



Dangdut music in rhythmic gymnastics: effects on emotion, behavioral intention, and public engagement in Indonesia

Música dangdut en la gimnasia rítmica: efectos en emoción, intención conductual y participación del público en Indonesia

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Received: 09-05-26
Accepted: 20-05-26

How to cite in APA

Jamalulel, I., & Sihombing, A. (2026). Dangdut music in rhythmic gymnastics: effects on emotion, behavioral intention, and public engagement in Indonesia. *Retos*, 80, 1042-1057. <https://doi.org/10.47197/retos.v80.119435>

Abstract

Introduction: Dangdut music represents a culturally significant musical form in Indonesia, yet its role in rhythmic gymnastics and audience responses remains underexplored in sport and cultural studies.

Objective: This study examines the role of dangdut music in rhythmic gymnastics and its effects on emotional response, behavioral intention, and public engagement in Indonesia.

Methods: A quantitative design was used with a survey of 427 Indonesian respondents. Data were analyzed using SPSS & SmartPLS, and Partial Least Squares Structural Equation Modeling (PLS-SEM).

Findings: Familiarity, rhythm, attractiveness, and tempo significantly influence emotional response. Emotional response significantly affects behavioral intention and public engagement, and behavioral intention, in turn, positively influences public engagement.

Discussion: Findings indicate that culturally familiar music enhances emotional engagement in sport performances. Dangdut music strengthens the audience's emotional connection, which drives behavioral intention and increases public engagement. This supports the importance of integrating local cultural elements in aesthetic sports to enhance audience experience.

Conclusion: Dangdut music plays a significant role in enhancing emotional response and audience engagement in rhythmic gymnastics. Its cultural familiarity contributes to stronger emotional and behavioral outcomes, offering practical implications for sport organizers to design more engaging and culturally relevant performances.

Keywords

Dangdut music; rhythmic gymnastics; emotional response; behavioral intention; public engagement; sport; culture.

Resumen

Introducción: La música dangdut constituye una forma musical de gran relevancia cultural en Indonesia; sin embargo, su papel en la gimnasia rítmica y la reacción del público siguen sin haberse estudiado en profundidad en los ámbitos de los estudios deportivos y culturales.

Objetivo: El presente estudio analiza el papel de la música dangdut en la gimnasia rítmica y sus efectos sobre la respuesta emocional, la intención conductual y la participación del público en Indonesia.

Métodos: Se utilizó un diseño cuantitativo con una encuesta realizada a 427 participantes indonesios. Los datos se analizaron utilizando SPSS & SmartPLS, y el modelo de ecuaciones estructurales de mínimos cuadrados parciales (PLS-SEM).

Resultados: La familiaridad, el ritmo, el atractivo y el tempo influyen significativamente en la respuesta emocional. La respuesta emocional afecta significativamente a la intención de comportamiento y a la implicación del público, mientras que la intención de comportamiento también influye positivamente en la implicación del público.

Discusión: Los resultados indican que la música culturalmente familiar potencia la implicación emocional en las actuaciones deportivas. La música dangdut refuerza la conexión emocional del público, lo que impulsa la intención conductual y aumenta la implicación del público. Esto respalda la importancia de integrar elementos culturales locales en los deportes estéticos para mejorar la experiencia del público.

Conclusión: La música dangdut desempeña un papel significativo en la mejora de la respuesta emocional y la implicación del público en la gimnasia rítmica. Su familiaridad cultural contribuye a obtener resultados emocionales y conductuales más sólidos, lo que ofrece implicaciones prácticas para que los organizadores deportivos diseñen actuaciones más atractivas y culturalmente relevantes.

Palabras clave

Música dangdut; gimnasia rítmica; respuesta emocional; intención conductual; participación ciudadana; deporte; cultura.

Introduction

Rhythmic gymnastics is a unique sport that combines athletic performance with artistic expression, where music serves as a central element in shaping choreography, timing, and audience perception. Unlike purely competitive sports, rhythmic gymnastics emphasizes aesthetic quality, requiring a harmonious integration of movement and musical accompaniment. Traditionally, routines have relied on classical or instrumental music to highlight elegance and technical precision (Bobo-Arce & Méndez-Rial, 2013). However, recent developments in sport performance and entertainment have encouraged the use of more diverse and culturally relevant musical genres to enhance audience appeal and broaden participation. In this evolving context, the incorporation of Dangdut music into rhythmic gymnastics represents a significant innovation. Dangdut is one of the most popular and culturally embedded music genres in Indonesia, characterized by its distinctive rhythms, dynamic tempo, and emotional expressiveness (Weintraub, 2010). It has a strong presence in everyday life and is widely associated with social gatherings, entertainment, and collective identity. Given its familiarity and accessibility, dangdut music has the potential to transform how audiences experience and interpret rhythmic gymnastics performances.

Music plays a critical role in influencing both performers and spectators. From a performance perspective, music provides structure and rhythm that guide movement execution and synchronization. From an audience perspective, music contributes to emotional experience, attention, and overall enjoyment (Karageorghis & Priest, 2012; Karageorghis, 2016). Research in sport and exercise psychology suggests that musical elements such as rhythm, tempo, and familiarity can significantly affect perception, mood, and engagement. In aesthetic sports, where subjective evaluation and audience appreciation are essential, the choice of music becomes even more influential.

Public engagement has become an increasingly important concept in sport management and performance studies. It refers to the degree to which audiences are cognitively, emotionally, and behaviorally involved in a performance (Jones, 2003). Higher levels of engagement are associated with greater satisfaction, stronger emotional connection, and increased likelihood of future participation or support (Inoue et al., 2017). In this regard, integrating culturally relevant elements such as local music may serve as an effective strategy to enhance engagement by making performances more relatable and meaningful.

Despite the recognized importance of music in shaping sport experiences, existing research has largely focused on Western musical contexts or general exercise environments. Previous studies have examined the role of music in sport settings, particularly focusing on how music influences emotional and motivational responses during physical activity and performance contexts. For example, research with athletes shows that music is frequently used to enhance positive affect, motivation, and performance during training and preparation phases (Laukka & Quick, 2013). In addition, broader sport psychology literature highlights that music contributes to emotional arousal, psychological readiness, and engagement in sport-related activities (Song et al., 2024). Studies in performance and audience contexts also demonstrate that music can generate emotional contagion and strengthen audience engagement during live events (Garrido & Macritchie, 2018). Furthermore, recent research in digital and mediated performances shows that music plays a key role in shaping emotional response and engagement across different audience settings (Fraser et al., 2021). However, these studies are largely concentrated in Western or general sport and performance contexts, with limited attention to culturally specific music genres in Southeast Asia, particularly dangdut music in formal sport environments such as rhythmic gymnastics. As a result, the role of culturally rooted music in shaping emotional response, behavioral intention, and public engagement remains underexplored.

