independently measured mental well-being is associated with the original overall psychological-performance composite; (b) optimism has a conditional association after adjustment for measured confounders, including pessimism; and (c) estimated indirect associations are negative, positive or close to zero when scale definitions are corrected. Differences between team and individual athletes and analyses by outcome dimension are exploratory. The direction of the conditional optimism association was not imposed on the data.

Method

Design and participants

This observational, cross-sectional secondary analysis used the supplied SPSS Data.sav file (739 records, 70 variables), corresponding to the publicly archived study “Factors affecting how well athletes perform mentally” (OpenICPSR doi:10.3886/E231941V1; Arındı et al., 2025a). Participants were licensed Turkish athletes. The raw file includes 412 men and 327 women, 404 team-sport and 335 individual-sport athletes, with ages 13–35 years (M = 21.74, SD = 3.40). These counts differ from the source investigators’ published description of 413 men, 326 women, 406 team-sport, 333 individual-sport athletes aged 18–35 years; the discrepancy must be clarified with the source depositor before publication.

One record had age 13 although the source study specified adult inclusion criteria, and two optimism item responses were 33 and 43 despite a permissible 1–5 item scale. These three records were excluded under screening rules applied before fitting the reanalysis models, leaving N = 736 (410 men, 326 women; 404 team and 332 individual athletes; age M = 21.75, SD = 3.39, range 18–35). Retaining the younger observation in an additional sensitivity analysis did not materially affect the estimates. No core questionnaire items were missing. Discrepant stored summary-score values were replaced by deterministic rescoring from the observed constituent items rather than guessed edits to the source data.

Instruments and scoring

Mental well-being. Seven archive items (mi1–mi7) correspond to the Short Warwick–Edinburgh Mental Well-being Scale (SWEMWBS), validated in Turkish by Demirtaş and Baytemir (2019). Each item ranges from 1 to 5. Following the original Warwick scoring guidance, the seven item scores were summed (range 7–35) and each integer sum was mapped to the published Rasch-transformed metric table; this transformed score was the primary well-being predictor (M = 25.288, SD = 4.687). The former item-mean score is retained solely for a comparable sensitivity analysis. Cronbach's α = .810 for the seven raw items. The stored archive aggregate MİO differed from its seven-item mean in one record (value 340), so all aggregates were recomputed from item responses. Warwick advises that raw SWEMWBS totals must be transformed for comparisons with other SWEMWBS studies (Stewart-Brown et al., 2009).

The WEMWBS family originated in the development and validation work of Tennant et al. (2007). The short form has also been evaluated in a population survey using its own distribution and norms (Ng Fat et al., 2017). Internal consistency is reported for transparency but does not establish that a score measures a theoretically distinct construct or that the items have a validated total-score interpretation (McNeish, 2018).

Athlete optimism and pessimism. The Athletes Optimism and Pessimism Scale (Tekkurşun Demir, 2022) contains separate nine-item optimism (i1–i9) and nine-item pessimism (k1–k9) domains on a five-point response scale. The respective item means were calculated separately; reliabilities were α = .872 and α = .921. The two out-of-range values occurred in i4. No Life Orientation Test–Revised (LOT-R) items were used. Importantly, the archived SİVKÖ score is EXACTLY (optimism mean + pessimism mean)/2 for every one of the 739 records. It is therefore a derived optimism–pessimism composite, not an independent well-being indicator. Using SİVKÖ as the predictor alongside optimism and pessimism makes their model matrix exactly collinear, invalidating separate attribution to those three terms.

Self-reported psychological functioning. The 32 SP items (sp1–sp32) correspond to the Psychological Performance Evaluation Scale in Sports (Aydoğan & Konaş, 2022), which comprises physical/cognitive anxiety (17 items), motivation (eight), and self-confidence (seven). The archive's SPPDort is generally the arithmetic mean of the 32 items, except one discrepant stored average. We recomputed the raw item mean (α = .807) to reproduce the archive variable. The development article does not provide an unambiguous, validated higher-is-better overall total scoring rule that reverses the anxiety dimension. It does establish three separately interpretable domains, which are therefore reported as primary descriptive outcomes. The raw 32-item mean is retained as an archive-compatible comparison, not as an observed competitive performance measure or necessarily a uniformly positive index. Figure 1 illustrates the construct correction established by the archive audit.

