

The Marketability of Frisbee Game as a Sports Event in Schools around Bandar Tun Razak, Jengka

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Abstract: *This study aims to assess the marketability of Frisbee as an alternative sports activity in primary schools, with a focus on Bandar Tun Razak primary school, Jengka, Pahang. Using a quantitative approach, questionnaires were distributed to 116 respondents consisting of teachers and parents to identify the level of awareness, perceptions of benefits, as well as challenges and opportunities in the implementation of Frisbee. The statistical technique used in this study is descriptive statistical analysis for data on the awareness and interest of students, parents and teachers towards Frisbee sports, the benefits of Frisbee for students, as well as the challenges and opportunities of implementing Frisbee as sport in schools. In addition, inferential analysis such as the independent t-test was also used to identify differences in awareness and interest, understanding of the benefits, understanding of awareness, as well as understanding of the challenges in implementing Frisbee as a sport based on factors such as gender, income and respondent category. The study found that the level of awareness of Frisbee was moderately high, with 81% of respondents being parents and 19% teachers. Perceptions of the benefits of the game, including the development of social, physical, and ethical skills, were received positively. However, the main challenges identified were the lack of infrastructure and teacher training. The study recommends that schools, the Ministry of Education Malaysia, and the community work together to enhance promotion, provide teacher training, and ensure the availability of basic facilities. This study contributes to school sport and Physical Education research by providing empirical evidence on the marketability and acceptance of Frisbee as an alternative sport in school settings. It supports curriculum diversification, inclusive sport education, and student engagement models by demonstrating the viability of non-traditional sports in promoting participation and motivation among students. The findings further contribute to policy making, pedagogical innovation, and localised educational research within the context of Bandar Jengka, offering data driven insights for school administrators, educators and policy makers in developing sustainable and inclusive school sport programs. With policy support and effective implementation strategies, Frisbee has the potential to become an inclusive and relevant alternative sport in the physical education curriculum in Malaysia.*

Keywords: Marketability, Frisbee Game, Sports, Schools, Alternative Sports

1. Introduction

The Frisbee Game, also known as Ultimate Frisbee, has emerged as an inclusive and engaging sport in various countries, particularly in the context of school-based education. Its growing

popularity is attributed to its unique gameplay, inclusive nature, and its potential to foster both physical and social skills among students. In the United States, Ultimate Frisbee has been integrated into physical education curricula across numerous schools. Similarly, in Europe, countries such as Sweden, Germany, and the Netherlands have adopted the sport as part of their school sports programs. These initiatives have been successful largely because the sport requires minimal and inexpensive equipment, making it accessible to students across different socio-economic backgrounds (Johansson et al., 2019). In Germany, for instance, Ultimate Frisbee has also been utilized as a platform to promote the values of inclusivity and tolerance, primarily due to its unique nature of being a self-regulated game that does not require referees (European Ultimate Federation, 2021).

Despite its affordability, the implementation of Ultimate Frisbee still faces several challenges, especially in terms of budget allocation and training space. Aziz and Kamaruddin (2021) note that schools in rural areas often struggle to provide suitable spaces for training, as priority is generally given to more traditional sports. Additionally, some school administrators tend to invest more in well-established sports, which further limits the opportunities for new sports like Frisbee to gain traction.

Currently, the Frisbee Game lacks strong policy support from authoritative bodies such as the Ministry of Education Malaysia and the National Sports Council. Research by Ismail and Kadir (2021) reveals that most schools have not received specific guidelines for introducing the sport. The absence of institutional promotion further hampers the expansion of Ultimate Frisbee at both primary and secondary school levels.

Another pressing issue is the shortage of trained coaches and physical education teachers with expertise in Ultimate Frisbee. Ismail and Kadir (2021) found that the majority of physical education teachers in Malaysia possess limited knowledge and experience in the sport, creating difficulties in organizing training sessions and competitions. This lack of expertise reduces confidence among school administrators to incorporate the sport into their curricular or co-curricular programs.