This study addresses these gaps by examining the role of dangdut music in influencing emotional response, public engagement, and behavioral intention in rhythmic gymnastics performances. Specifically, the study conceptualizes dangdut music through four key dimensions (familiarity, rhythm, attractiveness, and tempo) and investigates how these factors shape audience experience and subsequent behavioral outcomes. By adopting a quantitative approach, this research provides empirical insights into the relationship between musical characteristics and audience engagement. The contribution of this study is twofold. First, it extends the literature on sport and music by incorporating a culturally specific genre into the analysis of audience engagement. Second, it offers practical implications for coaches, choreographers, and sport organizations seeking to enhance the attractiveness of rhythmic gymnastics through



culturally relevant innovations. By situating rhythmic gymnastics within the Indonesian cultural context, this study highlights the importance of aligning global sport practices with local cultural preferences to foster stronger audience connection and participation.

Literature Review

The Use of Dangdut Music and Performance in Rhythmic Gymnastics

Music is a fundamental component of rhythmic gymnastics, shaping not only the structure of routines but also how performances are perceived by audiences. The synchronization between movement and music contributes to artistic quality and overall evaluation (Zhang, 2025). In aesthetic sports, music enhances expressiveness, timing, and coherence, making it a key determinant of performance appeal. While classical music has traditionally dominated this discipline, recent trends highlight the growing use of diverse musical genres to increase creativity and audience interest. The integration of culturally relevant music can significantly influence how audiences experience sports performances. Dangdut, as a dominant popular genre in Indonesia, carries strong cultural meaning and emotional resonance (Weintraub, 2013). Music that reflects local identity tends to be more relatable, enhancing audience connection and perceived authenticity. Studies suggest that culturally embedded elements in performances can foster a sense of familiarity and belonging, which positively influences audience perception and enjoyment (Al Doghan & Sadiq, 2024). In the context of rhythmic gymnastics, the integration of dangdut music may enhance viewers' emotional experiences, making performances more engaging and memorable. Previous research consistently shows that these musical elements significantly shape emotional experiences in both sport and entertainment contexts. Positive emotional responses, such as enjoyment and excitement, are essential for creating memorable experiences and sustaining audience interest (Oliver & Bartsch, 2010).

Drawing on Daniel Berlyne's seminal work, *Aesthetics and Psychobiology*, aesthetic responses to music are influenced by stimulus properties such as familiarity, complexity, and arousal potential. Attractiveness reflects hedonic evaluation of musical stimuli shaped by arousal and preference mechanisms (Berlyne, 1971). Attractiveness in music is theoretically grounded in Berlyne's aesthetic theory, which explains that hedonic evaluation of stimuli is shaped by arousal and preference mechanisms. One study extended this perspective to sport and exercise settings, showing that musical characteristics (particularly rhythm and tempo are among the strongest determinants of emotional arousal, motivation, and engagement (Karageorghis et al., 1999). Familiarity enhances cognitive fluency and preference, while appeal reflects the listener's overall affective evaluation of the music. Beyond isolated physical skills, improvements in coordination, rhythm, balance, and movement control reflect transferable competencies that contribute to broader learning outcomes across academic domains. Such findings support the integration of music and physical education as a holistic instructional approach that extends beyond physical performance alone (Muñoz-Llerena et al., 2026). Accordingly, this study focuses on familiarity, rhythm, attractiveness, and tempo as key perceptual dimensions of dangdut music because they represent core attributes most consistently associated with emotional and behavioral responses in prior literature. Although other musical features such as lyrics, melody, and instrumentation may also influence listeners, they were excluded to maintain a parsimonious model and to emphasize dimensions most directly linked to emotional response and public engagement (Karageorghis & Terry, 2012). Although other musical features, such as lyrics, melody, and instrumentation, may also shape listener responses, they were not included in order to maintain a parsimonious model centered on the dimensions most directly linked to emotional and behavioral outcomes. Dangdut music, due to its widespread popularity and rhythmic appeal, has the potential to attract and retain audience interest.

Public Engagement in Sport Contexts

Public engagement refers to the extent to which audiences are cognitively, emotionally, and behaviorally involved in a performance (Kang, 2014). Cognitive engagement includes attention and interest, emotional engagement involves feelings of connection and enjoyment, and behavioral engagement reflects actions such as participation or sharing experiences. In sport management, engagement is considered a key predictor of satisfaction, loyalty, and long-term involvement (Fernando et al., 2023). In aesthetic sports like rhythmic gymnastics, engagement is particularly influenced by sensory and artistic elements.



Music, as an integral part of the performance, plays a crucial role in shaping these engagement dimensions. When audiences find the music appealing and emotionally stimulating, they are more likely to remain attentive and develop a deeper connection with the performance.

Emotional Response and Behavioral Intention in Sport Consumption

Emotional response is a central factor linking external stimuli to behavioral outcomes. According to Russell's (1980) circumplex model of affect, emotions can be categorized along dimensions of pleasure and arousal. In the context of sports and performance, positive emotions such as enjoyment and excitement have been shown to significantly enhance audience engagement and satisfaction (Yun et al., 2025). Music is a powerful emotional trigger, capable of evoking both immediate and lasting affective responses. Laukka and Quick (2013) highlight that music can influence mood, motivation, and perceived effort, not only for performers but also for spectators. When audiences experience positive emotional reactions to music, they are more likely to remain attentive, feel connected, and engage with the performance.

Behavioral intention represents the likelihood that individuals will engage in future actions related to a performance, such as watching again, attending events, or recommending to others. It is widely used as an outcome variable in sport consumer behavior research (Kim et al., 2013). Studies have shown that positive experiences and high levels of engagement significantly increase behavioral intention, highlighting the importance of creating engaging and enjoyable performances.

Hypothesis Development

Although prior studies have examined the role of music in sport and exercise settings, most focus on Western musical genres and general physical activity contexts. There is limited quantitative research exploring how local music genres, such as dangdut, influence audience engagement in formal sport performances. Additionally, few studies have examined the combined effects of multiple musical characteristics on emotional and behavioral outcomes in aesthetic sports. This study addresses these gaps by providing empirical evidence from the Indonesian context. This study proposes a quantitative research framework that explains how the use of Dangdut music in rhythmic gymnastics influences audience experience and subsequent behavioral outcomes.

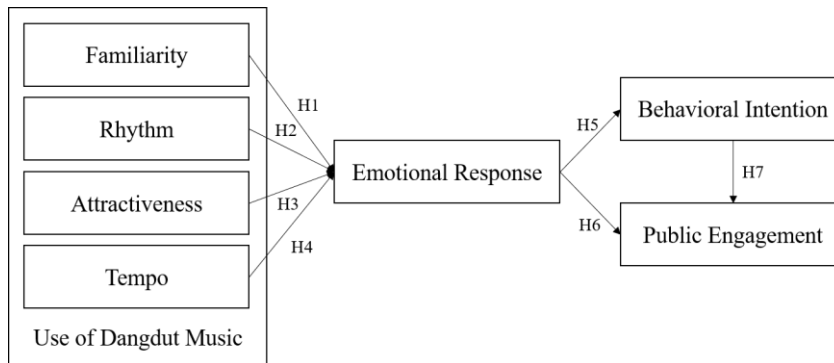
Familiarity enhances comfort and positive feelings, as individuals tend to prefer music they recognize. Familiar music is easier to process and often generates positive affective reactions (North & Hargreaves, 2008). Rhythm contributes to excitement and attentional focus by creating a sense of movement and synchronization (Karageorghis & Priest, 2012). Attractiveness increases enjoyment by enhancing the perceived entertainment value of the performance (Hall, 2015). Tempo influences emotional intensity, with faster tempos generating higher levels of arousal and energy (Van der Zwaag et al., 2011). Tempo, on the other hand, affects arousal levels, with faster tempos generally associated with increased excitement and energy. Dangdut music, characterized by upbeat rhythms and expressive melodies, is likely to stimulate positive emotional responses among audiences. Therefore, the use of dangdut music in rhythmic gymnastics is expected to positively influence public engagement by making performances more relatable and enjoyable.