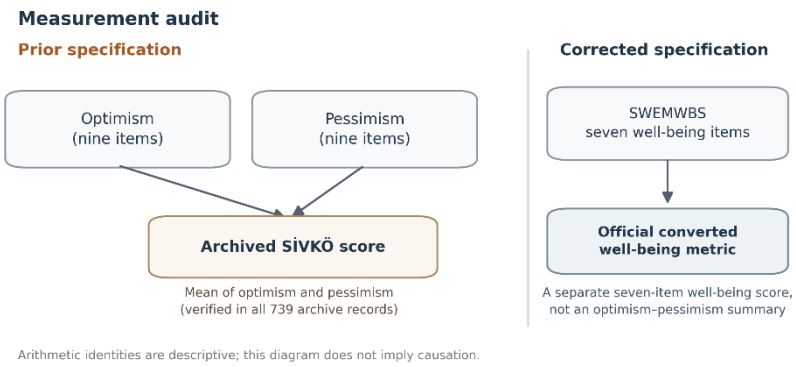


Figure 1. Measurement audit and identification of the appropriate well-being predictor. SİVKÖ is the stored arithmetic mean of optimism and pessimism, verified for all 739 original archive records. SWEMWBS is independently computed from seven mental well-being items and transformed according to the official scoring lookup; analyses use 736 eligible records. Diagram is not a causal model.

Separate domain reporting is supported by older sport-performance meta-analyses, which examine cognitive or somatic anxiety and self-confidence as distinct predictors rather than treating their raw item scores as uniformly performance-enhancing (Craft et al., 2003; Woodman & Hardy, 2003). A recent review of achievement goals and performance similarly emphasizes explicitly measured sporting outcomes (Lochbaum & Sisneros, 2024).

Statistical analyses

Data preparation and statistical analyses were implemented in Python using NumPy, pandas, SciPy, and statsmodels. Following Warwick's recommended scoring, each SWEMWBS seven-item raw sum (7–35) was transformed using its official lookup table. Scale domains were rescored from the raw SPSS records. Descriptive statistics, Cronbach's alpha, and Pearson correlations were calculated. Three nested OLS models estimated a univariable well-being association; a model additionally containing optimism and pessimism; and a model additionally controlling for sex, sport type, age, and licensed competitive years. HC3 heteroskedasticity-robust standard errors were used; coefficients are in the actual units of each scale, not standardized β values. The original unconverted SWEMWBS item-mean analysis was retained as a sensitivity check.

In the indirect-association specification, X was the official transformed SWEMWBS score, M was the nine-item optimism mean, and Y was the archive-compatible, unweighted 32-item psychological-functioning mean. The mediator equation was $M = a0 + aX + \gamma C + \text{error}$, and the outcome equation was $Y = b0 + c'X + bM + \delta C + \text{error}$; C included the same covariates in both equations. The corresponding total model was $Y = t0 + cX + \eta C + \text{error}$. The indirect association a×b was assessed using 5,000 nonparametric row-bootstrap resamples and percentile 95% confidence intervals with a fixed random seed. The primary covariate set included pessimism, sex, sport type, age, and licensed years. A model excluding pessimism and a model using the unconverted seven-item mean were sensitivity analyses. On equal samples and scales, $c = c' + ab$. Such a decomposition cannot identify causal mediation from cross-sectional data (Maxwell & Cole, 2007; Hayes & Rockwood, 2017).

The resampling procedure estimates uncertainty in a specified statistical indirect coefficient (Preacher & Hayes, 2008; Hayes & Scharkow, 2013); it does not create temporal precedence or establish the assumptions required for causal mediation (Imai et al., 2010). Longitudinal methodological analyses demonstrate how cross-sectional mediation estimates may misrepresent underlying longitudinal processes (Cole & Maxwell, 2003; Maxwell & Cole, 2007). The selection of covariates in observational models also requires causal reasoning rather than routine adjustment alone (Rohrer, 2018).

