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“I WAS INTERESTED... UNTIL I REALIZED WE HAD TO DANCE IN FRONT OF EVERYONE AND POSSIBLY PULL SOMETHING:” SOCIAL AND INJURY FEARS AS POSSIBLE INHIBITORS OF INDIVIDUAL INTEREST IN MOVEMENT-BASED ART WITHIN THE PHYSICAL EDUCATION CONTEXT

“ZANIMALO ME JE ... DOKLER NISEM UGOTOVIL, DA BOMO MORALI PLESATI PRED VSEMI IN SE PRI TEM LAHKO CELO POŠKODOVALI”: SOCIALNI STRAH IN STRAH PRED POŠKODBAMI KOT MOGOČA INHIBITORJA POSAMEZNIKOVEGA INTERESA ZA GIBALNO UMETNOST V OKVIRU ŠPORTNE VZGOJE

ABSTRACT

This study explored the associations between social fear and injury-related fear with individual interest in dance as a movement-based art within the Philippine physical education context. Using a cross-sectional design with 242 university students, multiple regression analyses revealed no statistically significant associations between either fear construct and the three factors of individual interest, as well as the composite score. The results suggest that students' interest in expressive physical activities may remain intact despite emotional discomfort. Generalized fear constructs may be insufficient to capture the nuanced emotional landscape of dance-based learning, indicating a need for more context-specific emotional measures. By focusing on a culturally embedded art form in a Southeast Asian setting, this study contributes to the global discourse on interest development and affective engagement in physical education. Implications for future research and pedagogical design are addressed.

Keywords: dance, individual interest, movement-based art, physical education

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IZVLEČEK

Raziskava je preučevala povezanost med socialnim strahom in strahom, povezanim s poškodbami, ter posameznikovim interesom za ples v smislu gibalne umetnosti v okviru filipinskega športno-vzgojnega konteksta. S presečnim raziskovalnim načrtom in vzorcem 242 univerzitetnih študentov je multipla regresijska analiza pokazala, da med obema konstruktoma strahu ter tremi dejavniki posameznikovega interesa, kakor tudi sestavljeno oceno, ni statistično pomembnih povezav. Rezultati nakazujejo, da je interes študentov za izrazne telesne dejavnosti nespremenjen kljub čustvenemu nelagodju. Posplošeni konstrukti strahu so morda nezadostni za zajemanje čustvene palete učenja na podlagi plesa, kar nakazuje potrebo po bolj kontekstno specifičnih čustvenih merilnih postopkih. S poudarkom na kulturno utemeljeni umetniški obliki v jugovzhodnoazijskem okolju ta raziskava prispeva k svetovni razpravi o razvoju interesa in afektivni vključenosti v športni vzgoji. Predlagana so tudi priporočila za prihodnje raziskave in pedagoško zasnovu.

Ključne besede: ples, individualni interesi, umetnost gibanja, športna vzgoja

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INTRODUCTION

“I was interested... until I realized we had to dance in front of everyone and possibly pull something.”

For many students, this humorous reflection captures the uneasy balance between curiosity and discomfort in dance-based physical education. Yet for some learners, the invitation to participate is met not with enthusiasm but hesitation (Fjogstad Langnes & Rustad, 2024). Despite initial interest, students may withdraw when confronted with the social visibility and that physical vulnerability that dancing in front of others entails (Gao et al., 2018; Rustad et al., 2025). This dynamic raises important pedagogical questions about the psychological factors that shape student engagement with dance. In particular, it prompts a closer examination of the role of fear as a possible constraint on the development of individual interest in dance-based PE.

In educational psychology, *individual interest* is understood as a relatively enduring personal connection to a specific content domain or activity. It develops gradually through repeated engagement, positive affect, and internalized value (Hidi & Renninger, 2006; K. A. Renninger & Hidi, 2015). Unlike situational interest, which is externally triggered and often short-lived, individual interest reflects a student’s willingness to reengage over time and is shaped by motivational conditions such as autonomy support, relevance, and perceived competence (Deci & Ryan, 1985; Harackiewicz et al., 2016; Schiefele, 2009). Although widely examined across academic subjects (Durik et al., 2017; Laine et al., 2020; Tsai et al., 2008; Wild, 2022), considerably less is known about how negative affective experiences may interfere with this process. This gap is especially relevant in movement-based and performance-oriented physical education settings, where students must not only learn but also publicly perform their skills (Rustad, 2012).

As a curricular component of PE, dance frequently involves public performance, group coordination, and unfamiliar physical demands (Bajek et al., 2015; Tao et al., 2022). Previous research studies have mentioned that dancing is a form of therapeutic activity that can enhance physical and mental well-being (Fantiro et al., 2023; Lobo, 2023). However, for students who struggle with confidence, coordination, or anxiety, this can become a source of psychological discomfort (“How Can We Strengthen Dance in Physical Education?,” 2016). *Social fear* in the context of higher education is defined as apprehension about being judged or evaluated by peers, may lead to avoidance or self-conscious participation (Purdon et al., 2001). At the same

time, *injury fear*, or the anticipation of physical pain, strain, or harm during movement, may compound this hesitation (Helsen et al., 2013). These fears are not mere excuses for non-participation; they represent meaningful emotional responses that can suppress students' ability to engage, persist, or find value in the activity (Jiang et al., 2025; Skinner et al., 2024). Although these dynamics have been explored in sports psychology and pain literature, they remain relatively absent in discussions about arts-based physical education.

To understand how fear may constrain interest, this study draws on the tripartite framework of individual interest proposed by Roure et al. (2021), which disaggregates the construct into three factors: *positive affect and willingness to reengage (PAWR)*, *stored-utility value (SUV)*, and *stored attainment value and knowledge-seeking intentions (SAVKSI)*. These factors reflect the emotional, cognitive-pragmatic, and value-oriented foundations of interest (Roure et al., 2021). Social and injury fears can be understood as affective inhibitors. These are not direct opposites of interest, but psychological forces that suppress the curiosity, value attribution, and knowledge-seeking behaviors that sustain it. Interest does not flourish in a vacuum; it requires an environment where students feel safe to fail, comfortable to explore, and supported to improve (Brinkley et al., 2017). When fear disrupts these conditions, even previously interested students may retreat.