Emotional response is a key factor influencing how audiences engage with performances. Positive emotions such as enjoyment and excitement increase attention, involvement, and connection (Harmon & Kyle, 2016). In sport contexts, emotional experiences enhance both cognitive and behavioral engagement, leading to a more immersive and meaningful experience (Chen & Huang, 2025). Engagement is a strong predictor of behavioral intention in sport consumption. When audiences are actively engaged, they are more likely to develop positive attitudes toward the performance and express intentions to continue their involvement (Walmsley, 2019). Higher levels of engagement lead to increased likelihood of watching future performances, attending events, and recommending experiences to others. At its core, the model conceptualizes dangdut music as a multidimensional construct, consisting of four key elements: familiarity, rhythm, attractiveness, and tempo. These dimensions represent how audiences perceive and evaluate the music used in rhythmic gymnastics performances. Rather than treating music as a single variable, this approach allows for a more nuanced understanding of how different musical attributes contribute to audience responses.



Figure 1 shows the proposed research model. The framework is designed to capture the process through which musical characteristics shape emotional reactions, engagement levels, and future behavioral intentions.

Figure 1. The Research Model



Based on the literature reviewed, the following hypotheses are proposed:

H1: Familiarity significantly influences emotional response.

H2: Rhythm significantly influences emotional response.

H3: Attractiveness significantly influences emotional response.

H4: Tempo significantly influences emotional response.

H5: Emotional response significantly influences behavioral intention.

H6: Emotional response significantly influences public engagement.

H7: Behavioral intention significantly influences public engagement.

Method

Research Design

This study employed a quantitative, cross-sectional survey design to examine the relationships between musical characteristics, emotional response, behavioral intention, and public engagement in rhythmic gymnastics performances using dangdut music. A quantitative approach was appropriate as the study aims to test relationships among latent constructs and generate generalizable findings through statistical analysis (Creswell & Creswell, 2017). The research adopts an explanatory design to investigate how specific musical attributes influence audience experiences and subsequent behavioral outcomes. Given the study's predictive-explanatory objective, complex structural model with multiple mediating relationships, and focus on variance explanation among latent constructs, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed as the primary analysis technique. PLS-SEM is suitable for prediction-oriented research and complex models with mediating effects (Hair et al., 2019).

Participants and Sampling

The target population consisted of individuals in Indonesia who are familiar with dangdut music and have experience watching or doing rhythmic gymnastics performances, either live or through digital platforms. A purposive sampling technique was employed to ensure that respondents met the study criteria, namely being at least 17 years old, having prior familiarity with dangdut music, and having watched rhythmic gymnastics performances.

Data Collection Procedure

Data were collected using a structured questionnaire designed to measure respondents' perceptions of dangdut music in rhythmic gymnastics and its influence on emotional response, behavioral intention,

and public engagement. The final questionnaire was distributed both online and offline to individuals who were familiar with dangdut music and rhythmic gymnastics. Informed consent was obtained before the questionnaire was completed. Data collection took place over a specified period (from July to December 2025). The study adhered to ethical research standards, ensuring informed consent and confidentiality. This study was conducted in accordance with ethical research guidelines. Participation was voluntary, and informed consent was obtained from all respondents before data collection. Participants were informed about the purpose of the study and the confidentiality of their responses. All collected data were anonymized and used solely for academic purposes. No personal identifiers were collected, and data were stored securely to ensure privacy protection. No minors participated in this study. Ethical approval was not required according to institutional guidelines, as the study involved anonymous survey-based data collection without sensitive information or intervention.

After screening for incomplete or inconsistent responses, the valid questionnaires were retained for analysis. The instrument was reviewed by Experts in sport psychology and music research. Before the main data collection, a pilot test involving 50 participants was conducted to assess the clarity and reliability of the questionnaire. Feedback from the pilot test was used to refine the wording and structure of the measurement items (Hair et al., 2019).

Measurement

The measurement instrument consisted of multiple constructs adapted from established literature. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), which is widely used in behavioral research. The independent variable, use of dangdut music, was conceptualized as a multidimensional construct. The measurement of dangdut music was operationalized using four dimensions (familiarity, rhythm, appeal, and tempo) selected based on aesthetic theory and prior studies emphasizing their relevance to emotional and behavioral responses. Each construct has 3 questionnaire items consisting of familiarity, rhythm, attractiveness, and tempo, adapted from previous studies on music perception (North & Hargreaves, 2008; Karageorghis & Priest, 2012; Berlyne, 1971). Emotional response was measured using items developed based on the circumplex model of affect (Russell, 1980), also adapted and developed by the authors from validated emotion scales used in sport and exercise psychology research. The scale captures two dimensions: valence (pleasant–unpleasant) and arousal (high–low activation). Item wording was modified to fit the context of dangdut music in rhythmic gymnastics. Emotional response was measured using indicators of pleasure and arousal, and has 4 questionnaire items. Public engagement was operationalized as a multidimensional construct including cognitive, emotional, and behavioral engagement, and has 3 questionnaire items (Kang, 2014). Behavioral intention was measured through 3 questionnaire items reflecting the likelihood of watching future performances, attending events, and recommending the experience to others (Baker & Crompton, 2000).

Data Analysis

Data analysis was conducted using SPSS and SmartPLS following a two-stage approach. First, preliminary analyses were performed to assess data quality, including screening for missing values, outliers, and normality. Descriptive statistics such as means and standard deviations were calculated, and reliability was assessed using Cronbach's alpha, with values above 0.70 considered acceptable (Hair et al., 2019). Second, the measurement and structural models were evaluated using PLS-SEM. Convergent validity was assessed through factor loadings and Average Variance Extracted (AVE), while discriminant validity was evaluated using the Fornell–Larcker criterion and the Heterotrait–Monotrait ratio. The structural model was analyzed by examining path coefficients, coefficients of determination (R^2), and effect sizes (f^2). Hypotheses were tested using a bootstrapping procedure with 5,000 resamples to determine the significance of direct and indirect effects (Hair et al., 2021).

Results

A total of 427 respondents participated in this study, representing diverse demographic backgrounds across Indonesia. The sample was dominated by female respondents, indicating stronger participation among women in discussions and observations related to rhythmic gymnastics performances. In terms



of age distribution, the majority of respondents were between 17 and 25 years old, reflecting the dominance of younger generations in consuming sport-related entertainment and digital media content. This finding is relevant considering that younger audiences are generally more exposed to contemporary cultural trends and music-based performances.

