

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

Ma. Leomie B. Lagrosas, PhD

St. Michael's College of Iligan, Inc.

ABSTRACT: This descriptive-quantitative research examines the perceptions of college students regarding their classroom-initiated community engagement with a home for the aged. The study aimed to assess the students' stance on the integration of academic learning with social outreach, particularly in fostering empathy, civic involvement, and awareness of elderly care. A total of 50 student-respondents from St. Michael's College of Iligan City participated in the study. A structured survey questionnaire using a five-point Likert scale was administered to gather data on the students' attitudes, reflections, and perceived benefits of the program. Descriptive statistics such as frequency, percentage, mean, and standard deviation were employed to analyze the results. Findings indicated that students strongly agreed that their participation enhanced their sense of social responsibility, interpersonal communication, and respect for the elderly. The majority rated their overall experience as highly impactful, with themes of compassion, active learning, and community solidarity emerging from the results. The study affirms the value of integrating classroom instruction with real-life community service, promoting both academic growth and emotional intelligence. It is recommended that similar initiatives be regularly incorporated into academic programs to produce socially responsible and empathetic graduates.

KEYWORDS: Descriptive study, student perception, community engagement, elderly care, social responsibility, empathy development

I. INTRODUCTION

In today's fast-paced academic environment, students often struggle to maintain a healthy lifestyle, particularly in terms of physical activity. As sedentary behaviors become more common among young people, there is a growing need for fitness programs that are both effective and engaging. Zumba and Ero Dance—popular dance-based exercise routines—have gained attention for their ability to combine physical exertion with fun, rhythm, and social interaction. These programs not only promote cardiovascular health but also provide an enjoyable alternative to traditional workout routines.

This study, titled *"Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students,"* investigates how students perceive the effectiveness of these dance fitness programs in enhancing cardiovascular fitness. It also examines the common challenges students encounter when participating in such activities. Findings revealed that students generally agreed that Zumba and Ero Dance contribute positively to cardiovascular endurance, physical engagement, motivation to exercise, and enjoyment through social interaction. However, participants also reported facing significant barriers, such as physical limitations, scheduling conflicts, program accessibility, and fluctuating levels of interest and commitment.

While numerous studies have established the physical health benefits of traditional cardiovascular exercises such as running, cycling, and aerobics, there remains limited research on dance-based fitness programs like Zumba and Ero Dance, especially in the context of student populations. Existing literature tends to focus either on the physiological outcomes or the entertainment value of these programs, with few studies examining both the perceived effectiveness and the real-world challenges students face when participating. Furthermore, most related research is concentrated in Western or urban settings, leaving a gap in understanding how such programs are experienced by students in localized, school-based environments, particularly in developing regions.

This study addresses this gap by providing a comprehensive exploration of both the benefits and barriers of Zumba and Ero Dance as cardiovascular fitness programs among students. By assessing perceptions in terms of endurance, engagement, motivation, enjoyment, and the common challenges such as time constraints, accessibility, and commitment, this research contributes meaningful data that can support the design of more responsive and inclusive fitness initiatives within educational institutions. Understanding both the benefits and barriers associated with Zumba and Ero Dance is essential for developing more inclusive, enjoyable, and sustainable fitness programs in academic settings. This study aimed to provide insights that can guide educators,

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

program designers, and school administrators in promoting physical well-being among students through **innovative and accessible approaches**.

II. THEORETICAL AND EMPIRICAL BACKGROUND

This study is guided by the **Health Belief Model (HBM)** and the **Self-Determination Theory (SDT)**. The Health Belief Model, developed by Rosenstock (1974), explains that individuals are more likely to engage in health-promoting behavior if they perceive themselves to be susceptible to a health issue and believe that a specific action would reduce that risk. Applied to this study, HBM helps explain students' participation in Zumba and Ero Dance based on their belief in its health benefits, such as improved cardiovascular fitness and reduced fatigue.

In parallel, **Self-Determination Theory** (Deci & Ryan, 1985) posits that human motivation is driven by the need for autonomy, competence, and relatedness. These psychological needs can be fulfilled through activities that are enjoyable, socially engaging, and offer a sense of achievement—traits commonly associated with dance-based exercise. When these needs are met, students are more likely to develop intrinsic motivation, which supports consistent participation in physical activities like Zumba and Ero Dance.

Empirical research has shown that Zumba and similar dance-based fitness programs provide significant health and motivational benefits. Luetngen et al. (2012) found that Zumba offers moderate to vigorous physical activity that enhances aerobic capacity and contributes positively to cardiovascular endurance. Domene et al. (2016) similarly reported improvements in physical fitness, mood, and social connection among participants of regular Zumba sessions, highlighting the multidimensional benefits of such programs.

Despite these benefits, students often face challenges that affect their participation. Jung et al. (2015) identified time constraints, physical discomfort, and waning interest as key barriers to maintaining consistent physical activity, particularly in academic settings. Additionally, Chen and Sun (2020) emphasized that accessibility factors—such as schedule alignment, facility quality, and availability of trained instructors—significantly influence student participation and engagement in school-based fitness programs.

Although existing studies affirm the physical and psychological gains from dance fitness, there is limited research that simultaneously examines both the **perceived effectiveness and encountered barriers** within the same context. Moreover, few studies focus specifically on student populations in school settings. This study addresses that gap by providing a holistic exploration of the benefits and challenges of Zumba and Ero Dance among students, offering insights that can help optimize program design and implementation in educational institutions.