Therefore, this study aims to examine the extent to which social and injury-related fears predict individual interest in dance-based physical education, focusing on its three factors. By framing fear not as a fixed trait but as a situational and task-specific response, the research aligns with current motivation theories that highlight the role of context, emotion, and perception in shaping academic dispositions. The goal is not to pathologize fear but to understand its influence on interest formation, especially in settings that require public, embodied performance. Understanding how these fears operate within the context of dance allows educators and curriculum designers to identify emotional barriers that may otherwise remain invisible in performance-based learning. It also highlights the need for psychologically safe learning environments where individual interest can thrive without being undermined by fear of judgment or injury. By empirically examining these relationships, the present study not only fills a notable gap in literature on fear-based inhibition in the arts but also contributes to ongoing conversations about student agency, affective equity, and meaningful engagement in physical education.

In the context of higher education in the Philippines, where general physical education remains a core component of undergraduate curricula (Tagare, 2025; Tolentino & Sinio, 2024), such insights are particularly relevant. Dance-based PE courses are often implemented as a means to promote wellness, cultural identity, and physical literacy, yet student responses to these courses vary widely (Magat et al., 2024). Many students experience discomfort not because they lack interest in movement or creativity, but because of the compounded pressures of public performance, peer visibility, and unfamiliar motor tasks (Krijgsman et al., 2017; Metz et al., 2024). As universities in the Philippines aim to enhance holistic development through learner-centered approaches (Tagare Jr. et al., 2025), it becomes increasingly important to understand not only what motivates student engagement in PE (Campoamor-Olegario et al., 2024), but also what inhibits it. This study therefore offers both conceptual and practical contributions to the discourse on affective learning in Philippine higher education.

Review of Related Literature

What makes students care? The psychology behind interest

Individual interest is conceptualized as a relatively stable and enduring psychological disposition that develops over time through repeated exposure, meaningful engagement, and internalized value (Hidi & Renninger, 2006; Renninger & Hidi, 2015). According to Renninger (2000), it evolves from situational curiosity into a deeper personal investment, provided that environmental conditions support autonomy, relevance, and emotional safety. These foundational constructs are particularly critical in educational settings where students are expected to perform under evaluation. Expanding this conceptualization, Roure et al. (2021) introduced a tripartite model of individual interest specific to physical education contexts. The model identifies three interrelated factors: *positive affect and willingness to reengage (PAWR)*, *stored-utility value (SUV)*, and *stored attainment value and knowledge-seeking intentions (SAVKSI)*. PAWR pertains to the learner's emotional experience during engagement and their openness to repeat movement-based art in the future (J. Lobo, 2023). In movement-based art in physical education, this may be influenced by the perceived social safety of the environment. SUV refers to the extent to which students perceive the task as useful, relevant, or aligned with their personal goals (Roure & Lentillon-Kaestner, 2022). For instance, students may value dance as a means of improving physical fitness, enhancing self-expression, or engaging with cultural content. Finally, SAVKSI reflects a deeper level of interest, characterized by internalized value, personal importance, and a desire to improve or seek further knowledge

(Bautista et al., 2023). The presence of fear within the learning environment has the potential to disrupt all three dimensions by reducing emotional enjoyment, diminishing perceived utility, and undermining sustained personal investment.

Vulnerable and at risk: Emotional and physical barriers in movement-based art within PE

Dance is distinct within the physical education curriculum due to its expressive nature, public visibility and emotional demands (Mattsson & Lundvall, 2015). Unlike other PE activities that emphasize competition or endurance, dance requires rhythm, aesthetic movement, cultural sensitivity, and often public performance (Redelius et al., 2015). These features increase the psychological stakes for students, particularly those who may experience anxiety, self-consciousness, or low movement confidence (Borowski, 2023). Student responses to dance vary widely. Some learners approach it with enthusiasm, while others experience discomfort and inhibition (Rustad, 2012; Ward & Scott, 2020). These affective responses are shaped by the social dynamics of the performance setting. Tasks that involve public demonstration or group choreography in front of peers may generate fear of negative evaluation (Metz et al., 2024). This emotional discomfort can suppress engagement, even in students who might otherwise be interested (Åsebø et al., 2022). Research in arts education has emphasized that participation is more likely when learners perceive the environment as emotionally safe and socially inclusive (Davies et al., 2013; Fajrie et al., 2024). However, movement-based art in PE is frequently implemented without sufficient attention to these affective dimensions. The result is a misalignment between curricular intentions and students' emotional readiness, which can inhibit participation and stifle the development of individual interest.

Too scared to engage? How fear suppresses participation in movement-based art within PE

Inhibitors of engagement have become a growing focus in motivation research, particularly affective states such as fear and anxiety (Robinson et al., 2013; Singh et al., 2022). Two specific forms of fear are salient in the context of movement-based art in physical education: social fear and injury-related fear. *Social fear* refers to the apprehension associated with being negatively evaluated by others (Fredrick & Luebbe, 2020). It can manifest in behaviors such as avoidance, reluctance to perform, or over-self-monitoring during movement tasks (La Greca & Lopez, 1998). This fear becomes particularly prominent when students are asked to perform choreographed routines or expressive movements in front of peers. In contrast, *injury-related*

fear pertains to the anticipation of physical harm, strain, or discomfort associated with unfamiliar or complex physical movements (H. Liu et al., 2021). Lethem et al. (1983) fear-avoidance model (FAM) explains how perceived threat can lead to cognitive and behavioral withdrawal from physical tasks (Lethem et al., 1983; Slade et al., 1983). Although widely used in sports science and clinical rehabilitation (Dover & Amar, 2015; Lu et al., 2025; Zale & Ditre, 2015), this model has not been thoroughly applied in school-based dance settings. Both types of fear are capable of inhibiting not only physical performance but also the psychological precursors to sustained engagement (Patterson et al., 2021). When students perceive the movement-based art as emotionally or physically unsafe, they may disengage both behaviorally and cognitively, even if the content initially held personal interest.