Team and individual sports were estimated separately for description; pooled regression included the well-being×sport and optimism×sport interactions to directly test group differences. Additional outcomes were the recorded anxiety, motivation and confidence subscale means. An exploratory orientation-corrected summary reversing the raw anxiety responses (6 minus each item) was calculated solely to illustrate sensitivity of the overall association to score direction; it is not asserted to be a validated total score of the original questionnaire. Models were not preregistered, and exploratory *p* values were not multiplicity-adjusted.

Result

Data audit and descriptive statistics

The original SPSS file has 739 records. Two i4 optimism responses exceeded the permitted 1–5 scale, one age was 13 years despite the original adult inclusion description, one stored well-being summary was 340, and one outcome aggregate differed from its constituent items. After excluding the three records flagged by retrospective data-quality screening, 736 observations were analysed. The variable SİVKÖ_Ortalama was algebraically dependent on optimism and pessimism means rather than an independent mental well-being score. Results using officially converted SWEMWBS scores are summarised in Table 1.

Table 1. Descriptive statistics and correlations with the original unweighted 32-item outcome

Measure	N	M	SD	α (raw items)	r with 32-item mean
Well-being (official SWEMWBS metric)	736	25.288	4.687	.810	−.010
Optimism (9-item mean)	736	3.852	0.740	.872	.117
Pessimism (9-item mean)	736	1.753	0.870	.921	.291
32-item archived mean	736	3.055	0.416	.807	1.000
Physical/cognitive anxiety	736	2.273	0.749	.920	.715
Motivation	736	4.149	0.729	.860	.462
Self-confidence	736	3.703	0.778	.834	.276

Note. N = 736. SWEMWBS is reported on its official Rasch-converted 7–35 metric, with α calculated on its seven underlying items; optimism, pessimism, and the PPESiS domains are 1–5 item means. Subscale correlations with the 32-item score are part–whole correlations. Higher raw anxiety is substantively different from greater motivation or confidence.

Officially transformed SWEMWBS had a near-zero zero-order association with the 32-item average (r = −.010). It correlated positively with optimism (r = .490) and negatively with pessimism (r = −.203). Its correlations with the three sport psychological-functioning dimensions were in different directions: anxiety r = −.349, motivation r = .289, and confidence r = .481. The initially submitted positive well-being–outcome correlation was obtained using a misidentified optimism–pessimism aggregate, not the actual well-being measure.

Regression and covariate adjustment

In the univariable Model 1, the official SWEMWBS score was not associated with the original 32-item mean (B = −.0009, HC3 SE = .0042, p = .827; N = 736; R^2 < .001). Models 2 and 3 are reported in Table 2.

Table 2. Linear regression estimates of the original unweighted 32-item mean

Predictor	Model 2: B (HC3 SE); p	Model 3: B (HC3 SE); p
Well-being, metric	−.0039 (.0050); p = .438	−.0041 (.0053); p = .439
Optimism	.1135 (.0268); p < .001	.1120 (.0272); p < .001
Pessimism	.1535 (.0298); p < .001	.1520 (.0304); p < .001
Female	—	.0318 (.0312); p = .308
Team sport	—	.0144 (.0308); p = .640
Age	—	.0003 (.0049); p = .947
Licensed years	—	.0044 (.0044); p = .310
N / R^2 / adjusted R^2	736 / .1176 / .1139	736 / .1209 / .1125

Note. Univariable Model 1 is reported in the text. Model 2 includes well-being, optimism, and pessimism; Model 3 additionally adjusts for sex, sport type, age, and licensed years. All B estimates are unstandardized (change in raw 32-item mean per one unit of SWEMWBS metric or the relevant predictor). SE values are HC3 robust. The mixed anxiety/motivation/confidence nature of the outcome limits overall score interpretation.