Furthermore, public awareness of Ultimate Frisbee remains low, particularly among parents and educators. According to Zainal and Jamaluddin (2021), the limited promotion and exposure to the sport has resulted in it being less well-known compared to traditional sports such as football or badminton. This lack of exposure presents a barrier to positioning Frisbee as a viable option within school co-curricular activities. Additionally, Peiris et al (2022) reported that many parents perceive the Frisbee Game as merely a recreational activity rather than a competitive or educational sport. Such perceptions significantly influence the acceptance of Ultimate Frisbee as a relevant and legitimate alternative sport in the development of school-aged children. Therefore, this study aims to examine the acceptance and marketability of Ultimate Frisbee as an alternative sport in primary schools, focusing on the case of Bandar Tun Razak, Jengka.

2. Review of Previous Studies

Alief, Soegiyanto and Sulaiman, (2018) highlighted the effectiveness of Frisbee Game in developing social skills among students. Due to its collaborative nature, the sport was found to enhance communication and teamwork, enabling students to work collectively towards

achieving common goals. The study also emphasized the role of the “Spirit of the Game” principle in fostering respect and empathy among participants.

In a separate study, Johansson, Meyer, and Wagner (2019) observed the growing acceptance of Frisbee Game within the physical education curricula in Europe, particularly in Sweden and Germany. Educators in these countries valued the sport’s simplicity in terms of equipment and cost, as well as its effectiveness in engaging students who showed less interest in traditional sports. Traykova (2021) focused on the introduction of Frisbee Game where the main challenge identified was the lack of trained teachers. Nevertheless, the sport demonstrated significant potential in enhancing student interest in co-curricular activities, particularly among primary school students.

According to Johnson & Lane (2020), Frisbee Game possesses high marketability due to its ease of instruction and adaptability to various school activities. The study also noted that the sport’s low cost and minimal space requirements make it ideal for schools with limited budgets. However, the lack of awareness among school administrators regarding its benefits remains a barrier to widespread adoption. Simon and Fitzpatrick (2018) explored the potential of Frisbee Game as a competitive school sport. They found it especially suitable for students who are less inclined toward mainstream sports such as football or basketball. The absence of official referees reduces pressure while still maintaining a healthy competitive environment.

Hancock and Roetert (2020) highlighted the physical benefits of Frisbee Game, including improved cardiovascular fitness and motor coordination. The researchers advocated for its use as an effective tool in physical education, particularly in encouraging less active students to engage in enjoyable and light exercise.

Ahmed and Noronha (2021) emphasized the sport’s cultural adaptability, noting that Frisbee game does not rely on physical size or socio-economic backgrounds. Their study based in international schools, found that the sport promotes social integration among students from diverse racial and cultural backgrounds. Smith et al. (2017) demonstrated that incorporating Frisbee Game into cocurricular programs helps cultivate self discipline and leadership skills. Students were trained to make quick decisions and take responsibility for gam strategies, skills that can be applied to daily life. Taylor and Brown (2022) further argued that Frisbee Game contributes to both individual development and community buildings. Its emphasis on teamwork allows students to feel part of a supportive and positive community.

In summary, although Frisbee Game holds strong potential to become a popular school sport, significant gaps remain in the literature regarding its integration into the Malaysian education system. These gaps include limited research on its acceptance, awareness, and effectiveness within the context of physical education, as well as practical challenges such as the shortage of trained coaches, operational costs, and lack of policy support. Further research is therefore necessary to identify key factors that can facilitate the acceptance of Frisbee Game in Malaysian schools and address the barriers to its implementation.

3. Research Methodology

This study is a quantitative study using a survey-based approach designed through the distribution of questionnaires. The researcher selected 3 schools as the research sites to assess the marketability of the Frisbee Game as a school sports event. These schools were chosen

because of their proximity to UiTM Cawangan Pahang Kampus Jengka, where Frisbee is played among UiTM students as an alternative sport and because of the larger students population. The study population consisted of 116 individuals comprising teachers and parents of students in schools within the Maran district, Pahang. The selection of this population was based on the need to gain a deeper understanding of the marketability of the Frisbee Game as a school sports event. It also represents typical urban and semi-urban school environments in Bandar Jengka, making the findings more generalisable to similar school contexts. Moreover, the schools have supportive school administrations and Physical Education teachers who are open to introducing alternative sports, facilitating smooth implementation and data collection.