Where fear and interest collide: Addressing the empirical blind spot in movement-based art within PE

Despite robust literatures on both individual interest and fear, their intersection remains underexamined. This is especially true in contexts that involve performance, physical expression, and peer observation. Most studies on interest focus on its developmental trajectory and supporting conditions, while studies on fear typically address anxiety or avoidance behaviors. There is a notable lack of empirical research that investigates how fear may act as an inhibitory force in the development of individual interest, particularly in movement-art based within physical education. This gap is especially relevant within higher education in the Philippines, where dance remains a compulsory component of general PE programs. These programs are designed to promote holistic development, including cultural competence, creativity, and physical literacy (Pacadaljen, 2024). However, students are often expected to engage in dance without sufficient preparation for the affective challenges it entails. The fear of social exposure and the anticipation of physical discomfort are rarely addressed in the pedagogical framework, despite their potential to suppress willingness to participate or explore further. Understanding how these fears influence the key factors of individual interest offers valuable insights into designing more emotionally responsive and inclusive physical education environments, specifically for movement-art topics. This study seeks to address this empirical gap by examining how social and injury-related fears function as inhibitors of individual interest in dance-based physical education among university students.

Objectives of the study and hypotheses formulation

This study aims to examine the predictive association between social fear and injury-related fear, and the three factors of individual interest in dance-based physical education, as proposed in the tripartite model of Roure et al. (2021). Additionally, the study seeks to determine the extent to which these fears predict students' overall individual interest, derived as a composite measure of the three factors. Drawing on theoretical insights from the fear-avoidance model (Lethem et al., 1983) and the expectancy-value perspective on motivation (Eccles & Wigfield, 2002), the study explores the role of fear as a psychological inhibitor within the context of expressive physical education.

Given the limited empirical research that directly examines fear as a correlate of individual interest, particularly in movement-art based within physical education in Philippine higher education, this study is exploratory in nature. Nevertheless, the hypotheses are theoretically grounded. It is expected that higher levels of social fear and injury-related fear will be significantly associated with lower levels of PAWR, as concerns about judgment or physical discomfort may inhibit students' emotional engagement and willingness to reengage. These fears are also expected to be negatively associated with SUV, since perceived threats may diminish students' view of dance as a meaningful or relevant activity. Likewise, both forms of fear are hypothesized to be negatively associated with SAVKSI, as students who experience fear may be less inclined to invest in skill development or seek deeper knowledge about the movement-based art.

Finally, it is anticipated that both social and injury-related fears will show a significant negative association with overall individual interest in dance-based physical education. Whether experienced independently or simultaneously, these fears may serve as psychological inhibitors that reduce students' affective responses, utility appraisals, and internalized motivation. Through this analysis, the study seeks to offer empirical insight into the affective conditions that shape or constrain student interest in physical education environments that demand public performance and physical engagement.

Conceptual framework of the study

This study is anchored on the theoretical integration of the tripartite model of individual interest by Roure et al. (2021) and the fear-avoidance framework by Lethem et al. (1983). It examines the associations between two independent variables (social fear and injury-related fear) and four dependent variables (PAWR, SUV and SAVKSI, and overall individual interest, computed

as a composite score of the three factors). The framework proposes that both social fear and injury-related fear are negatively associated with each of the three individual interest factors, and likewise, with overall individual interest. Within the context of movement-based art in physical education, these fears may be linked to reduced student engagement, lower task value perceptions, and limited personal investment. By exploring these associations, the study aims to better understand the potential psychological barriers that may be associated with decreased individual interest in dance-based learning environments (see Figure 1).

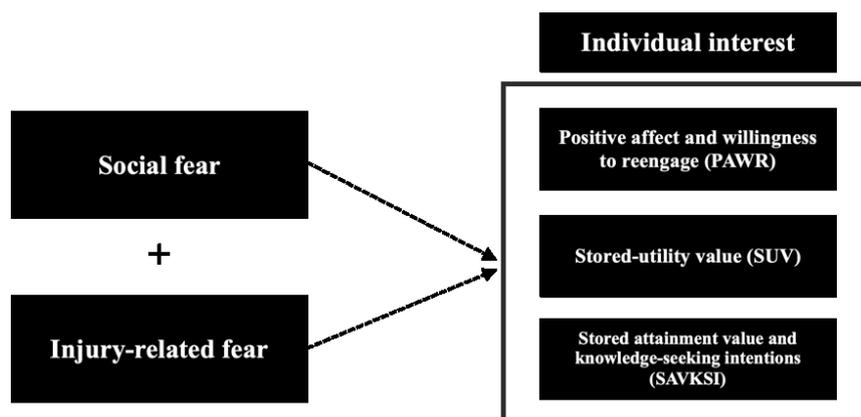


Figure 1. Conceptual framework showing the associations between social fear and injury-related fear and the factors of individual interest in the context of movement-based art in physical education.

METHODS

Participants

The participants were second-year undergraduate students enrolled in *Physical Activity Towards Health and Fitness 3* (PATH-Fit 3) during the second semester of Academic Year 2024–2025 at a public higher education institution in the Philippines. Respondents are purposively selected from dance-designated sections of the course. In this institution, PATH-Fit 3 offerings are aligned with the instructors' field of specialization (such as dance, sports, or fitness) ensuring that students are taught by faculty members with expertise in the corresponding domain. This institutional practice supports pedagogical alignment and maximizes instructional quality. For this study, only sections taught by dance-specialized instructors were included to preserve the thematic focus on movement-based art within physical education. All participants were briefed on the nature of the study and provided informed

consent. A total of 347 students initially responded to the survey. After data cleaning, 242 responses were retained, resulting in a usable response rate of 69.7% (see Table 1).