In Model 3, officially scored SWEMWBS showed no independent association with the original raw 32-item mean (B = −.0041, p = .439). Optimism (B = .1120, p < .001) and pessimism (B = .1520, p < .001) were positive conditional correlates of that mixed-orientation total. Model 3 explained 12.09% of its variance, compared with 11.76% in Model 2, indicating little additional explanatory contribution from demographics and sport participation. None of the demographic covariates was significant.

Indirect-association decomposition

Table 3. Official-metric indirect-association decomposition with 5,000 bootstrap resamples

Parameter	Adjusted covariates, no pessimism	Adjusted covariates + pessimism
a: Well-being → optimism	0.0793	0.0760
b: Optimism → overall score, adjusted	0.0895	0.1120
c′: Direct well-being association	-0.0082	-0.0041
a×b: Indirect association	0.0071 [0.0026, 0.0119]	0.0085 [0.0044, 0.0131]
c: Total well-being association	-0.0011	0.0044
Difference c−(c′+ab)	< .000001	< .000001

Note. Both models adjust for sex, sport type, age, and licensed years; the right-hand model additionally adjusts for pessimism. B coefficients are unstandardized with X measured in official SWEMWBS metric points. Indirect confidence intervals are 95% percentile bootstrap intervals. The raw item-mean scale gives numerically different coefficients; comparing them without unit conversion is incorrect. All indirect effects describe statistical associations, not verified temporal processes.

In the model adjusting for pessimism and demographics, the optimism indirect association was positive (a×b = .00851, 95% percentile bootstrap CI [.00439, .01308]). The direct well-being association was negligible (B = −.00410, HC3 SE = .00530, p = .439), and the total association was also nonsignificant (B = .00442, p = .371). Within this model, c = c′ + ab to rounding. The negative indirect suppression reported in the previous submission was not reproduced. When the original unconverted SWEMWBS item mean is substituted, the indirect coefficient is .0573, 95% CI [.0277, .0906], showing a difference of predictor units but not direction. Figure 2 depicts the fully adjusted statistical decomposition and its bootstrap interval.

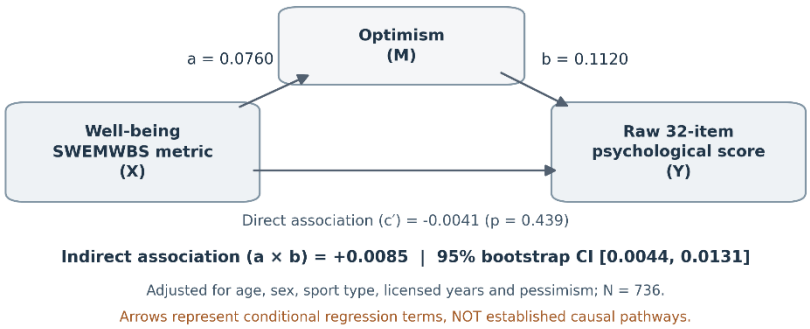


Figure 2. Cross-sectional indirect-association decomposition through optimism. N = 736. Estimates are unstandardized coefficients from the fully adjusted linear regression specification. The indirect association and its 95% interval use 5,000 percentile bootstrap resamples. Arrows depict statistical regression parameters, not temporal or causal mechanisms. The outcome is the raw, mixed-orientation 32-item questionnaire average, not observed competition performance.

Sport-type comparisons

Table 4. Sport-group regression estimates and pooled interaction tests

Term	Individual athletes (n=332)	Team athletes (n=404)	Pooled interaction p
Well-being B (HC3 SE)	−.0049 (.0087)	−.0023 (.0065)	.737
Optimism B (HC3 SE)	.1266 (.0446)	.1014 (.0350)	.474
Model R^2	.116	.141	—

Note. Group models adjust for pessimism, female sex, age, and licensed years. Pooled interaction models include well-being×sport and optimism×sport terms with the same covariates. A difference in group R^2 is not an interaction test.

The officially scored models explained 11.57% of the mixed 32-item mean in individual-sport athletes and 14.11% in team-sport athletes; however, well-being×sport (p = .737) and optimism×sport (p = .474) were both nonsignificant in the pooled interaction model. Thus, the data do not support the earlier claim of sport-type-specific negative suppression.