III. OBJECTIVES OF THE STUDY

Engaging in physical activity is essential for maintaining cardiovascular health, especially among students who are increasingly susceptible to sedentary lifestyles due to academic demands. Dance-based fitness programs such as Zumba and Ero Dance have become popular alternatives to traditional exercises, offering both physical and psychological benefits. However, despite their growing popularity, the actual perceived effectiveness of these programs and the barriers that students encounter remain underexplored in academic settings.

This study seeks to explore how students perceive the effectiveness of Zumba and Ero Dance in enhancing cardiovascular fitness and to identify the challenges that hinder consistent participation in such programs. It also aims to examine the relationship between students' perceived benefits and the barriers they face.

Specifically, the study seeks to answer the following questions:

Problem 1. How do students perceive the effectiveness of Zumba and Ero Dance in enhancing cardiovascular fitness in terms of the following in terms of Cardiovascular Endurance, Physical Engagement, Motivation to Exercise and Enjoyment and Social Interaction? Problem 2: What is the level of the challenges do students encounter in participating in Zumba and Ero Dance as a cardiovascular fitness program in terms of Physical Limitations, Time Availability, Program Accessibility and Level of Interest and Commitment? Problem 3: Is there a significant relationship between effectiveness and challenges do students encounter in participating in Zumba and Ero Dance as a cardiovascular fitness program?

IV. RESEARCH METHOD

Research Design

This study employed a **descriptive quantitative research design** to investigate students' perceptions of the effectiveness of Zumba and Ero Dance in enhancing cardiovascular fitness and the challenges they encounter in participating in these programs. The descriptive design allowed for the collection and analysis of numerical data reflecting the respondents' attitudes and experiences related to cardiovascular endurance, physical engagement, motivation, enjoyment, social interaction, and participation challenges.

The study respondents consisted of 50 students who have been actively participating in Zumba and Ero Dance sessions as part of a cardiovascular fitness program. The sample size was determined using convenience sampling based on students enrolled

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

and attending these dances fitness programs during the study period. Participants represented a diverse range of ages and fitness levels, ensuring a broad understanding of perceptions and challenges across the student population.

Data Collection Instrument

A structured **survey questionnaire** was developed based on the study objectives and relevant literature on cardiovascular fitness and dance-based exercise programs. The questionnaire included two major parts:

1. **Perceived Effectiveness Scale** — assessing how Zumba and Ero Dance enhance cardiovascular fitness in terms of cardiovascular endurance, physical engagement, motivation to exercise, and enjoyment and social interaction.
2. **Challenges Scale** — measuring challenges encountered by students during participation in terms of physical limitations, time availability, program accessibility, and level of interest and commitment.).

Validation and Pilot Testing

To ensure the content validity of the questionnaire, the instrument was subjected to **content validation** by a panel of experts in physical education, fitness training, and research methodology. Feedback from these experts was incorporated to refine the clarity, relevance, and appropriateness of the items. Subsequently, the revised questionnaire was **pilot tested** on a small group of students similar to the study population but not included in the final sample. The pilot test helped assess the reliability and understandability of the instrument, leading to minor adjustments before the main data collection.

Table A: Scoring System for Perceived Level of the Effectiveness of Zumba and Ero Dance in Enhancing Cardiovascular Fitness

Rating	Scoring Scale	Qualitative Description	<i>Qualitative Interpretation</i>
5	4.20 – 5.00	Strongly Agree	Very High
4	3.40 – 4.19	Agree	High
3	2.60 - 3.39	Neutral	Moderate
2	1.80 – 2.59	Disagree	Low
1	1.00 – 1.79	Strongly Disagree	Very Low

The scoring system used to interpret respondents' perceived level of the effectiveness of Zumba and Ero Dance in enhancing cardiovascular fitness is based on a 5-point Likert scale. Each rating corresponds to a range of mean scores, which are then described qualitatively. A mean score between 4.20 and 5.00 indicates a “Strongly Agree” response, reflecting a very high perception of effectiveness. Scores from 3.40 to 4.19 are categorized as “Agree,” which denotes a high level of perceived effectiveness. A mean between 2.60 and 3.39 is interpreted as “Neutral,” indicating a moderate perception. Scores falling between 1.80 and 2.59 correspond to “Disagree,” signifying a low level of perceived effectiveness. Finally, a score between 1.00 and 1.79 reflects “Strongly Disagree,” which is interpreted as a very low perception of effectiveness. This system helps to clearly classify and understand the varying degrees of respondents' agreement or disagreement with the statements related to the fitness program.

Table B: Scoring System for Perceived Level of the Challenges do Students Encounter in Participating in Zumba and Ero Dance as a Cardiovascular Fitness Program

Rating	Scoring Scale	Qualitative Description	<i>Qualitative Interpretation</i>
5	4.20 – 5.00	Strongly Agree	Very High
4	3.40 – 4.19	Agree	High
3	2.60 - 3.39	Neutral	Moderate
2	1.80 – 2.59	Disagree	Low
1	1.00 – 1.79	Strongly Disagree	Very Low

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

The scoring system for assessing the level of challenges students encounter while participating in Zumba and Ero Dance as cardiovascular fitness programs also uses a 5-point Likert scale with specific score ranges linked to qualitative descriptions. A mean score from 4.20 to 5.00 represents a “Strongly Agree” rating, indicating that students perceive the challenges at a very high level. Scores between 3.40 and 4.19 fall under “Agree,” reflecting a high perception of challenges. A mean range of 2.60 to 3.39 corresponds to “Neutral,” showing a moderate level of perceived difficulty. Scores within 1.80 to 2.59 are classified as “Disagree,” which signifies a low level of perceived challenges. Lastly, scores from 1.00 to 1.79 are labeled “Strongly Disagree,” indicating a very low perception of the challenges faced by the participants. This scoring framework enables clear categorization and understanding of how students view the obstacles related to their involvement in the fitness programs.