Table 1. Respondents' background characteristics (n = 242).

Demographic attribute	Items	n(%)
Sex	Male	104(43.0%)
	Female	110(45.5%)
	Prefer not to disclose	18(11.6%)
Age (\bar{x} = 18.55, SD = 1.269)	17	17(7.0%)
	18	135(55.8%)
	19	59(24.4%)
	20	20(8.3%)
	21	6(2.5%)
	22	3(1.2%)
	27	1(0.4%)
	29	1(0.4%)

Furthermore, an a priori power analysis was conducted using G*Power 3.1 (Faul et al., 2007) to determine the minimum sample size required for multiple linear regression with two predictors. Based on an anticipated medium effect size ($f^2 = .15$), an alpha level of .05, and a desired statistical power of .95, the analysis indicated that a minimum of 107 participants was necessary to detect meaningful results. The final sample of 242 respondents not only met but substantially exceeded this threshold, thereby ensuring adequate statistical power for robust hypothesis testing.

Instrument

The survey was administered online via Google Forms and conducted from February to March 2025. Participants were invited to complete the questionnaire digitally through the learning management system (LMS) used by the university. Therefore, to assess the relevant constructs, the study utilized two validated instruments. Fear was measured using the Fear Survey Schedule (FSS) developed by Arrindell et al. (1984), a 52-item instrument comprising five subscales: *social fears* (SOC), *agoraphobia fears* (AGO), *injury fears* (INJ), *sex aggression fears* (SEX), and *fear of harmless animals* (ANI). For this study, 13 items from the Social Fears (SOC) subscale and 12 items from the Injury Fears (INJ) subscale were adopted without modification. The FSS employs a 5-point Likert scale ranging from 1 (Not at all) to 5 (Very much), with higher scores reflecting greater levels of fear.

Meanwhile, individual interest was measured using a 14-item English version of the Students' Individual Interest in Physical Education Questionnaire developed by Roure et al. (2021). The instrument assesses three factors: positive affect and willingness to reengage (5 items), stored-

utility value (4 items), and stored attainment value and knowledge-seeking intentions (4 items). Only minor wording adjustments were made to tailor the items to the Philippine higher education and dance-specific context, while preserving the theoretical integrity of the scale. Responses were recorded on a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).

Measurement model assessment

Confirmatory Factor Analysis (CFA) was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS 4.0 to evaluate the reliability and validity of the measurement model (Hair et al., 2019). All indicators demonstrated satisfactory standardized loadings, ranging from 0.717-0.931, surpassing the recommended minimum of ≥ 0.70 , and affirming indicator reliability (Hair et al., 2019). Internal consistency was also confirmed, with Cronbach's alpha (CA) values ranging from 0.889-0.945 and composite reliability (CR) values from 0.911-0.988, all well ≥ 0.70 threshold (Nunnally & Bernstein, 1994). Convergent validity was established as each construct's average variance extracted (AVE) exceeded the minimum criterion of ≥ 0.50 (Hair et al., 2019). Furthermore, all variance inflation factor (VIF) values were below 5, indicating no significant multicollinearity among items (Hair et al., 2019).

Table 2. Confirmatory Factor Analysis results: Factor loadings, reliability, and validity indices for convergent validity.

Construct	Item	Item loadings	CA	CR	AVE	VIF
PAWR	PAWR1	0.903	0.909	0.953	0.713	2.954
	PAWR2	0.898				2.448
	PAWR3	0.868				2.876
	PAWR4	0.717				2.106
	PAWR5	0.822				2.358
SUV	SUV1	0.821	0.889	0.938	0.745	2.294
	SUV2	0.857				1.977
	SUV3	0.868				2.913
	SUV4	0.905				2.740
SAVKSI	SAVKSI1	0.928	0.945	0.988	0.855	3.548
	SAVKSI2	0.922				4.384
	SAVKSI4	0.931				4.085
	SAVKSI5	0.916				4.276
SOC	SOC5	0.798	0.893	0.911	0.758	1.798
	SOC8	0.884				3.165
	SOC9	0.872				2.722
	SOC10	0.924				3.350
INJ	INJ12	0.812	0.942	0.966	0.740	3.084
	INJ14	0.871				3.899
	INJ22	0.882				3.331
	INJ32	0.867				3.040
	INJ36	0.835				3.382
	INJ38	0.885				4.372
	INJ39	0.867	3.563			

Notes. Confirmatory Factor Analysis (CFA) thresholds. Item loadings $\geq .70$, Cronbach's Alpha (CA) and Composite Reliability $\geq .70$, Average Variance Extracted (AVE) $\geq .50$, VIF ≤ 5 ; PAWR- Positive affect and willingness to reengage; SUV - Stored-utility value; SAVKSI - Stored attainment knowledge and knowledge-seeking intentions; SOC - Social fear; INJ - Injury-related fear.

Additionally, discriminant validity was evaluated using two established criteria (Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio) as recommended by Hair et al. (2019). As shown in Table 3, the square roots of the Average Variance Extracted (AVE) for each construct (diagonal values in the Fornell-Larcker matrix) were greater than the inter-construct correlations in the corresponding rows and columns, thereby satisfying the threshold for discriminant validity (Fornell & Larcker, 1981). In addition, all HTMT values were below the conservative threshold of ≤ 0.85 , with the highest being 0.828 between PAWR and SUV. This further confirms that the constructs are empirically distinct from one another (Henseler et al., 2015). The low HTMT estimates suggest that multicollinearity and conceptual overlap among constructs were minimal, affirming the discriminant adequacy of the measurement model. This result supports the theoretical premise that individual interest, fear constructs, and their subdimensions are related yet conceptually independent constructs.

Table 3. Fornell-Larcker and HTMT Estimates for Discriminant Validity.