The research instrument was adapted from studies by Jomar S. Tianio et al. (2023) and Songjie Liu et al. (2024). The researcher then adapted the items to suit the objectives of the study. The researcher obtained validation of the instrument from a panel of experts, consisting of three individuals: a lecturer from the Department of Dakwah and Usuluddin, Faculty of Islamic Civilization Studies, UIS, and two others, a headmaster & a senior assistant of co-curricular affairs. A pilot study was conducted and found that each item according to its construct was acceptable as a research instrument, with overall construct alpha values ranging from 0.64 to 0.84.

Subsequently, the data obtained were analyzed descriptively, including frequency, percentage, and mean analysis, as well as inferential statistics, namely the t-test. This was to describe general patterns in the respondents' answers. The descriptive and inferential statistical analysis process enabled the researcher to clearly and concisely explain and interpret the study's findings, helping to draw conclusions aligned with the study's objectives and answer the research questions posed.

4. Research Findings

4.1 Descriptive Findings Analysis

Table 1: Demographic Profile by Respondent Category & Income Decile Group

Demographic Profile		Frequency	Percentage %
Respondent Category	Parents	94	81
	Teachers	22	19
Income Group	B40	104	89.7
	M40	12	10.3

Table 1 indicates that a greater proportion of responses were obtained from parents compared to teachers. This disparity may be attributed to several factors, including the possibility that the focus of the study was perceived as more directly relevant to parents, their active involvement in matters related to their children's school activities, or greater accessibility and willingness to participate. The distribution of respondents is significant, as it ensures that the analysis incorporates perspectives from both key stakeholder groups. This representation enables a more comprehensive evaluation of differing viewpoints based on their respective roles within the school context.

The findings further reveal that a larger proportion of respondents belonged to the lower-income (B40) category, which constitutes the primary target group of this research. The imbalance in group size should be considered when interpreting the results, particularly with

regard to comparisons based on income level. The higher representation of the B40 group may reflect the study’s deliberate focus on this demographic or greater accessibility to respondents within this category. Given that the research aims to examine the feasibility and relevance of Frisbee-related programmes among lower-income communities, this distribution aligns with the study’s objectives.

Overall, the data demonstrate a generally high level of awareness, positive interest, and strong support for the introduction of Frisbee as a school sport. Although there appears to be a slight gap in respondents’ understanding of the basic rules of the game, the findings suggest that Frisbee holds considerable potential to be successfully introduced and accepted among parents, students, and teachers. These results indicate a favourable foundation for the development and implementation of Frisbee as a co-curricular activity in schools.

Table 2: Interpretation of Mean Scores for Aspects in the Questionnaire & Challenges and Opportunities

No	Item	Mean	Level
Aspects in the Questionnaire			
1	Interpretation of mean score for students’ and teachers’ awareness and interest in Frisbee	3.89	High
2	Interpretation of mean score for the benefits of the Frisbee Game to students	4.32	Very high
3	Interpretation of mean score for the challenges and opportunities in implementing Frisbee as a school sport	4.0	Very high
Challenges and Opportunities			
1	Lack of Promotion	4.27	Very High
2	Lack of Equipment	4.18	Very high
3	Lack of Trained Teachers/Coaches		
4	Competition with Other Sports	3.78	High

The descriptive analysis examined respondents’ levels of awareness, interest, and perceptions of the benefits of Frisbee as a school-based activity. Table 2 presents the mean scores and corresponding interpretation levels for the three principal constructs assessed in the study.

The findings indicate a mean score of 3.89, which falls within the high interpretation category. This result suggests that respondents, including both students and teachers, demonstrate a strong level of awareness and generally positive attitudes toward Frisbee. Although minor gaps were identified in respondents’ understanding of the fundamental rules of the game, the overall level of awareness indicates that Frisbee is well-positioned for introduction and acceptance within the school sports context.

Furthermore, the results reveal that respondents perceive Frisbee as offering multiple benefits to students. These include improvements in social interaction skills, physical fitness, sportsmanship, teamwork, and mental well-being. The high level of agreement regarding these benefits supports the suitability of Frisbee as an activity that aligns with the objectives of physical education and holistic student development.

The mean score of 4.32 reflects a very high level of acceptance concerning the benefits of Frisbee. This finding strengthens the argument that Frisbee possesses considerable potential to be implemented as a co-curricular activity. Beyond being an enjoyable sport, it is viewed as contributing positively to students’ physical, psychological, and social development.