Treatment of the Data

The researcher employed a quantitative method of treating the data for analyses suited according to the research problem mentioned in Chapter 1. These are basic and inferential statistical tools appropriate to the nature of the data sets gathered. These are the following:

Mean and Standard Deviation. These basic statistical tools were used to describe and measure the average location and variation of the respondents’ perceived level of the Effectiveness and Challenges do Students Encounter in Participating in Zumba and Ero Dance as a Cardiovascular Fitness Program. These descriptive statistics are appropriate to answer and analyze research problem number one (1) and two (2) since these variables are measurable quantitatively.

Spearman (rho) Rank Correlation. This non-parametric statistical tool was utilized to answer and analyze research problem number three (3). This tool is more appropriate since this does not require the normality of the distribution of the data sets with few tied ranks. This is because the distributional shape of the data sets involved in the testing relationship between levels of Effectiveness and Challenges do Students Encounter in Participating in Zumba and Ero Dance as a Cardiovascular Fitness Program are not normally distributed.

Table C. Test for Normality Distribution

Data Set (Variable)	Shapiro-Wilk		
	Statistic	df	p-value
Cardiovascular endurance	0.865	50	< .001
Physical Engagement	0.923	50	0.003
Motivation to Exercise	0.945	50	0.022
Enjoyment and Social Interaction	0.875	50	< .001
Physical Limitations	0.780	50	< .001
Time Availability	0.922	50	0.003
Program Accessibility	0.817	50	< .001
Level of Interest and Commitment	0.835	50	< .001

Table C presents the results of the Shapiro-Wilk test, which was used to assess the normality of the distribution for each variable in the study. The variables analyzed include Cardiovascular Endurance, Physical Engagement, Motivation to Exercise, Enjoyment and Social Interaction, Physical Limitations, Time Availability, Program Accessibility, and Level of Interest and Commitment. The Shapiro-Wilk statistics for all variables range from 0.780 to 0.945, with degrees of freedom consistently at 50. Importantly, the p-values for all variables are less than the conventional alpha level of 0.05, with many being less than 0.001. This indicates that the data for each variable significantly deviate from a normal distribution, suggesting that the assumption of normality is violated for all the tested factors.

Ethical Consideration

This study strictly adhered to ethical standards to ensure the protection and respect of all participants involved. Prior to data collection, ethical clearance was sought and granted by the Research Ethics Review Committee (RERC) of St. Michael’s

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

College of Iligan Inc. (SMCII). This review ensured that the study design, instruments, and procedures complied with established ethical guidelines, safeguarding the rights and welfare of the student respondents throughout the research process.

Participation in the study was entirely voluntary, with respondents fully informed about the purpose, procedures, potential benefits, and risks of the research before giving their consent. Potential risks were minimal but included possible physical fatigue or muscle soreness during the Zumba and Ero Dance sessions, which participants were made aware of. To minimize these risks, appropriate warm-up, cool-down activities, and instructor guidance were provided. Benefits of participation included improved cardiovascular fitness, enhanced motivation for exercise, social interaction, and enjoyment, which could positively impact the students' overall health and well-being.

To maintain confidentiality, all personal information and responses were treated with strict confidentiality and anonymity. Data were coded and securely stored, accessible only to the researchers, to prevent unauthorized access or disclosure of sensitive information. Participants were also assured of their right to withdraw from the study at any time without any penalty or loss of benefits. The ethical oversight by the RERC of SMCII reinforced the commitment to conducting research that respects human dignity, promotes transparency, and upholds the highest standards of academic integrity.

V. RESULT AND DISCUSSION

Problem 1. How do students perceive the effectiveness of Zumba and Ero Dance in enhancing cardiovascular fitness in terms of the following in terms of Cardiovascular Endurance, Physical Engagement, Motivation to Exercise and Enjoyment and Social Interaction?

Table 1: Level of Respondents' Perceived of the Effectiveness of Zumba and Ero Dance in Enhancing Cardiovascular Fitness in terms of Cardiovascular Endurance.

Indicators	Mean	SD	Qualitative Description	Qualitative Interpretation
1. My ability to sustain high-intensity activity has improved since participating in Zumba and Ero Dance.	3.66	1.364	Agree	High
2. I feel less fatigued after engaging in physical activities.	4.58	0.785	Strongly Agree	Very High
3. I can exercise for longer periods without getting tired.	3.46	0.930	Agree	High
4. My breathing control during exercise has improved.	4.24	0.625	Strongly Agree	Very High
5. I have noticed an improvement in my running or jogging endurance.	4.38	0.725	Strongly Agree	Very High
6. I no longer experience shortness of breath as easily as before.	4.52	0.614	Strongly Agree	Very High
7. My overall stamina has increased since joining the program.	4.30	1.515	Strongly Agree	Very High
8. I feel more energetic throughout the day after participating in Zumba and Ero Dance.	3.58	0.810	Agree	High
Over-all Mean	4.09	0.503	Agree	High

The findings revealed that students perceive Zumba and Ero Dance as highly effective in enhancing their cardiovascular endurance, with an overall mean score of 4.09, which falls under the qualitative interpretation of "High." Among the various indicators, the statement **"I feel less fatigued after engaging in physical activities"** received the highest mean score of 4.58, indicating a very strong agreement that participation in these programs reduces fatigue. Conversely, the statement **"I can exercise for longer periods without getting tired"** received the lowest mean score of 3.46, though it still falls within the "Agree" and "High" category, showing that some students perceive this area as less improved compared to others.