The demographic characteristics of the respondents are presented in Table 1. The majority of respondents were female (60.0%) and male (40.0%). Most respondents were aged between 17 and 25 years (60.0%), followed by those aged 26–35 years (30.0%) and those aged 36 years or older (10.1%). Regarding experience with rhythmic gymnastics, the largest proportion reported occasional exposure (45.2%), while 30.0% indicated frequent viewing and 24.8% reported limited experience. In terms of familiarity with dangdut music, the majority of respondents indicated high familiarity (64.9%), followed by moderate (25.1%) and low familiarity (10.1%). Regionally, most respondents were from Jawa (45.7%), followed by Sumatra (15.0%) and other regions, indicating that the sample is both diverse and appropriate for examining the role of dangdut music in rhythmic gymnastics.

Table 1. Demographic Overview of Respondent

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	171	40.0
	Female	256	60.0
Age Group	17–25	256	60.0
	26–35	128	30.0
	36+	43	10.1
	Rarely	106	24.8
Gymnastics Experience	Sometimes	193	45.2
	Often	128	30.0
	Low	43	10.1
Dangdut Familiarity	Moderate	107	25.1
	High	277	64.9
	Sumatra	64	15.0
Region	Jawa	195	45.7
	Kalimantan	34	8.0
	Sulawesi	34	8.0
	Bali	29	6.8
	Nusa Tenggara	29	6.8
	Maluku	21	4.9
	Papua	21	4.9

Table 2. Construct Validity and Reliability

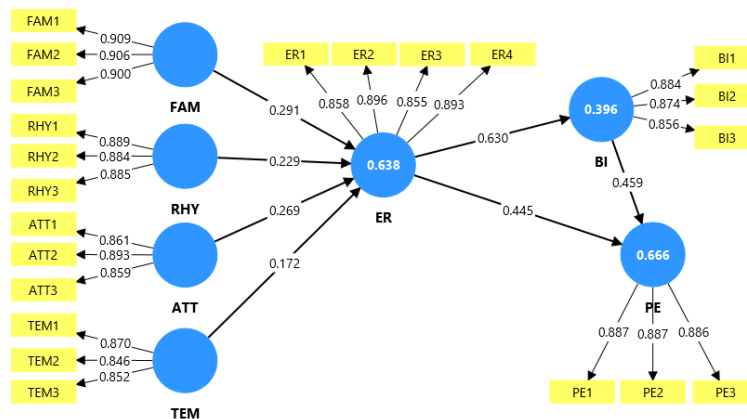
Construct	Items	Outer Loadings	VIF Value	Cronbach's Alpha	Composit Reliability (CR)	Average Variance Extracted (AVE)
Familiarity (FAM)	FAM1	0.909	2.628	0.889	0.890	0.819
	FAM2	0.906	2.694			
	FAM3	0.900	2.472			
Rhythm (RHY)	RHY1	0.889	2.267	0.863	0.863	0.785
	RHY2	0.884	2.197			
	RHY3	0.885	2.165			
Attractiveness (ATT)	ATT1	0.861	1.918	0.841	0.843	0.759
	ATT2	0.893	2.203			
	ATT3	0.859	1.935			
Tempo (TEM)	TEM1	0.870	1.810	0.818	0.823	0.732
	TEM2	0.846	1.802			
	TEM3	0.852	1.838			
Emotional Response (ER)	ER1	0.858	2.317	0.898	0.901	0.767
	ER2	0.896	2.848			
	ER3	0.855	2.263			
	ER4	0.893	2.751			
Behavioral Intention (BI)	BI1	0.884	2.094	0.842	0.844	0.760
	BI2	0.874	2.003			
	BI3	0.856	1.916			
Public Engagement (PE)	PE1	0.887	2.238	0.864	0.864	0.786
	PE2	0.887	2.204			
	PE3	0.886	2.214			

Table 2 presents the results of the measurement model assessment, including outer loadings, VIF Value, Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). All questionnaire items demonstrated strong outer loadings ranging from 0.846 to 0.909, exceeding the recommended



threshold of 0.70 (Hair et al., 2019). This indicates that all indicators adequately represent their respective constructs and contribute significantly to measuring the intended latent variables. The results indicate that all constructs achieved satisfactory levels of reliability and convergent validity, as shown in Figure 2. To reduce potential common method bias, several procedural remedies were applied. Respondents were assured of anonymity and confidentiality to minimize social desirability bias. Full collinearity variance inflation factors (VIFs) were assessed to examine potential common method bias. All VIF values were below the threshold of 3.3, indicating that common method bias is not a serious concern (Kock, 2015). Among the constructs, Familiarity (FAM) showed the highest indicator loading, with FAM1 at 0.909, suggesting a very strong relationship between the item and the construct. Internal consistency reliability was assessed using Cronbach’s alpha and Composite Reliability (CR). The Cronbach’s alpha values ranged from 0.818 to 0.898, while CR values ranged from 0.823 to 0.901. All values exceeded the recommended threshold of 0.70, confirming satisfactory internal consistency reliability across all constructs (Hair et al., 2019). Emotional Response (ER) demonstrated the highest reliability values, with Cronbach’s alpha of 0.898 and CR of 0.901, indicating a high level of consistency among its indicators. Convergent validity was evaluated using the Average Variance Extracted (AVE). The AVE values ranged from 0.732 to 0.819, all surpassing the recommended minimum value of 0.50 (Fornell & Larcker, 1981). These results indicate that each construct explains more than 50% of the variance of its indicators, thereby confirming adequate convergent validity. Familiarity (FAM) recorded the highest AVE value (0.819), suggesting strong explanatory power of the construct toward its indicators. Overall, the measurement model demonstrates satisfactory psychometric properties, indicating that the constructs used in this study are reliable and valid for assessing the relationships between familiarity, rhythm, attractiveness, tempo, emotional response, public engagement, and behavioral intention in the context of rhythmic gymnastics performances using Dangdut music.

Figure 2. Measurement Model Results



Discriminant validity ensures that each construct is empirically distinct from others within the model. It was assessed using the Heterotrait-Monotrait ratio of correlations (HTMT) as suggested by Henseler, Ringle, and Sarstedt (2015). Table 3 displays the HTMT values among the latent constructs: Attractiveness (ATT), Familiarity (FAM), Rhythm (RHY), Tempo (TEM), Emotional Response (ER), Behavioral Intention (BI), and Public Engagement (PE). All HTMT values are below the conservative threshold and well under the liberal threshold of 0.90, indicating strong discriminant validity among the constructs.

Table 3. HTMT Ratio Results

Construct	ATT	BI	ER	FAM	PE	RHY	TEM
ATT							
BI	0.586						
ER	0.793	0.722					
FAM	0.611	0.525	0.729				
PE	0.665	0.866	0.832	0.609			
RHY	0.803	0.556	0.785	0.715	0.638		
TEM	0.777	0.500	0.698	0.51	0.534	0.666	



Discriminant validity was further assessed using the Fornell–Larcker criterion. According to Fornell and Larcker (1981), the square root of the Average Variance Extracted (AVE) for each construct should be greater than its correlations with other constructs. All diagonal values, representing the square root of AVE, were higher than the corresponding inter-construct correlations. These findings indicate satisfactory discriminant validity, as presented in Table 4, confirming that each construct is empirically distinct and adequately captures unique aspects of the model.