Component outcomes and score-orientation sensitivity

Table 5. Distinct outcome dimensions: correlations and adjusted regression

Outcome	r(well-being)	B well-being	*p*	B optimism	*p*
Anxiety (higher raw score)	-0.349	-0.0381	< .001	0.0198	0.566
Motivation	0.289	0.0207	0.014	0.2192	< .001
Self-confidence	0.481	0.0503	< .001	0.2135	< .001
Exploratory anxiety-reversed composite	0.473	0.0364	< .001	0.0910	< .001

Note. Domain correlations and coefficients use officially transformed SWEMWBS. Separate HC3-robust models for each domain control for optimism, pessimism, sex, sport type, age, and licensed years. The final row is an explicitly unvalidated sensitivity score that reverses 17 anxiety responses; it is not the published PPESiS score. Exploratory tests were not multiplicity adjusted.

Official SWEMWBS metric scores correlated negatively with raw anxiety (r = −.349) but positively with motivation (r = .289) and confidence (r = .481). Simply averaging the unmodified domains with opposite substantive directions obscured those associations. A sensitivity score that reversed the raw anxiety items was correlated with well-being at r = .473, but this is not evidence that the modified composite has been validated as an official PPESiS total. The original scale-development article confirms its three-factor structure but does not resolve the global total-score direction for this archive. Confirmatory scoring advice should be sought from the source investigators. Figure 3 displays the distinct domain correlations with 95% confidence intervals.

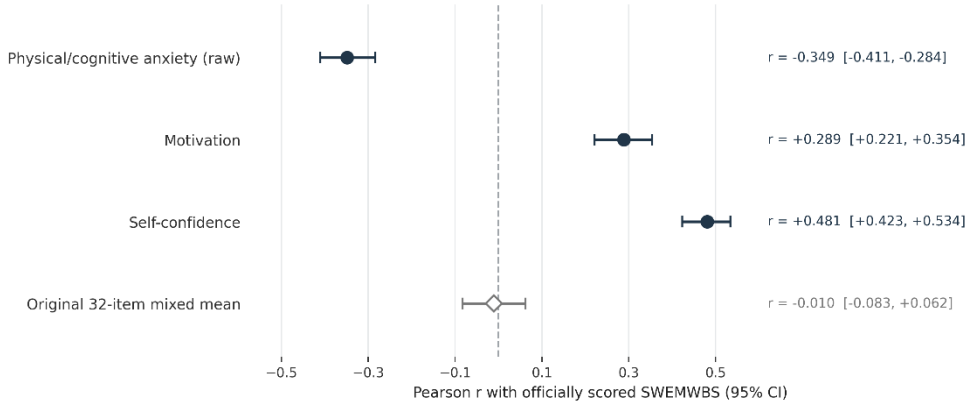


Figure 3. Different associations of mental well-being with psychological-functioning domains. N = 736. Plotted estimates are unadjusted Pearson correlations with official SWEMWBS metric scores; intervals use Fisher's z transformation. Anxiety is in its stored raw direction, whereas motivation and self-confidence are adaptive constructs. The original 32-item mean combines domains of differing substantive orientations; it is not established here as a validated overall performance score.

Discussion

The most consequential result of this reanalysis concerns construct identity, not the *p* value of a mediation coefficient. The variable labelled mental well-being in the submitted paper was exactly the mean of optimism and pessimism. It therefore contained the proposed mediator by definition. A model that attempts to estimate separate optimism, pessimism and SİVKÖ coefficients has a singular design matrix, making the claimed distinct direct effect of "well-being" uninterpretable. This is more serious than a moderate correlation between independent scales and goes beyond the conventional concern of inflated standard errors.

Once the official SWEMWBS well-being construct was identified and scored with its published metric transformation, the negative indirect estimate vanished. The small positive model-based indirect estimate was insensitive to whether pessimism was included, but numerical coefficients changed with the well-being scale unit. The official metric did not correlate appreciably with the mixed-orientation 32-item questionnaire average. These results are not evidence that optimism improves or impairs actual athletic competition outcomes.