These results suggest that students notice substantial benefits in their cardiovascular endurance, especially in terms of reduced fatigue, better breathing control during exercise ($M = 4.24$), and decreased shortness of breath ($M = 4.52$). Improvements in running or jogging endurance ($M = 4.38$) and overall stamina ($M = 4.30$) also contribute to this positive perception.

The high perception of reduced fatigue aligns with research by Stevens et al. (2019), who emphasized that dance-based cardiovascular programs effectively enhance aerobic capacity and decrease exercise-related exhaustion. However, the relatively

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

lower score on prolonged exercise capacity may indicate that while students feel less tired overall, their endurance for sustained activity is still developing. This gap may suggest the need for longer or more frequent sessions to further boost endurance.

The implications of these findings highlight the potential of Zumba and Ero Dance to promote cardiovascular health among students. Their enjoyable and interactive nature may help sustain student motivation and physical engagement, which are critical for long-term fitness improvements. Educational institutions should consider these dance programs as effective, accessible tools to enhance cardiovascular endurance and overall physical health in student populations.

Table 2: Level of Respondents' Perceived of the Effectiveness of Zumba and Ero Dance in Enhancing Cardiovascular Fitness in terms of Physical Engagement.

Indicators	Mean	SD	Qualitative Description	Qualitative Interpretation
1. I actively participate in all Zumba and Ero Dance sessions.	3.90	1.182	Agree	High
2. I am fully engaged in each session without distractions.	2.22	0.545	Disagree	Low
3. I feel motivated to put in effort throughout the entire session.	3.34	1.560	Neutral	Moderate
4. I follow the instructor's movements accurately and consistently.	4.12	0.689	Agree	High
5. I feel physically challenged in a positive way during the sessions.	3.41	0.936	Agree	High
6. I actively participate in group activities and routines.	4.70	0.580	Strongly Agree	Very High
7. I rarely skip or take breaks during the sessions.	4.02	1.446	Agree	High
8. I find myself becoming more physically engaged over time.	3.75	1.045	Agree	High
Over-all Mean	3.68	0.472	Agree	High

The data indicate that students generally perceive Zumba and Ero Dance as effective in enhancing their physical engagement, with an overall mean score of 3.68, categorized as "High." The highest-rated indicator was **"I actively participate in group activities and routines,"** which received a mean score of 4.70, reflecting a "Very High" level of agreement. This suggests that students feel most engaged during group interactions, highlighting the social and collaborative aspect of these dance programs as a strong motivating factor for participation.

Conversely, the statement **"I am fully engaged in each session without distractions"** recorded the lowest mean score of 2.22, falling under the "Low" category and indicating disagreement. This points to a notable challenge, as some students experience difficulty maintaining complete focus throughout the sessions, which may affect their overall physical engagement and benefits gained.

Other indicators such as following the instructor's movements accurately ($M = 4.12$), rarely skipping sessions ($M = 4.02$), and feeling physically challenged positively ($M = 3.41$) all fall within the "High" category, reinforcing the perception of effective engagement. The neutral response regarding motivation to exert effort throughout the session ($M = 3.34$) suggests variability among participants in sustaining consistent effort.

These findings are supported by studies like those of Bouchard and Shepard (2023), who emphasize that group-based physical activities increase motivation and adherence due to social support and interaction. However, the low score on sustained focus indicates that distractions may hinder some participants from fully maximizing the benefits, which aligns with research by Smith et al. (2022), highlighting the importance of minimizing external interruptions in exercise settings.

Overall, the results imply that while Zumba and Ero Dance effectively promote physical engagement, further strategies such as enhancing session structure or minimizing distractions could improve full participant focus, leading to even greater cardiovascular fitness benefits.

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

Table 3: Level of Respondents' Perceived of the Effectiveness of Zumba and Ero Dance in Enhancing Cardiovascular Fitness in terms of Motivation to Exercise.

Indicators	Mean	SD	Qualitative Description	Qualitative Interpretation
1. Zumba and Ero Dance have increased my motivation to exercise regularly.	3.49	1.513	Agree	High
2. I look forward to participating in each session.	4.13	1.165	Agree	High
3. The fun and energetic nature of dance-based exercise keeps me motivated.	4.37	0.691	Strongly Agree	Very High
4. I have developed a habit of being more physically active because of these sessions.	3.76	1.546	Agree	High
5. Seeing progress in my fitness level motivates me to keep going.	4.16	0.618	Agree	High
6. The positive environment in these sessions encourages me to participate.	3.47	0.872	Agree	High
7. I feel more disciplined about maintaining an exercise routine.	4.76	0.431	Strongly Agree	Very High
8. Zumba and Ero Dance have helped me overcome laziness or reluctance to exercise.	3.76	1.283	Agree	High
Over-all Mean	3.99	0.501	Agree	High

Students perceive Zumba and Ero Dance as highly effective in enhancing their motivation to exercise, reflected by an overall mean score of 3.99, which falls under the “High” qualitative interpretation. Among the specific indicators, the highest-rated was **“I feel more disciplined about maintaining an exercise routine,”** with a mean score of 4.76, categorized as “Very High.” This suggests that participating in these dance programs positively influences students' self-discipline and commitment to regular physical activity.

The statement with the lowest mean score was **“Zumba and Ero Dance have increased my motivation to exercise regularly,”** scoring 3.49 but still within the “High” range. While this reflects agreement, it also shows that some students may experience less of a motivational boost than others, indicating room for enhancing how the sessions inspire consistent exercise habits.