Table 4. Fornell-Larcker Criterion Results

Construct	ATT	BI	ER	FAM	PE	RHY	TEM
ATT	0.871						
BI	0.495	0.872					
ER	0.690	0.630	0.876				
FAM	0.528	0.455	0.652	0.905			
PE	0.567	0.739	0.734	0.534	0.887		
RHY	0.684	0.474	0.692	0.627	0.551	0.886	
TEM	0.646	0.419	0.602	0.439	0.452	0.561	0.856

Table 5. R-Square Statistics Model Goodness of Fit Statistics

Construct	R ²	Adjusted R ²	Q ² predict	RMSE	MAE
Behavioral Intention (BI)	0.396	0.395	0.306	0.838	0.675
Emotional Response (ER)	0.638	0.634	0.631	0.611	0.490
Public Engagement (PE)	0.666	0.664	0.404	0.776	0.614

The coefficient of determination (R^2) was used to evaluate the explanatory power of the structural model. According to Hair et al. (2019), R^2 values of 0.25, 0.50, and 0.75 can be interpreted as weak, moderate, and substantial, respectively. As shown in Table 5, the R^2 value for Emotional Response (ER) was 0.638, indicating that familiarity, rhythm, attractiveness, and tempo collectively explained 63.8% of the variance in emotional response. Similarly, Public Engagement (PE) achieved an R^2 value of 0.666, suggesting that emotional response explained 66.6% of the variance in public engagement. Meanwhile, Behavioral Intention (BI) recorded an R^2 value of 0.396, indicating that public engagement explained 39.6% of the variance in behavioral intention. Overall, these findings demonstrate moderate to substantial explanatory power of the proposed model. The adjusted R^2 values were slightly lower but remained close to the original R^2 values, indicating good model stability and minimal estimation bias. Specifically, the adjusted R^2 values were 0.634 for Emotional Response (ER), 0.664 for Public Engagement (PE), and 0.395 for Behavioral Intention (BI). Predictive relevance was assessed using the Q^2 predict statistic. All Q^2 predict values were above zero, including 0.631 for Emotional Response (ER), 0.404 for Public Engagement (PE), and 0.306 for Behavioral Intention (BI), indicating that the model possesses satisfactory predictive relevance (Hair et al., 2019). Additionally, prediction errors were evaluated using the Root Mean Square Error (RMSE) and Mean Absolute Error (MAE). Emotional Response (ER) produced the lowest RMSE (0.611) and MAE (0.490), suggesting relatively accurate predictive performance. Overall, the results indicate that the structural model demonstrates acceptable goodness of fit and adequate predictive capability for explaining behavioral intention and public engagement in rhythmic gymnastics performances using Dangdut music. Although the findings demonstrate strong and consistent relationships among constructs. In particular, respondents' familiarity and generally positive attitudes toward dangdut music may lead to a halo effect, potentially inflating the observed relationships among variables.

Table 6 and Figure 3 explain the structural model that was tested to examine the hypothesized relationships among Attractiveness (ATT), Familiarity (FAM), Rhythm (RHY), Tempo (TEM), Emotional Response (ER), Behavioral Intention (BI), and Public Engagement (PE).

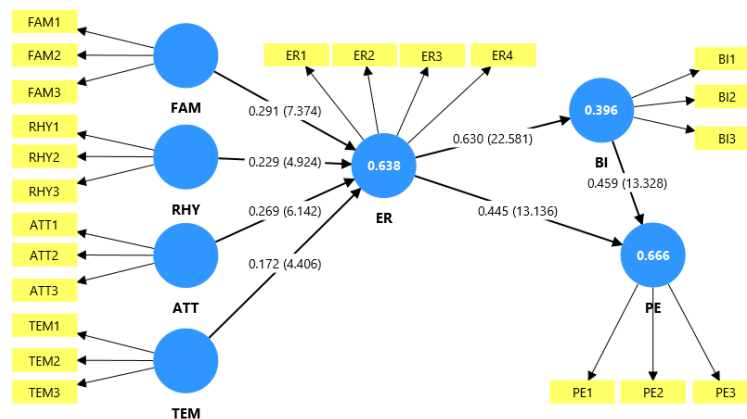
Table 6. Hypothesis Testing Results

Hypothesis	Path	β (Beta)	SE	t-value	p-value	95% CI (LL - UL)	f ²	Decision
H1	FAM -> ER	0.291	0.040	7.374	0.000	0.215-0.371	0.001	Accepted
H2	RHY -> ER	0.229	0.046	4.924	0.000	0.134-0.318	0.019	Accepted
H3	ATT -> ER	0.269	0.044	6.142	0.000	0.179-0.351	0.004	Accepted
H4	TEM -> ER	0.172	0.039	4.406	0.000	0.091-0.245	0.034	Accepted
H5	ER -> BI	0.630	0.028	22.581	0.000	0.571-0.681	0.000	Accepted



H6	ER -> PE	0.445	0.034	13.136	0.000	0.378-0.509	0.000	Accepted
H7	BI -> PE	0.459	0.034	13.328	0.000	0.389-0.524	0.000	Accepted

Figure 3. The Structural Model



The structural model assessment was conducted to examine the proposed relationships among the constructs. Hypothesis testing was evaluated using path coefficients, t-values, and p-values obtained through the bootstrapping procedure in SmartPLS. A bootstrapping procedure with 5,000 resamples was used to estimate standard errors, t-values, and 95% confidence intervals, as well as effect sizes (f^2). According to Hair et al. (2019), hypotheses are supported when the t-value exceeds 1.96, and the p-value is below 0.05. As presented in Table 6, all proposed hypotheses were supported. Familiarity significantly influenced Emotional Response (ER) (H1: $t = 7.374$, $p < 0.001$), indicating that audiences who are more familiar with Dangdut music tend to experience stronger emotional reactions during rhythmic gymnastics performances. Similarly, Rhythm demonstrated a significant positive effect on Emotional Response (H2: $t = 4.924$, $p < 0.001$), suggesting that rhythmic musical patterns contribute to audience excitement and emotional involvement. Attractiveness also showed a significant positive relationship with Emotional Response (H3: $t = 6.142$, $p < 0.001$), indicating that appealing musical characteristics enhance emotional engagement among audiences. In addition, Tempo significantly influenced Emotional Response (H4: $t = 4.406$, $p < 0.001$), demonstrating that faster and more energetic musical tempo increases emotional stimulation.

Furthermore, Emotional Response significantly affected Behavioral Intention (H5: $t = 22.581$, $p = 0.003$), suggesting that audiences experiencing positive emotions are more likely to show intentions to watch future performances, attend events, or recommend them to others. Emotional Response also had a significant positive effect on Public Engagement (H6: $t = 13.136$, $p < 0.001$), indicating that stronger emotional reactions increase audience involvement and interaction with the performance. Finally, Behavioral Intention significantly influenced Public Engagement (H7: $t = 13.328$, $p < 0.001$), suggesting that audiences with stronger future behavioral intentions also demonstrate higher levels of engagement. Overall, the findings confirm that musical characteristics play an important role in shaping emotional response, which subsequently contributes to behavioral intention and public engagement in rhythmic gymnastics performances.