Construct	INJ	PAWR	SAVKSI	SOC	SUV
<i>Fornell-Larcker criterion</i>					
INJ	0.860				
PAWR	-0.090	0.844			
SAVKSI	-0.051	0.685	0.925		
SOC	0.591	-0.100	-0.078	0.871	
SUV	-0.086	0.724	0.736	-0.135	0.863
<i>Heterotrait-Monotrait Ratio (HTMT)</i>					
INJ					
PAWR	0.077				
SAVKSI	0.047	0.765			
SOC	0.636	0.100	0.077		
SUV	0.081	0.828	0.792	0.139	

Notes. HTMT Conservative $\leq .85$; Liberal $\leq .90$ (Henseler et al., 2015).

The measurement instruments, originally developed in international contexts, were adapted to the local educational and cultural setting of Philippine higher education. The adapted tools underwent content validation procedures to ensure contextual relevance and construct alignment, allowing the scales to meaningfully capture the affective and motivational dimensions of students' engagement in dance-based physical education.

Statistical analysis

Data were analyzed using both descriptive and inferential statistics. Descriptive statistics were employed to summarize the demographic characteristics of the respondents, including frequencies, percentages, means, and standard deviations. For the psychometric evaluation of the measurement model, Confirmatory Factor Analysis (CFA) was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4.0. This process assessed indicator reliability, internal consistency (through Cronbach's alpha and composite reliability), convergent validity (via average variance extracted), and discriminant validity (via Fornell-Larcker criterion and Heterotrait-Monotrait ratio).

To test the research hypotheses, multiple linear regression analyses were performed using IBM SPSS Statistics version 29 for macOS. Separate regression models were analyzed for each of the three factors of individual interest (PAWR, SUV and SAVKSI) as well as the composite individual interest score. In each model, social fear and injury-related fear were treated as independent variables. Prior to running the models, the assumptions of normality, linearity and multicollinearity were checked and satisfied. All inferential tests adopted a significance level of $\alpha = 0.05$. Standardized beta coefficients, R^2 values, and F -statistics were reported to evaluate the predictive strength and direction of the relationships.

Ethical statement

This study adhered to ethical standards in the conduct of research involving human participants. Prior to data collection, participants were informed of the study's purpose, assured of anonymity and confidentiality, and advised that their participation was voluntary with the option to withdraw at any time without penalty. Informed consent was obtained electronically. No personally identifiable information was collected. The study was exempted from formal ethical review of the Local Research Ethics Committee (LREC) of the college with its Protocol Number (CSER-CRDU-2025-024) due to its non-invasive and anonymous survey-based nature, in line with institutional guidelines for minimal-risk research. No physical, psychological, or social harm was anticipated.

RESULTS

Preliminary Descriptive Analysis

Descriptive statistics showed that students reported comparatively high levels of social fear ($\bar{x} = 4.40$, $SD = .83$) and injury-related fear ($\bar{x} = 3.91$, $SD = .89$). In contrast, the three components of individual interest reflected generally modest mean levels: positive affect and willingness to reengage ($\bar{x} = 2.25$, $SD = .81$), stored utility value ($\bar{x} = 2.20$, $SD = .82$), and stored attainment value and knowledge-seeking intentions, which showed the lowest values ($\bar{x} = 1.82$, $SD = .83$). The composite interest score ($\bar{x} = 2.09$, $SD = .74$) also indicated relatively low and consistent interest in dance-based physical education within the sample. These patterns provide initial context for subsequent analyses by illustrating that fear-related constructs were substantially higher than interest-related indicators.

Assumption Diagnostics for Multiple Regression

Across all four regression models, diagnostic checks consistently indicated that the core assumptions of multiple linear regression were adequately satisfied (see Figure 2). The histograms and Normal P-P plots for each model showed residuals that closely followed a normal distribution, with only minimal deviations at the tails, suggesting that the assumption of normality was met. Scatterplots of standardized residuals against standardized predicted values displayed random and evenly dispersed patterns, supporting the assumptions of linearity and homoscedasticity. Durbin-Watson statistics across models ranged between approximately 2.00 and 2.18, indicating independence of errors and the absence of autocorrelation.

Multicollinearity was also not a concern, as all predictors showed acceptable Tolerance values ($\geq .664$) and low VIF values (≈ 1.50), well below the conservative threshold of 5. Finally, examination of standardized residuals revealed no influential outliers, with all values falling within acceptable bounds (approximately ± 3.5). Collectively, these diagnostics confirm that all four models met the necessary assumptions for valid interpretation of regression estimates.