Other items such as **“The fun and energetic nature of dance-based exercise keeps me motivated”** (M = 4.37), **“I look forward to participating in each session”** (M = 4.13), and **“Seeing progress in my fitness level motivates me to keep going”** (M = 4.16) all demonstrate strong positive perceptions, emphasizing the role of enjoyment and visible improvement in sustaining motivation. The encouraging atmosphere of the sessions also supports motivation (M = 3.47), indicating that social and environmental factors contribute to students' exercise engagement.

These findings align with research by Ryan and Deci (2021), who highlight that intrinsic motivation—such as enjoyment and personal progress—is a key driver of sustained exercise behavior. Additionally, the high discipline score supports the idea that structured group activities can foster routine adherence, as noted by Dishman et al. (2020).

In summary, the data imply that Zumba and Ero Dance effectively motivate students to maintain and develop regular exercise habits, although continued efforts to boost motivation for all participants could further enhance the program's impact.

Table 4: Level of Respondents' Perceived of the Effectiveness of Zumba and Ero Dance in Enhancing Cardiovascular Fitness in terms of Enjoyment and Social Interaction.

Indicators	Mean	SD	Qualitative Description	Qualitative Interpretation
1. I enjoy participating in Zumba and Ero Dance sessions.	3.80	1.641	Agree	High
2. The music and rhythm make the sessions more fun.	3.52	1.182	Agree	High
3. I feel happy and energized after each session.	4.74	0.443	Strongly Agree	Very High
4. I enjoy the social aspect of dancing with others.	4.00	1.262	Agree	High
5. I have made new friends through these fitness programs.	3.76	0.657	Agree	High

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

6.	I find Zumba and Ero Dance more enjoyable than traditional workouts.	4.64	0.485	<i>Strongly Agree</i>	<i>Very High</i>
7.	I would recommend these dance-based fitness programs to others.	4.78	0.418	<i>Strongly Agree</i>	<i>Very High</i>
8.	The combination of music, movement, and social interaction makes these sessions enjoyable.	4.04	0.781	<i>Agree</i>	<i>High</i>
Over-all Mean		4.16	0.442	<i>Agree</i>	<i>High</i>

The findings reveal that students perceive Zumba and Ero Dance as highly effective in enhancing their enjoyment and social interaction, with an overall mean score of 4.16, indicating a “High” level of positive perception. Among the indicators, the highest-rated statement was **“I would recommend these dance-based fitness programs to others,”** with a mean of 4.78 and a “Very High” qualitative interpretation. This reflects strong satisfaction and enthusiasm toward the program, suggesting that many students view it as a beneficial and enjoyable fitness activity worth sharing.

Similarly, statements such as **“I feel happy and energized after each session”** (M = 4.74) and **“I find Zumba and Ero Dance more enjoyable than traditional workouts”** (M = 4.64) also received “Very High” ratings, highlighting the positive emotional and motivational impact the programs have on participants. These results underscore the significance of music, rhythm, and group dynamics in making exercise appealing and fun.

On the other hand, the lowest-rated indicator was **“The music and rhythm make the sessions more fun,”** with a mean of 3.52, still interpreted as “High.” While this shows agreement, it suggests some variability in how much the musical aspect influences enjoyment for different students.

The overall positive perception is supported by literature indicating that social interaction and enjoyment are critical factors in maintaining exercise adherence (Burke et al., 2021). Music and group activities increase intrinsic motivation and contribute to feelings of connectedness, which can improve both psychological well-being and fitness outcomes (Karageorghis & Priest, 2020).

In conclusion, the results suggest that Zumba and Ero Dance effectively promote enjoyment and social engagement, which are essential components in sustaining cardiovascular fitness programs among students.

Table 5: Summary of Respondents’ Perceived Level of the Effectiveness of Zumba and Ero Dance in Enhancing Cardiovascular Fitness

Factors	Minimum	Maximum	Mean	SD	Description
Cardiovascular endurance	2.00	4.75	4.09	0.503	<i>High</i>
Physical Engagement	2.00	4.39	3.68	0.472	<i>High</i>
Motivation to Exercise	2.88	4.88	3.99	0.501	<i>High</i>
Enjoyment and Social Interaction	3.25	4.75	4.16	0.442	<i>High</i>

Table 1.5 presents the overall summary of students’ perceived effectiveness of Zumba and Ero Dance in enhancing cardiovascular fitness across four key factors: Cardiovascular Endurance, Physical Engagement, Motivation to Exercise, and Enjoyment and Social Interaction. All factors received mean scores that fall within the “High” qualitative description, indicating a generally positive perception of the fitness programs. Among the factors, **Enjoyment and Social Interaction** scored the highest mean of 4.16, suggesting that students particularly value the fun and social aspects of the programs, which aligns with previous research emphasizing the role of social connectedness in exercise adherence (Burke et al., 2006).

Cardiovascular Endurance followed closely with a mean of 4.09, reflecting students’ recognition of improved stamina and breathing control, which are vital physiological benefits of consistent aerobic activity (McArdle et al., 2022). Meanwhile, **Motivation to Exercise** showed a strong mean score of 3.99, highlighting that these dance programs effectively encourage students to maintain regular physical activity routines, consistent with studies on dance-based exercises boosting intrinsic motivation (Kattenstroth et al., 2019).

Physical Engagement, while still rated “High” at 3.68, was the lowest among the factors, indicating that some students may experience challenges in maintaining full participation or focus during sessions. This suggests an opportunity for program facilitators to explore strategies to increase active involvement and reduce distractions.

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

Overall, the findings imply that Zumba and Ero Dance are perceived as effective cardiovascular fitness activities that combine physical benefits with social and motivational support, which can enhance student participation and promote a healthier lifestyle.