The original sports psychological-performance instrument has validated anxiety, motivation, and confidence dimensions. The development article includes negatively valenced anxiety items, whereas the other two domains assess adaptive motivational and confidence functioning; it does not justify describing a simple unreversed total as uniformly better performance. The dimension-specific results are therefore more interpretable than the overall archived mean. The optional anxiety-reversed sensitivity score should not be represented as a validated alternative. Additional reporting should foreground these dimensions and treat the archived global variable as a reproducibility comparison.

An additional conceptual caveat concerns overlap between the SWEMWBS items and optimism. At least one well-being item refers to being optimistic about the future, so the two measures are distinct arithmetic scales but not conceptually independent. The positive indirect association should therefore be considered a model-based shared-variable pattern, not proof of a temporal process in which well-being first changes optimism and optimism subsequently changes psychological performance. The cross-sectional survey supplies no temporal sequence, intervention randomisation, or design capable of identifying these causal steps (Maxwell & Cole, 2007).

Sport-type differences were likewise not robust to direct statistical testing. Although the adjusted R^2 was numerically higher for team-sport athletes, formal pooled interactions were not significant. No collected measure tested whether collective pressure, unrealistic expectations, motivational overreliance, or restricted cognitive resources explained the results; those mechanisms cannot be claimed as observed phenomena. Future work should analyse objective competition indicators, separate anxiety and positive functioning domains, employ longitudinal measurement, and preregister model comparisons and moderator analyses. If optimism training or process-goal techniques are evaluated, their effectiveness must be assessed in appropriately controlled intervention designs.

Practical recommendations should also distinguish promoting well-being from improving competitive performance. Contemporary reviews of elite-athlete mental-health services and interventions emphasize context-sensitive support (Moesch et al., 2018; Purcell et al., 2019; Wang et al., 2025), while reviews of psychological techniques and performance anxiety warn that the effects of interventions depend on the population, outcomes and study design (Niering et al., 2023; Reinebo et al., 2024). Nothing in this cross-sectional reanalysis tests whether optimism training or other psychological interventions work.

Limitations

The study has a cross-sectional, self-report, single-country, secondary design, with no observed sporting-performance outcomes. The public dataset and source publication differ in participant sex/sport counts and age range, and the archive contains out-of-range and inconsistent summary values. The official SWEMWBS conversion has now been applied, although confirmation of the exact Turkish administration version and permission requirements belongs with the original data custodian. The original development article documents three PPESiS factors but does not establish a validated higher-is-better scoring rule for the archive's unreversed 32-item average. No causal mediation, general athlete benefit of optimism, or sport-type differential effects can be inferred. Measurement invariance and multiplicity-adjusted exploratory comparisons were not evaluated.

Conclusion

The initial claim that optimism suppressed a positive association between mental well-being and psychological performance is not reproduced once the predictors are correctly identified. The purported well-being variable in the earlier manuscript is mathematically formed from optimism and pessimism and is not an independent mental well-being scale. Using the official transformed SWEMWBS score reveals a small positive cross-sectional indirect association through optimism, a nonsignificant direct association with the unweighted 32-item archive score, and contrasting associations with anxiety, motivation, and confidence. No evidence establishes a sport-type interaction or the effects of optimism training. Clarification of the original total-score direction and inconsistencies in source-data metadata remains necessary.

Data availability

The anonymized source dataset is publicly archived at OpenICPSR (https://doi.org/10.3886/E231941V1). The SWEMWBS score was converted using the official Warwick scoring lookup table. The derived analysis file and reproducible scripts are available for examination by the journal and coauthors.

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Consent for Publication

The manuscript includes no identifiable participant-level material, photographs, or direct quotations. Consent for publication of identifiable personal material is therefore not applicable.

Competing Interests

The authors declare no competing financial or non-financial interests.

Ethical Approval Statement

The original investigators reported ethics approval (reference 2023-YÖNP-0725). This secondary reanalysis used de-identified, publicly available records and involved no new participant recruitment or contact.

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