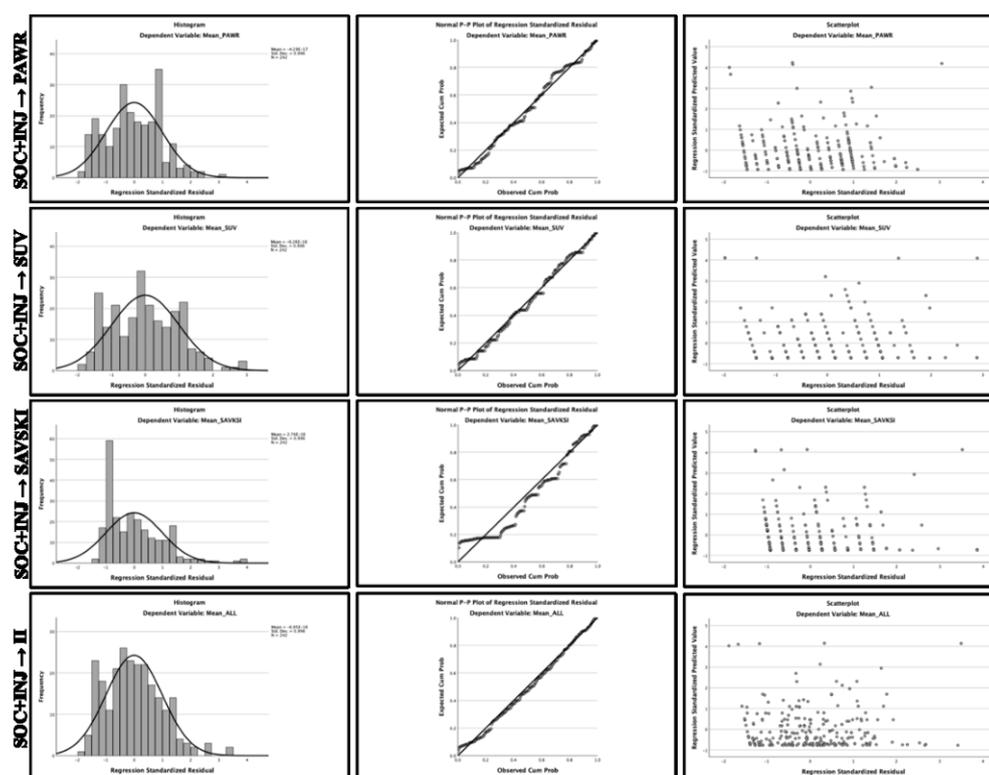


Figure 2. Diagnostic plots assessing regression assumptions across the four models, including histograms of standardized residuals, Normal P-P plots, and residuals-versus-predicted scatterplots. All models demonstrated acceptable normality, linearity, independence, and homoscedasticity.

Tests of Hypothesized Relationships

The regression model predicting positive affect and willingness to reengage was not statistically significant [$F(2, 239) = 0.833, p = .436, R^2 = .007$], explaining only 0.7% of the variance. Social fear ($\beta = -.065, t_{\text{value}} = -.840, p = .402$) and injury-related fear ($\beta = -.022, t_{\text{value}} = -.312, p = .755$) were not significantly associated with students' emotional response to dance or their readiness to reengage (see Table 4). This suggests that students' enjoyment and willingness to participate again may remain relatively stable even in the presence of social or physical apprehension. Since PAWR reflects emotional experience during and after participation, it is possible that fear

diminishes in relevance once students become actively engaged. Supportive instruction, group energy, or task enjoyment may override initial hesitations, allowing students to experience positive affect regardless of prior discomfort. These findings point to a potential disconnect between anticipated emotional risk and the actual emotional outcomes in movement-based learning.

Moreover, The regression model for stored utility value was likewise not statistically significant [$F(2, 239) = 1.890, p = .153, R^2 = .016$], with fear-related constructs accounting for only 1.6% of the variance in perceived usefulness. Social fear ($\beta = -.124, t_{\text{value}} = -1.591, p = .113$) showed a small, non-significant negative trend, while injury-related fear ($\beta = .001, t_{\text{value}} = .013, p = .990$) showed no observable association (see Table 4). Although the trend for social fear was not statistically conclusive, it may reflect an emerging pattern in which students who feel uncomfortable being observed or judged are slightly less inclined to see dance as useful. These students may focus more on discomfort than on the potential academic or physical benefits of participation. Meanwhile, the absence of association with injury-related fear suggests that concerns about physical harm may be less salient in students' evaluation of dance's utility. Judgments of usefulness may be shaped more by cultural framing, goal alignment, or previous experience than by emotional discomfort.

Similarly, the regression model predicting stored attainment value and knowledge-seeking intentions was not statistically significant [$F(2, 239) = 0.607, p = .546, R^2 = .005$], accounting for only 0.5% of the variance. Neither social fear ($\beta = -.070, t_{\text{value}} = -.875, p = .382$) nor injury-related fear ($\beta = .005, t_{\text{value}} = -.038, p = .954$) showed significant associations (see Table 4). This result supports the idea that SAVKSI reflects a more internalized and resilient form of motivation, possibly grounded in personal meaning, cultural value, or identity. Students who already perceive dance as meaningful may continue to seek growth and knowledge despite experiencing fear. This aligns with previous findings that deeper interest-related constructs are less susceptible to transient affective states and can remain intact even when social anxiety or performance apprehension is present.

The final regression model predicting overall individual interest was also not statistically significant [$F(2, 239) = 1.287, p = .278, R^2 = .011$], explaining only 1.1% of the variance. Social fear ($\beta = -.089, t_{\text{value}} = -1.255, p = .211$) and injury-related fear ($\beta = -.006, t_{\text{value}} = -.087, p = .931$) were not significantly associated with the composite interest score (see Table 4). This cumulative result confirms the consistent pattern observed across the three factors. Generalized

fears do not appear to be statistically associated with students' individual interest in movement-based art within physical education. These findings suggest that interest may operate independently of fear in this context, or that the constructs of fear used in the present study may not sufficiently reflect the specific emotional dynamics involved in dance (e.g., fear of ridicule, performance anxiety, body-consciousness). The low variance explained across all models highlights the potential significance of alternative variables (i.e., such as prior experience, autonomy, social support, or instructional quality) in shaping interest in expressive movement learning.

Given the consistently non-significant associations across all models, the findings of this study should be interpreted within the bounds of its exploratory nature. The present analysis was designed to examine potential patterns rather than establish definitive relationships between fear-related constructs and individual interest. As such, the absence of significant statistical associations does not negate the conceptual relevance of fear within movement-based art but instead suggests that its correlation may be more nuanced, indirect, or context-specific than anticipated. These results serve as a starting point for further inquiry, emphasizing the importance of refining emotional predictors, broadening theoretical lenses, and exploring additional variables that may shape how students relate to expressive physical activities such as dance.

Table 4. Summary of regression results testing hypothesized relationships between fear constructs and individual interest factors.