Problem 2: What is the level of the challenges do students encounter in participating in Zumba and Ero Dance as a cardiovascular fitness program in terms of Physical Limitations, Time Availability, Program Accessibility and Level of Interest and Commitment?

Table 6: Level of Respondents' Perceived of the Challenges do Students Encounter in Participating in Zumba and Ero Dance as a Cardiovascular Fitness Program in terms of Physical Limitations

Indicators	Mean	SD	Qualitative Description	Qualitative Interpretation
1. I experience fatigue or exhaustion during sessions.	4.19	1.200	Agree	High
2. I often need to take breaks due to physical discomfort.	4.62	0.725	Strongly Agree	Very High
3. The intensity of the exercises is too challenging for me.	3.60	1.195	Agree	High
4. I experience muscle soreness or stiffness after participating.	3.98	0.589	Agree	High
5. I lack the flexibility needed for certain dance moves.	4.14	1.309	Agree	High
6. I struggle with balance and coordination during the routines.	4.28	0.671	Strongly Agree	Very High
7. I feel that my overall endurance limits my ability to fully participate.	4.60	0.782	Strongly Agree	Very High
Over-all Mean	4.20	0.646	Strongly Agree	Very High

Table 6 illustrates the respondents' perceived challenges related to physical limitations while participating in Zumba and Ero Dance as cardiovascular fitness programs. The overall mean score of 4.20 falls within the "Strongly Agree" and "Very High" qualitative interpretation, indicating that students commonly face significant physical challenges during the sessions. Notably, the highest-rated indicators were the need to take breaks due to physical discomfort (mean = 4.62) and limitations in endurance affecting full participation (mean = 4.60). Additionally, difficulties with balance and coordination (mean = 4.28) also ranked very high, underscoring specific physical struggles in executing dance routines effectively.

Despite the high challenge level, most respondents still agreed that muscle soreness, fatigue, and lack of flexibility were prevalent issues, which are consistent with the physical demands of aerobic dance workouts (Caspersen et al., 1985). These findings suggest that while Zumba and Ero Dance are effective, program facilitators need to consider modifications or supportive measures to accommodate participants' physical limitations and prevent injury. Addressing these challenges may improve participation rates and overall satisfaction with the fitness program.

Table 7: Level of Respondents' Perceived of the Challenges do Students Encounter in Participating in Zumba and Ero Dance as a Cardiovascular Fitness Program in terms of Time Availability

Indicators	Mean	SD	Qualitative Description	Qualitative Interpretation
1. My academic schedule makes it difficult to attend sessions.	3.00	1.143	Neutral	Moderate
2. I struggle to balance school, extracurricular activities, and fitness participation.	2.70	1.129	Neutral	Moderate
3. The scheduled time for sessions is inconvenient for me.	4.14	1.246	Agree	High
4. I feel overwhelmed by my workload and struggle to fit in exercise.	3.64	1.156	Agree	High
5. I frequently have conflicts between Zumba/Ero Dance sessions and other activities.	4.60	0.495	Strongly Agree	Very High

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

6.	I lack a consistent schedule that allows me to attend regularly.	4.26	0.694	<i>Strongly Agree</i>	<i>Very High</i>
7.	I often have last-minute obligations that prevent me from attending.	4.04	0.781	<i>Agree</i>	<i>High</i>
Over-all Mean		3.77	0.344	<i>Agree</i>	<i>High</i>

Level of Challenges Encountered: Time Availability

Table 7 presents the respondents' perceptions regarding challenges related to time availability when participating in Zumba and Ero Dance sessions. The overall mean score of 3.77 indicates a "High" level of challenge, suggesting that time management is a significant barrier for many students. Specifically, the most challenging aspect was the frequent conflicts between Zumba/Ero Dance sessions and other activities, which received a very high rating (mean = 4.60). Additionally, students reported lacking a consistent schedule to attend sessions regularly (mean = 4.26), and many found the scheduled times inconvenient (mean = 4.14).

Although some items like difficulty balancing academics and fitness or feeling overwhelmed by workload showed moderate challenges, the overall findings highlight that academic and extracurricular demands strongly impact students' ability to participate consistently. These results align with previous studies (e.g., Dishman et al., 2022) that show time constraints are a common barrier to regular exercise among students. To improve participation, program planners might consider more flexible scheduling or integrating sessions within academic timetables to better accommodate students' commitments.

Table 8: Level of Respondents' Perceived of the Challenges do Students Encounter in Participating in Zumba and Ero Dance as a Cardiovascular Fitness Program in terms of Program Accessibility

Indicators	Mean	SD	<i>Qualitative Description</i>	<i>Qualitative Interpretation</i>
1. The location of the fitness sessions is difficult for me to access.	4.08	0.752	<i>Agree</i>	<i>High</i>
2. The schedule of the sessions does not align with my availability.	4.12	1.223	<i>Agree</i>	<i>High</i>
3. The facilities for the sessions are not always available.	4.66	0.479	<i>Strongly Agree</i>	<i>Very High</i>
4. There is limited space, making participation difficult.	4.46	0.862	<i>Strongly Agree</i>	<i>Very High</i>
5. The class size is too large, making it hard to fully engage.	3.84	1.095	<i>Agree</i>	<i>High</i>
6. There is a lack of proper ventilation or cooling in the workout area.	4.26	0.443	<i>Strongly Agree</i>	<i>Very High</i>
7. The availability of trained instructors affects my participation.	3.92	0.566	<i>Agree</i>	<i>High</i>
Over-all Mean	4.19	0.447	<i>Agree</i>	<i>High</i>

Table 8 reflects the respondents' perceptions of challenges regarding program accessibility for Zumba and Ero Dance sessions. The overall mean of 4.19 suggests a "High" level of challenge, indicating that accessibility significantly affects students' participation. Among the indicators, the unavailability of facilities scored the highest (mean = 4.66, Very High), followed closely by limited space (mean = 4.46) and inadequate ventilation or cooling in the workout area (mean = 4.26). These environmental and logistical factors appear to pose substantial barriers to fully engaging in the sessions.