Discussion

This study examined the influence of musical characteristics, namely familiarity, rhythm, attractiveness, and tempo, on emotional response, behavioral intention, and public engagement in rhythmic gymnastics performances using Dangdut music. The findings demonstrate that all proposed relationships were significant, highlighting the important role of culturally relevant music in shaping audience experiences and behavioral outcomes. First, the results revealed that familiarity significantly influences emotional response. This finding suggests that audiences who are more familiar with dangdut music tend to expe-

rience stronger emotional reactions during rhythmic gymnastics performances. Familiar music is generally easier to process cognitively and often generates feelings of comfort, nostalgia, and enjoyment (North & Hargreaves, 2008). In the Indonesian context, dangdut music has long been embedded within everyday cultural life, making it highly recognizable among audiences. This result is consistent with previous studies showing that familiarity with music positively affects emotional attachment and audience satisfaction in entertainment and sport settings (Karageorghis & Priest, 2012). The finding also indicates that local cultural elements can strengthen emotional connections between audiences and performances. Second, rhythm was found to significantly affect emotional response. Rhythm is one of the most important musical elements influencing movement synchronization and audience excitement. In rhythmic gymnastics, synchronized movement and music create a more immersive and aesthetically appealing performance. This finding supports previous research suggesting that rhythmic patterns enhance motivation, concentration, and emotional arousal during physical activity and sport performances (Terry et al., 2020; Park et al., 2023). Strong rhythmic elements in dangdut music may therefore contribute to increased audience engagement and enjoyment by creating energetic and dynamic performances. In addition, critical discussions highlight the importance of addressing gender stereotypes and biases in rhythmic gymnastics and physical education more broadly. Integrating diverse pedagogical activities that combine motor skills, spatial awareness, musicality, and gender equality principles has been recommended to strengthen inclusivity (Freundt & Matus, 2026). Overall, interdisciplinary curriculum models that incorporate music, movement, and educational integration have been identified as effective in various educational contexts, including teacher training, music education, and performing arts instruction (Wu & Rodloytuk, 2025).

Attractiveness significantly influenced emotional response. This indicates that audiences are more emotionally engaged when they perceive the music as entertaining, enjoyable, and appealing. Music attractiveness reflects the extent to which audiences perceive the musical performance as aesthetically pleasing and emotionally stimulating. This finding aligns with Berlyne's (1971) theory of aesthetic appreciation, which explains that attractive artistic stimuli tend to evoke positive emotional reactions. Previous studies in sport and tourism contexts also found that attractive entertainment elements increase emotional satisfaction and overall experience quality (Jeong & Kim, 2020). In this study, the entertaining nature of dangdut music appears to strengthen the emotional atmosphere of rhythmic gymnastics performances. The results further showed that tempo significantly influences emotional response. A faster and more energetic musical tempo was associated with stronger emotional stimulation among audiences. This finding is consistent with prior studies indicating that tempo influences psychological arousal, mood enhancement, and excitement levels (Karageorghis & Priest, 2012). In rhythmic gymnastics, energetic tempo may enhance the perception of movement intensity and performance dynamism, thereby increasing emotional involvement among spectators. Health and fitness practitioners may consider integrating structured aerobic activities that combine full-body movements with musical accompaniment into community or home-based exercise programs, as these approaches have been shown to improve adherence and support favorable body composition outcomes (Zalillah et al., 2025). Similarly, research on structured musical relay activities indicates that integrating music with physical movement can significantly enhance attentional development in early childhood settings (Ismaniar et al., 2025).

Based on the findings, among the four musical dimensions, familiarity emerged as the strongest predictor of emotional response, suggesting that sociocultural proximity and prior exposure to dangdut music play a more dominant role than purely acoustic features. This indicates that cultural familiarity may enhance emotional resonance more effectively than structural musical elements such as tempo or rhythm. Differences in effect strength across musical dimensions are also evident. Rhythm and attractiveness demonstrated moderate effects, while tempo showed the weakest influence on emotional response. This may suggest that while structural features contribute to arousal, they are less influential than affective and culturally embedded dimensions in shaping audience emotional experience in this context. However, it has also been noted that symbolic and cultural meanings in folk and world dances are often underemphasized in educational contexts, where emphasis tends to be placed more on performance execution than on musical interpretation and expression (Melgarejo & Núñez, 2026).

In addition, emotional response was found to significantly influence behavioral intention. This suggests that audiences who experience positive emotions during performances are more likely to watch similar events in the future, recommend performances to others, and maintain continued interest in rhythmic gymnastics activities. This finding is consistent with consumer behavior literature, which emphasizes



that emotional experiences strongly influence future behavioral decisions and loyalty intentions (Enrique Bigné et al., 2008). Emotional satisfaction generated through culturally familiar music can therefore become an important factor in promoting sport-related events and audience retention (Hwang & Ballouli, 2025). The study also found that emotional response significantly affects public engagement. Audiences experiencing stronger emotional reactions demonstrated higher levels of cognitive, emotional, and behavioral involvement. This finding supports previous research indicating that emotions are central drivers of audience engagement in sport and entertainment settings (Kwak et al., 2011). Emotional engagement encourages audiences to pay greater attention, interact more actively, and feel more connected to performances. In the context of rhythmic gymnastics, integrating dangdut music appears to create a more relatable and engaging environment for Indonesian audiences. Behavioral intention significantly influenced public engagement. This finding indicates that audiences who express stronger intentions to continue consuming similar performances also tend to demonstrate greater active engagement. This relationship suggests that engagement and future behavioral tendencies are closely interconnected. Previous studies in sport management have similarly reported that individuals with strong participation intentions often demonstrate higher engagement and stronger attachment to sport experiences (Oh, 2023).

Based on the findings, interestingly, all hypotheses were statistically significant with relatively high *t*-values, indicating a highly consistent pattern of relationships across the model. While this strengthens the internal coherence of the proposed framework, it also raises methodological considerations. The homogeneity of the sample, shared cultural familiarity with dangdut music, or potential common method bias may have contributed to inflated relationships. Finally, this study contributes to the literature by extending research on music and sport performance into a non-Western cultural context. While previous studies have primarily focused on Western music genres in sport environments, this study demonstrates that local music genres such as dangdut can effectively enhance emotional response and audience engagement. The findings also provide practical implications for sport organizers and performance designers, suggesting that incorporating culturally relevant music may improve audience experience, increase public participation, and strengthen the attractiveness of rhythmic gymnastics performances in Indonesia

Conclusions

This study investigated the relationships between musical characteristics (familiarity, rhythm, attractiveness, and tempo), emotional response, behavioral intention, and public engagement in rhythmic gymnastics performances using dangdut music in Indonesia. The findings indicate that all musical dimensions significantly influence emotional response, suggesting that culturally familiar and rhythmically structured music is associated with more positive emotional experiences among audiences. Among these factors, familiarity and attractiveness showed relatively stronger contributions in shaping emotional responses. Furthermore, emotional response was found to significantly relate to both behavioral intention and public engagement, indicating that stronger positive emotions are associated with higher intentions to watch future performances, recommend the event, and engage with rhythmic gymnastics performances. In addition, behavioral intention was significantly associated with public engagement, highlighting the interconnected nature of emotional and behavioral responses in audience experience among Indonesian audiences familiar with dangdut. Perceptions of familiar music are associated with greater reported engagement. The findings suggest that, within the context of Indonesian respondents familiar with dangdut music, musical characteristics are associated with emotional and engagement-related outcomes in rhythmic gymnastics performances.