Hypothesis	Regression weights	β	R^2	F	t	p	Decision
H_1	SOC+INJ \rightarrow PAWR	-	.007	.833	-	.436	Rejected
H_{1a}	SOC \rightarrow PAWR	-.065	-	-	-.840	.402	Rejected
H_{1b}	INJ \rightarrow PAWR	-.022	-	-	-.312	.755	Rejected
H_2	SOC+INJ \rightarrow SUV	-	.016	1.890	2.523	.153	Rejected
H_{2a}	SOC \rightarrow SUV	-.124	-	-	-1.591	.113	Rejected
H_{2b}	INJ \rightarrow SUV	.001	-	-	.013	.990	Rejected
H_3	SOC+INJ \rightarrow SAVKSI	-	.005	.607	-	.546	Rejected
H_{3a}	SOC \rightarrow SAVKSI	-.070	-	-	-.875	.382	Rejected
H_{3b}	INJ \rightarrow SAVKSI	-.003	-	-	-.038	.970	Rejected
H_4	SOC+INJ \rightarrow II	-	.011	1.287	-	.278	Rejected
H_{4a}	SOC \rightarrow II	-.089	-	-	-1.255	.211	Rejected
H_{4b}	INJ \rightarrow INDINT	-.006	-	-	-.087	.931	Rejected

Notes. Significance value $p < .05$; II- Individual interest; PAWR- Positive affect and willingness to reengage; SUV- Stored-utility value; SAVKSI- Stored attainment knowledge and knowledge-seeking intentions; SOC- Social fear; INJ- Injury-related fear; SOC+INJ- Combined social and injury-related fear.

DISCUSSION

This study set out to examine whether social and injury-related fears are associated with individual interest in dance as a movement-based art within the Philippine physical education context. Across all three validated components of individual interest as well as the overall composite score, no statistically significant associations were found. In a field where emotional inhibitors are often expected to reduce motivation, these null findings suggest that individual interest in expressive movement may be more emotionally resilient than previously theorized. Rather than indicating the irrelevance of fear, the absence of direct associations invites a deeper reconsideration of how fear functions in educational settings involving performance, embodiment, and cultural identity. The findings reframe fear not as a simple demotivating force, but as a potentially indirect and context-sensitive variable whose influence may elude linear models.

A possible explanation for these results lies in the developmental character of individual interest itself. According to Hidi and Renninger (2006), individual interest evolves through iterative engagement, sustained by both positive affect and meaningful value internalization (K. A. Renninger & Hidi, 2015; Schiefele, 2009). Once formed, it becomes less reactive to external fluctuations, including discomfort or vulnerability (Ainley et al., 2002; Krapp, 2002). Students may have already cultivated a strong identification with dance, whether as a form of self-expression, physical challenge, or cultural connection, that renders fear less disruptive (McCarthy-Brown, 2009; Risner, 2014). In this sense, social and injury-related fears may still be present, but are not strong enough to dismantle or even dent the interest structure already in place. This interpretation speaks to the motivational durability of interest (Bandhu et al., 2024). It may function not merely as a product of emotion, but as a stabilizing force capable of weathering emotional discomfort, particularly when the learning task is culturally or personally significant (Eccles & Wigfield, 2020; K. A. Renninger & Hidi, 2015; Schiefele, 2009).

Yet, these findings may also reflect limitations in construct alignment rather than a true absence of association. Though the measure used in the study is psychometrically robust (Arrindell et al., 1984), it is generalized and are not tailored to the intricacies of public performance or culturally charged movement. Dance in physical education is not merely about physical execution. It involves self-presentation, social exposure, rhythm, coordination, and often physical contact, all of which may elicit distinct affective responses (Clegg & Clements, 2024; Z. Liu et al., 2022). Fears rooted in making mistakes, being judged, experiencing body image

discomfort, or feeling inadequate among peers may be more relevant than generic fears of evaluation or injury (Cox et al., 2011; Kerner et al., 2018; Oliver, 2008; S. Taylor et al., 2023). These affective triggers are especially salient in adolescent and young adult dancers, whose engagement in movement-based art is often shaped by sociocultural pressures surrounding the body and performance norms (Bradley et al., n.d.). In this context, the null results are better interpreted not as the absence of emotional influence, but as evidence that conventional fear instruments may lack the specificity required to capture students' lived affective realities in embodied, expressive learning settings.

Additionally, the classroom context itself may also act as a silent moderator. The students in this study were enrolled in structured, curricular dance-based PE classes, where performance is scaffolded, grading may be lenient, and instructors may foster psychologically safe environments (Pianta & Hamre, 2009; Zins et al., 2004). Within such spaces, even students who begin with apprehension may feel normalized, supported, or empowered. Literature in autonomy-supportive teaching affirms that when teachers offer choice, minimize pressure, and nurture peer collaboration, negative emotions lose their grip on student motivation in dance (Hancox et al., 2017; V. Taylor, 2001). Thus, it is plausible that fear does exist. However, its functional weight is softened, overridden, or rendered irrelevant by positive classroom ecology. This buffering effect cannot be captured by direct predictive models, but it nonetheless influences outcomes in subtle, protective ways.

Moreover, the analytic lens used in this study may have been too limited to capture the complexity of emotional–motivational dynamics. Emotions such as fear do not always operate in straightforward, linear relationships with motivation. For example in sports, moderate levels of fear can enhance focus, increase preparation, or heighten performance through a sense of urgency (Boyce et al., 2009). This aligns with the Yerkes-Dodson law (Teigen, 1994), which posits an inverted U-shaped relationship between arousal and performance, suggesting that both low and high levels of fear can impair performance, while moderate levels may optimize it (Keeley et al., 2008; Meczkowski et al., 2016). For others, the same emotion may suppress engagement entirely. Without modeling curvilinear patterns, interaction effects (e.g., between fear and competence beliefs, body comfort, or gender identity), or temporal fluctuations, the statistical approach used here may have failed to reflect the nuanced ways fear operates in educational settings (Keeley et al., 2008; Meczkowski et al., 2016). Rather than treating the null results as an indication of irrelevance, they should be viewed as a call for more sophisticated modeling approaches (such as structural equation modeling, longitudinal frameworks, or

mixed-method designs) that are better equipped to account for the nonlinear, layered nature of students lived emotional experiences in embodied learning environments (Holzer et al., 2021; Khine, 2013)

Importantly, these results do not emerge from a Western sport-based paradigm, but from a Southeast Asian, culturally embedded context where dance is not simply co-curricular, but cultural. Philippine dance, when taught in PE, carries symbolic resonance (J. Lobo, 2024). It represents heritage, identity, social ritual, and community belonging (J. Lobo, 2023; Namiki, 2011). In this setting, participation may be framed not only as a personal achievement, but as a fulfillment of cultural expectation. Students may be willing to “push through” discomfort because the act of participation holds value beyond the self (Diert-Boté & Moncada-Comas, 2024). In such culturally integrated tasks, fear may be interpreted differently (Gopalkrishnan, 2018). Not as threat, but as a normal rite of passage. Thus, emotional discomfort becomes folded into the narrative of engagement, not its antagonist. This cultural reframing underscores why global educational research must be attuned not only to constructs, but to context.