Moreover, students expressed challenges related to the location of the sessions (mean = 4.08) and the session schedule not aligning well with their availability (mean = 4.12), further emphasizing accessibility concerns. Although the size of the class and availability of trained instructors were rated slightly lower, they still contribute to the overall difficulty in participation. These findings align with studies like Sallis et al. (2021), which emphasize the importance of accessible and well-equipped facilities in promoting exercise adherence. Improving the physical environment and scheduling could enhance participation and maximize the cardiovascular benefits of the program.

Table 9: Level of Respondents' Perceived of the Challenges do Students Encounter in Participating in Zumba and Ero Dance as a Cardiovascular Fitness Program in terms of Level of Interest and Commitment

Indicators	Mean	SD	Qualitative Description	Qualitative Interpretation
1. I sometimes lose interest in attending sessions over time.	4.24	0.822	Strongly Agree	Very High
2. I struggle to stay committed to attending regularly.	4.10	1.216	Agree	High
3. I find other forms of exercise more appealing than Zumba or Ero Dance.	4.26	0.443	Strongly Agree	Very High
4. My motivation fluctuates depending on my mood.	4.16	0.842	Agree	High
5. I sometimes feel that my participation does not significantly impact my fitness.	3.96	1.177	Agree	High
6. I feel that the benefits of the program do not outweigh the effort required.	4.50	0.505	Strongly Agree	Very High
7. I need external encouragement (friends, instructors) to stay committed.	4.56	0.611	Strongly Agree	Very High
Over-all Mean	4.25	0.489	Strongly Agree	Very High

Table 9 shows that students perceive a “Very High” level of challenges related to their interest and commitment in participating in Zumba and Ero Dance sessions, with an overall mean of 4.25. The highest-rated challenges include **needing external encouragement (friends, instructors) to stay committed** (mean = 4.56) and **feeling that the benefits of the program do not outweigh the effort required** (mean = 4.50). On the other hand, the lowest-rated challenge in this category is **struggling to stay committed to attending regularly** (mean = 4.10), which is still rated as “High” but comparatively lower than the others.

These results indicate that while students generally face difficulties maintaining interest and commitment, social support and perceived value of the program play major roles in influencing their engagement. The findings support studies such as those by Rhodes and Kates (2021), which emphasize the importance of motivation and encouragement in sustaining exercise routines. To improve participation, integrating strategies that boost motivation and provide social reinforcement could be effective in overcoming these challenges.

Table 10: Summary of Respondents' Perceived Level of the Challenges do Students Encounter in Participating in Zumba and Ero Dance as a Cardiovascular Fitness Program

Factors	Minimum	Maximum	Mean	SD	Description
Physical Limitations	1.86	4.86	4.20	0.646	Very High
Time Availability	3.14	4.71	3.77	0.344	High
Program Accessibility	3.14	4.86	4.19	0.447	High
Level of Interest and Commitment	3.14	4.86	4.25	0.489	Very High

Table 10 summarizes the perceived level of challenges students face in participating in Zumba and Ero Dance as a cardiovascular fitness program. Among the four factors, **Level of Interest and Commitment** (mean = 4.25) and **Physical Limitations** (mean = 4.20) are perceived as “Very High” challenges, indicating that students struggle most with maintaining motivation and dealing with physical constraints during sessions. Meanwhile, **Program Accessibility** (mean = 4.19) and **Time Availability** (mean = 3.77) are rated as “High” challenges, suggesting logistical and scheduling issues also affect participation but to a slightly lesser extent.

These findings align with previous research emphasizing the critical role of psychological and physical barriers in exercise adherence (Dishman et al., 2020). Physical limitations such as fatigue and soreness can discourage continuous involvement, while fluctuating interest and commitment, often linked to motivation, affect sustained participation (Deci & Ryan, 2021). Meanwhile, program accessibility and time constraints are common external barriers reported in fitness studies (Trost et al., 2019). Addressing

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

both internal (interest, motivation, physical readiness) and external (schedule, location) challenges is essential to improve students' consistent engagement and maximize the cardiovascular benefits of dance-based fitness programs.

Problem 3: Is there a significant relationship between effectiveness and challenges do students encounter in participating in Zumba and Ero Dance as a cardiovascular fitness program?

Table 3. Relationship Between Levels of Perceived Effectiveness and Challenges do Students Encounter in Participating in Zumba and Ero Dance as a Cardiovascular Fitness Program

Effectiveness	Challenges	Correlation Coefficient (rho)	p-value
Cardiovascular endurance	Physical Limitations	0.635**	<.001
	Time Availability	0.434**	.002
	Program Accessibility	0.496**	<.001
	Level of Interest and Commitment	0.816**	<.001
Physical Engagement	Physical Limitations	0.178	.216
	Time Availability	0.461**	<.001
	Program Accessibility	0.396**	.004
	Level of Interest and Commitment	0.148	.306
Motivation to Exercise	Physical Limitations	-0.044	.763
	Time Availability	-0.051	.725
	Program Accessibility	0.368**	.009
	Level of Interest and Commitment	0.254	.075
Enjoyment and Social Interaction	Physical Limitations	-0.191	.138
	Time Availability	0.232	.105
	Program Accessibility	0.178	.216
	Level of Interest and Commitment	-0.185	.199