Implications

This study contributes to the literature on sport entertainment, music perception, and audience behavior by demonstrating the significant role of musical characteristics in shaping emotional and behavioral outcomes. These findings extend music and sport engagement literature by highlighting the importance of cultural familiarity as a key driver of emotional and behavioral responses in performance contexts by



incorporating a local Indonesian music genre into the analysis. While many prior studies focused on Western musical contexts, this research highlights the importance of culturally relevant music in influencing emotional response and public engagement in aesthetic sports. The study also provides empirical evidence supporting the relationship between emotional response, behavioral intention, and engagement within sport performance settings. Practically, the findings provide useful insights for sport organizers, rhythmic gymnastics coaches, and event managers. The use of culturally familiar music such as dangdut may enhance audience enjoyment, increase emotional involvement, and improve public engagement during performances. Organizers may therefore consider integrating local musical elements into sports entertainment programs to attract broader audiences and create more memorable experiences.

Limitations and Future Research

Despite its contributions, this study has several limitations. First, the research employed a cross-sectional design, which limits the ability to observe changes in audience perceptions and behaviors over time. Future studies may adopt longitudinal approaches to better understand the long-term effects of music on audience engagement and behavioral intention. The study focused specifically on respondents in Indonesia and on the use of dangdut music in rhythmic gymnastics performances. Therefore, the generalizability of the findings to other cultural contexts or sport types may be limited. Future research is encouraged to examine other local music genres or compare different cultural music styles across various sports performances. Also, the study relied on self-reported questionnaire data, which may be subject to response bias and subjective interpretation. Future studies could incorporate experimental methods or observational approaches to provide more objective assessments of emotional response and audience engagement. Future studies should employ more diverse samples or experimental designs to further validate these findings. Finally, this study focused on selected musical characteristics and did not include additional variables such as performance quality, athlete attractiveness, social influence, or digital media interaction. Future research may expand the research model by incorporating these variables to develop a more comprehensive understanding of audience behavior in sport entertainment contexts.

Acknowledgements

The authors would like to express their sincere gratitude to all participants who generously shared their time, insights, and experiences, making this study possible. Special appreciation is extended to the Indonesian participants who voluntarily contributed valuable perspectives to support this research. The authors also gratefully acknowledge the academic support and research facilities provided by the Department of Business Administration at Chaoyang University of Technology. In addition, the authors would like to thank their family, friends, coworkers, and peers for their continuous encouragement and unwavering support throughout this research journey. One of the authors would also like to dedicate this writing to her father, a dangdut music artist, whose passion for dangdut music became an inspiration for this study and motivated the completion of this work.

Financing

This research received no external funding.



References

- Al Doghan, M. A., & Sadiq, M. (2024). Exploring Audience Engagement and Cultural Expression in Theatre: Insights from Boulevard City Performances and Community Involvement. *Rita Revista Indexada de Textos Academicos*. <https://doi.org/10.24192/2386-7027.2024.v11i22.03>
- Baker, D. A., & Crompton, J. L. (2000). Quality, satisfaction and behavioral intentions. *Annals of tourism research*, 27(3), 785-804. [https://doi.org/10.1016/S0160-7383\(99\)00108-5](https://doi.org/10.1016/S0160-7383(99)00108-5)
- Berlyne, D. E. (1971). Aesthetics and psychobiology.
- Berlyne, D. E. (1971). Effects of auditory prechoice stimulation on visual exploratory choice. *Psychonomic Science*, 25(4), 193-194. <https://doi.org/10.3758/BF03329087>
- Bobo-Arce, M., & Méndez-Rial, B. (2013). Determinants of competitive performance in rhythmic gymnastics. A review. *Journal of Human Sport and Exercise*, 8(3), S711-S727. <https://doi.org/10.4100/jhse.2013.8.Proc3.18>
- Chen, X., & Huang, Z. (2025). The psychological mechanisms of spectator experience: a pathway model of immersion, identification, and sport consumption behavior. *Frontiers in Sports and Active Living*, 7, 1659416. <https://doi.org/10.3389/fspor.2025.1659416>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Enrique Bigné, J., Mattila, A. S., & Andreu, L. (2008). The impact of experiential consumption cognitions and emotions on behavioral intentions. *Journal of Services Marketing*, 22(4), 303-315. <https://doi.org/10.1108/08876040810881704>
- Fernando, G. P., David, P. C., & Sergio, A. B. (2023). Effect of service experience, engagement and satisfaction on the future intentions of customers of a sports services. *Heliyon*, 9(7). <https://doi.org/10.1016/j.heliyon.2023.e17850>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Fraser, T., Crooke, A. H. D., & Davidson, J. W. (2021). "Music has no borders": An exploratory study of audience engagement with YouTube music broadcasts during COVID-19 lockdown, 2020. *Frontiers in Psychology*, 12, 643893. <https://doi.org/10.3389/fpsyg.2021.643893>
- Freundt, A. R., & Matus, N. M. (2026). Experiencia didáctica de la gimnasia rítmica en la Educación Física escolar chilena. *Retos*, 74, 459-473. <https://doi.org/10.47197/retos.v74.109722>
- Garrido, S., & Macritchie, J. (2020). Audience engagement with community music performances: Emotional contagion in audiences of a 'pro-am' orchestra in suburban Sydney. *Musicae Scientiae*, 24(2), 155-167. <https://doi.org/10.1177/1029864918783027>
- Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Partial least squares structural equation modeling (PLS-SEM) using R: A workbook (p. 197). *Springer Nature*. <https://doi.org/10.1007/978-3-030-80519-7>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hall, A. E. (2015). Entertainment-oriented gratifications of sports media: Contributors to suspense, hedonic enjoyment, and appreciation. *Journal of Broadcasting & Electronic Media*, 59(2), 259-277. <https://doi.org/10.1080/08838151.2015.1029124>
- Harmon, J., & Kyle, G. T. (2016). Positive emotions and passionate leisure involvement. *Annals of Leisure Research*, 19(1), 62-79. <https://doi.org/10.1080/11745398.2015.1065753>
- Henseler, J., Ringle, C.M. & Sarstedt, M. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. of the Acad. Mark. Sci.* 43, 115-135 (2015). <https://doi.org/10.1007/s11747-014-0403-8>
- Hwang, Y., & Ballouli, K. (2025). Musical congruity in sports: enhancing team branding in esports and traditional sports. *Sport Management Review*, 28(2), 201-231. <https://doi.org/10.1080/14413523.2024.2404722>
- Inoue, Y., Sato, M., Filo, K., Du, J., & Funk, D. C. (2017). Sport spectatorship and life satisfaction: A multi-country investigation. *Journal of Sport Management*, 31(4), 419-432. <https://doi.org/10.1123/jsm.2016-0295>