Finally, these findings highlight the need to expand motivation research beyond conventional assumptions that rely on clear-cut predictors of success or failure. In this study, individual interest in dance appeared unaffected by social or injury-related fears, as indicated by the absence of statistically significant associations. This suggests that other, potentially more meaningful variables (such as cultural identity, self-expression, prior experiences, or peer-driven motivation) may underpin engagement in movement-based art within physical education. Interest in expressive, embodied learning may operate under psychological dynamics that differ from those observed in traditional academic or sport contexts. Rather than validating expected emotional predictors, the results expose the limitations of generalized constructs and invite a more context-sensitive, multifactorial understanding of how motivation functions in culturally embedded learning environments. In this light, null findings become informative, not as indicators of absence, but as evidence that dominant models may require recalibration when applied to diverse educational spaces.

CONCLUSION

This study set out to explore the associations between social fear and injury-related fear with individual interest in dance as a movement-based art within the Philippine physical education context. Despite theoretical expectations that fear may suppress motivation and engagement,

the findings revealed no statistically significant associations between the two fear constructs and the three components of individual interest nor with the composite score. These consistent null results underscore the emotional resilience of student interest in expressive physical activities and raise critical questions about the types of emotional experiences that meaningfully shape learning in arts-based movement contexts. Rather than suggesting that fear is irrelevant, the findings point to the possibility that generalized fear constructs may not fully capture the nuances of emotional inhibition in dance, and that other factors, such as competence support, autonomy, or peer climate, may play more decisive roles in sustaining student interest.

Implications

The findings offer several implications for both educators and researchers. For practitioners, the results suggest that students' interest in dance may persist even in the presence of discomfort. This highlights the importance of creating emotionally supportive environments that acknowledge fear without positioning it as a primary barrier. Addressing anxiety and vulnerability in performance contexts remains essential, but equal emphasis should be placed on cultivating conditions that promote intrinsic motivation. These can be autonomy-supportive teaching, culturally responsive instruction, and positive peer interactions. For researchers, the study calls attention to the need for more context-specific emotional measures that capture the nuanced lived experiences of students in movement-based art forms. Constructs such as performance anxiety, embarrassment, or fear of ridicule may yield more accurate insights than generalized indicators like social or injury-related fear. Moreover, the findings suggest that future investigations on individual interest in physical education should integrate multi-level variables, including prior experience, perceived competence, and classroom relational climate, to better explain the complexities of student engagement in expressive movement.

Limitations

Despite its contributions, this study has several limitations that warrant acknowledgment. First, its cross-sectional design limits any temporal interpretation of associations, preventing inferences about changes or development in individual interest over time. Second, the fear constructs utilized were generalized and not tailored specifically to the emotional landscape of dance, which may have constrained their predictive utility. Future studies may benefit from using context-specific emotional measures such as performance anxiety, embarrassment, or fear of public evaluation. Third, the sample was drawn from a single public university in the Philippines, which may affect the generalizability of the findings across different institutional

types, cultural contexts, or geographic regions. Finally, self-reported responses are subject to social desirability and personal bias, potentially influencing the accuracy of responses related to fear and motivation.

Future research directions

Building on the current study, future research should consider using context-specific emotional constructs that more accurately capture the affective dynamics of dance-based learning. Constructs such as performance anxiety, fear of judgment, or body-related discomfort may provide clearer insight into how students emotionally navigate expressive movement tasks. Additionally, exploring moderating or mediating variables (e.g., such as perceived competence, autonomy support, or prior experience) could help clarify the underlying mechanisms that shape individual interest in arts-integrated physical education. Expanding the participant pool across diverse institutions, regions, and cultures would also enhance generalizability and reveal contextual patterns in fear and motivation. Finally, qualitative or mixed-methods approaches may offer richer perspectives on how students internalize, negotiate, or transcend fear in relation to interest development. These directions aim to refine both the theoretical and practical understanding of how learners engage with performance-based physical education in culturally diverse settings.

Contribution to the Global Discourse

This study contributes to the global discourse on affective engagement in physical education by offering a contextually grounded quantitative examination of fear and interest within a Southeast Asian learning environment. Through the use of standardized self-report instruments, the study tested associations between generalized fear constructs and individual interest in dance-based activities, an area underrepresented in large-scale empirical literature. Most existing quantitative investigations on student interest focus on Western contexts and traditional sports domains, leaving expressive movement largely unexplored. By centering a culturally embedded movement-based art in a non-Western setting, this study extends the geographic and domain-specific scope of interest research. Furthermore, the lack of significant associations found in this study challenges assumptions about fear as a universal inhibitor and underscores the need for culturally and task-specific models of emotional influence. These findings support the diversification of quantitative educational research by integrating localized, arts-integrated physical education contexts into broader theoretical frameworks.

Disclosure

CReDiT statement

The author solely contributed to the conceptualization, methodology, data curation, formal analysis, investigation, visualization, and writing of both the original draft and its subsequent revisions, as well as project administration and overall supervision of the study.

Declaration of Conflict of Interest

The author declares no conflict of interest.

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Data Availability

The data can be directly requested to the corresponding author.

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