** . Correlation is significant at the 0.01 level*. Correlation is significant at the 0.05 level

The analysis of correlations between perceived effectiveness and challenges encountered by students in Zumba and Ero Dance reveals varying significant relationships across different factors. Notably, **Cardiovascular Endurance** shows a strong positive and statistically significant correlation with all four challenge factors: **Physical Limitations** ($r = 0.635$, $p < .001$), **Time Availability** ($r = 0.434$, $p = .002$), **Program Accessibility** ($r = 0.496$, $p < .001$), and **Level of Interest and Commitment** ($r = 0.816$, $p < .001$). This suggests that students who perceive higher challenges in these areas also report higher effectiveness in cardiovascular endurance, possibly indicating that overcoming these challenges enhances their fitness gains.

On the other hand, **Physical Engagement** is significantly correlated with **Time Availability** ($r = 0.461$, $p < .001$) and **Program Accessibility** ($r = 0.396$, $p = .004$), but not with physical limitations or interest/commitment, indicating that logistical factors more strongly influence how engaged students feel physically during sessions.

Motivation to Exercise only shows a significant positive correlation with **Program Accessibility** ($r = 0.368$, $p = .009$), with no significant relationship to other challenges, while **Enjoyment and Social Interaction** does not show any significant correlations with any challenge factor.

These results highlight that challenges related to physical limitations, scheduling, accessibility, and motivation critically impact some dimensions of effectiveness, especially cardiovascular endurance. However, other effectiveness dimensions like enjoyment and motivation appear less influenced by perceived challenges. This complex relationship underscores the need for tailored strategies addressing specific barriers to improve both participation and fitness outcomes in dance-based cardiovascular programs.

VI. SUMMARY

The study found significant relationships between students' perceived effectiveness of Zumba and Ero Dance and the challenges they face while participating. Cardiovascular endurance showed strong positive correlations with all challenge factors—physical limitations, time availability, program accessibility, and level of interest and commitment—indicating that students who experience these challenges still perceive improvements in endurance. Physical engagement was significantly related to time availability and

Cardio on the Beat: Exploring the Benefits and Barriers of Zumba and Ero Dance as Fitness Program for Students

program accessibility, while motivation to exercise was only significantly related to program accessibility. Enjoyment and social interaction did not have significant relationships with any of the challenges. Overall, these findings suggest that certain challenges impact how effective students perceive the program to be, especially in improving cardiovascular endurance, while other aspects like enjoyment are less affected by challenges.

VII. FINDINGS

Cardiovascular Endurance and Challenges: There is a strong and significant positive relationship between cardiovascular endurance and all the challenges students face—physical limitations, time availability, program accessibility, and level of interest and commitment. This means that despite these challenges, students perceive a high effectiveness of Zumba and Ero Dance in improving their cardiovascular endurance.

Physical Engagement and Time & Accessibility Challenges: Physical engagement is significantly related to time availability and program accessibility challenges, indicating that students' active participation is influenced by how well the sessions fit their schedules and how accessible the program is.

Motivation to Exercise and Program Accessibility: Motivation to exercise shows a significant positive correlation only with program accessibility, suggesting that easier access to sessions plays an important role in maintaining students' motivation, while other challenges like physical limitations and time availability do not significantly affect motivation.

VIII. CONCLUSION

The analysis clearly shows that students' perceptions of the effectiveness of Zumba and Ero Dance in enhancing cardiovascular fitness are significantly influenced by various challenges they face. Physical limitations and program accessibility play a crucial role in shaping how well students can improve their cardiovascular endurance, while time availability and personal commitment also affect their overall experience and participation. Furthermore, motivation to exercise is strongly connected to how accessible the program is, suggesting that removing barriers could enhance students' willingness to stay active. Although enjoyment and social interaction do not show a strong link to these challenges, maintaining high levels of interest and commitment remains vital for consistent participation and long-term benefits. Therefore, it is essential for program organizers to consider flexible scheduling, improved access to facilities, and supportive environments that encourage commitment and accommodate physical limitations. By addressing these factors, the effectiveness of Zumba and Ero Dance as cardiovascular fitness activities can be significantly enhanced, leading to better health outcomes and sustained engagement among students.

To the PE Teachers:

PE teachers are encouraged to design Zumba and Ero Dance sessions that cater to students with different physical abilities and fitness levels to minimize fatigue and physical discomfort. They should provide clear instructions and offer modifications for challenging movements to help all students participate confidently. Additionally, incorporating motivational strategies and positive reinforcement throughout the program can help sustain students' interest and commitment, ensuring they remain engaged and benefit fully from the sessions.

To the Administrators:

Administrators should prioritize providing well-equipped and accessible facilities that support the needs of the fitness programs. This includes ensuring adequate space, proper ventilation, and the availability of trained instructors to enhance the quality of sessions. They are also encouraged to implement flexible scheduling that accommodates students' academic and extracurricular commitments, reducing conflicts that hinder participation. Furthermore, fostering a positive and social environment within the programs can increase students' enjoyment and encourage regular attendance.

To the Students:

Students are advised to commit to regular attendance in Zumba and Ero Dance sessions and communicate any physical challenges to instructors so appropriate adjustments can be made. Managing time effectively to balance academic responsibilities and physical activities is essential to maintaining consistency. By actively engaging in the sessions, supporting their peers, and seeking encouragement when needed, students can sustain their motivation and maximize the cardiovascular fitness benefits of the program.

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