- Ismaniar, I., Utoyo, S., Hazizah, N., & Murni, S. (2025). Enhancing attention skills in early childhood through musical relay games and physical activity: A non-western perspective. *Retos*, 72, 375-386. <https://doi.org/10.47197/retos.v72.115125>
- Jeong, Y., & Kim, S. (2020). A study of event quality, destination image, perceived value, tourist satisfaction, and destination loyalty among sport tourists. *Asia Pacific Journal of Marketing and Logistics*, 32(4), 940-960. <https://doi.org/10.1108/APJML-02-2019-0101>
- Jones, M. V. (2003). Controlling emotions in sport. *The sport psychologist*, 17(4), 471-486. <https://doi.org/10.1123/tsp.17.4.471>
- Kang, M. (2014). Understanding public engagement: Conceptualizing and measuring its influence on supportive behavioral intentions. *Journal of Public Relations Research*, 26(5), 399-416. <https://doi.org/10.1080/1062726X.2014.956107>
- Karageorghis, C. I. (2016). *Applying music in exercise and sport*. Human Kinetics.
- Karageorghis, C. I., & Priest, D. L. (2012). Music in the exercise domain: a review and synthesis (Part I). *International review of sport and exercise psychology*, 5(1), 44-66. <https://doi.org/10.1080/1750984X.2011.631026>
- Karageorghis, C. I., & Terry, P. C. (2012). Chapter 1 - The psychological, psychophysical and ergogenic effects of music in sport: A review and synthesis: Chapter taken from *Sporting Sounds* ISBN: 978-0-203-88797-4. *Routledge Online Studies on the Olympic and Paralympic Games*, 1(35), 13-36. https://doi.org/10.4324/9780203887974_chapter_1
- Karageorghis, C. I., Terry, P. C., & Lane, A. M. (1999). Development and initial validation of an instrument to assess the motivational qualities of music in exercise and sport: The Brunel Music Rating Inventory. *Journal of sports sciences*, 17(9), 713-724. <https://doi.org/10.1080/026404199365579>
- Kim, J. W., James, J. D., & Kim, Y. K. (2013). A model of the relationship among sport consumer motives, spectator commitment, and behavioral intentions. *Sport management review*, 16(2), 173-185. <https://doi.org/10.1016/j.smr.2012.08.004>
- Kwak, D. H., Kim, Y. K., & Hirt, E. R. (2011). Exploring the Role of Emotions on Sport Consumers' Behavioral and Cognitive Responses to Marketing Stimuli. *European Sport Management Quarterly*, 11(3), 225-250. <https://doi.org/10.1080/16184742.2011.577792>
- Laukka, P., & Quick, L. (2013). Emotional and motivational uses of music in sports and exercise: A questionnaire study among athletes. *Psychology of Music*, 41(2), 198-215. <https://doi.org/10.1177/0305735611422507>
- Melgarejo, A. M. L., & Núñez, N. L. (2026). Las danzas del mundo en los currículos autonómicos de Educación Primaria en España. *Retos*, 79, 189-201. <https://doi.org/10.47197/retos.v79.118166>
- Muñoz-Llerena, A., Muñoz-Llerena, E., Fernández-Gavira, J., & Alcaraz-Rodríguez, V. (2026). Interdisciplinarity between Physical Education and Music Education in primary education through dance. *Retos*, 74, 289-307. <https://doi.org/10.47197/retos.v73.113350>
- North, A., & Hargreaves, D. (2008). *The social and applied psychology of music*. OUP Oxford.
- Oh Y. (2023). The Relationship between Exercise Re-Participation Intention Based on the Sports-Socialization Process: YouTube Sports Content Intervention. *Behavioral sciences (Basel, Switzerland)*, 13(2), 187. <https://doi.org/10.3390/bs13020187>
- Oliver, M. B., & Bartsch, A. (2010). Appreciation as audience response: Exploring entertainment gratifications beyond hedonism. *Human communication research*, 36(1), 53-81. <https://doi.org/10.1111/j.1468-2958.2009.01368.x>
- Park, K. S., Williams, D. M., & Etnier, J. L. (2023). Exploring the use of music to promote physical activity: From the viewpoint of psychological hedonism. *Frontiers in Psychology*, 14, 1021825. <https://doi.org/10.3389/fpsyg.2023.1021825>
- Russell, J. A. (1980). A circumplex model of affect. *Journal of personality and social psychology*, 39(6), 1161. <https://doi.org/10.1037/h0077714>
- Russell, J. A. (1989). Measures of emotion. In *The measurement of emotions* (pp. 83-111). Academic Press. <https://doi.org/10.1016/B978-0-12-558704-4.50010-4>
- Song, R., Motevalli, S., & Zhou, Y. (2024). Melodic movements: the role of music in shaping sport performance and psychological responses. *International Sports Studies*, 46(2), 96-124. <https://doi.org/10.69665/iss.v46i2.24>
- Terry, P. C., Karageorghis, C. I., Curran, M. L., Martin, O. V., & Parsons-Smith, R. L. (2020). Effects of music in exercise and sport: A meta-analytic review. *Psychological bulletin*, 146(2), 91. <https://doi.org/10.1037/bul0000216>



- Van der Zwaag, M. D., Westerink, J. H., & Van den Broek, E. L. (2011). Emotional and psychophysiological responses to tempo, mode, and percussiveness. *Musicae Scientiae*, *15*(2), 250-269. <https://doi.org/10.1177/1029864911403364>
- Walmsley, B. (2019). *Audience engagement in the performing arts: A critical analysis*. London: Palgrave Macmillan. <https://doi.org/10.1007/978-3-030-26653-0>
- Weintraub, A. N. (2010). *Dangdut stories: A social and musical history of Indonesia's most popular music*. Oxford University Press.
- Weintraub, A. N. (2013). The Sound and Spectacle of Dangdut Koplo: Genre and Counter-Genre in East Java, Indonesia. *Asian Music*, *44*(2), 160–194. <http://www.jstor.org/stable/24256937>
- Wu, X., & Rodloytuk, P. (2025). The harmony of body and voice: integrating vocal techniques and sports physiology in education. *Retos*, *70*, 1575-1585. <https://doi.org/10.47197/retos.v70.117140>
- Yun, H., Park, M., & Choi, C. H. (2025). Behavioral insights into audience satisfaction: analyzing emotional and cognitive factors in K-culture dance engagement. *PLoS One*, *20*(12), e0337527. <https://doi.org/10.1371/journal.pone.0337527>
- Zalillah, S. I., Jayadi, I., Andriana, L. M., Ashadi, K., Wiriawan, O., & Hariyanto, A. (2025). Total-body aerobic gymnastic exercises more effective than low intensity steady state to improving body composition in adult women with sedentary. *Retos*, *68*, 2031-2041. <https://doi.org/10.47197/retos.v68.113196>
- Zhang, X. (2025). Analysis of the Synergy between the Rhythm Characteristics of Line Dance Music and Movement Choreography. *Journal of Modern Educational Theory and Practice*, *2*(6). <https://doi.org/10.70767/jmetp.v2i6.723>

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