In addition, the overall mean score of 4.01 (Very High) indicates strong recognition of both the potential and the associated challenges of implementing Frisbee in schools. While respondents express high levels of interest and acceptance, the findings also suggest that certain technical and logistical considerations—such as promotional efforts, availability of equipment, and access to trained coaches—must be addressed to ensure effective and sustainable implementation. Collectively, these results highlight a favourable foundation for the integration of Frisbee into school programmes, provided that practical constraints are systematically managed.

4.2 Inferential Findings Analysis

An independent samples t-test was conducted to examine whether there were significant differences in the levels of awareness and interest in the Frisbee Game among respondents based on gender. This analysis aimed to determine if gender influences perceptions and enthusiasm toward incorporating Frisbee as a school sport. The results are presented in the following table.

Table 3: Independent Samples t-Test Results on Awareness and Interest Toward the Frisbee Game by Gender

Gender	N	Mean	Standard Deviation	t	df
Awareness and Interest					
Male	55	20.40	3.16	3.17	114
Female	61	18.50	3.29		
Respondents' Understanding of the Benefits					
Male	55	22.40	2.20	3.37	114
Female	61	20.80	2.79		

The findings indicate a statistically significant difference between male and female respondents with respect to their awareness of and interest in the Frisbee Game, $t(114) = 3.17$, $p = 0.002$. Male respondents reported a higher mean score ($M = 20.40$, $SD = 3.16$) compared to female respondents ($M = 18.50$, $SD = 3.29$). This result suggests that male respondents demonstrate greater awareness and a stronger interest in the Frisbee Game than their female counterparts. The statistically significant p-value ($p < 0.05$) confirms that gender is a meaningful factor influencing attitudes toward Frisbee as a prospective co-curricular sport within the school context. These findings highlight the importance of incorporating gender-responsive strategies when introducing and promoting new sports initiatives in educational settings.

Similarly, the results presented in Table 3 reveal a statistically significant difference in respondents' understanding of the benefits of the Frisbee Game based on gender, $t(114) = 3.37$, $p = 0.001$. Male respondents obtained a higher mean score ($M = 22.40$) compared to female respondents ($M = 20.80$), indicating that males exhibited a significantly greater understanding of the potential benefits associated with the sport. This outcome suggests that gender plays a determining role in shaping perceptions of the physical, social, and psychological advantages of participating in Frisbee. The statistical significance of the findings ($p < 0.05$) further supports the reliability of this observed difference between male and female respondents.

In addition, Table 4 demonstrates significant gender-based differences in respondents' understanding of the challenges associated with the implementation of the Frisbee Game. Collectively, these results reinforce the conclusion that gender influences multiple dimensions of perception, including awareness, perceived benefits, and perceived challenges.

Consequently, the findings underscore the need for targeted awareness campaigns, training programmes, and inclusive promotional strategies to ensure balanced understanding and equitable engagement among both male and female stakeholders in the school environment.

Table 4: Independent Samples t-Test Results on Respondents' Understanding of the Challenges of the Frisbee Game by Gender

Gender	N	Mean	Standard Deviation	t	df
Male	55	20.00	2.21	3.17	114
Female	61	20.50	1.82		

There is a statistically significant difference in respondents' understanding of the challenges involved in implementing the Frisbee Game, based on gender ($t(114) = 3.17, p = 0.002$). Interestingly, although female respondents reported a slightly higher mean score ($M = 20.50$) compared to male respondents ($M = 20.00$), the difference was found to be statistically significant.

This suggests that female respondents possess a greater awareness of the challenges related to the implementation of the Frisbee Game in schools. The significant result ($p < 0.05$) indicates that gender influences perceptions of obstacles such as limited equipment, lack of trained coaches, or insufficient institutional support. These findings underscore the importance of considering gender perspectives when designing strategies to introduce and promote the Frisbee Game as a co-curricular activity in schools.

The Independent Samples t-Test also conducted to examine differences in respondents' awareness and understanding of the Frisbee Game, Respondents' Understanding of the Benefits of the Frisbee Game & Respondents' Understanding of the Challenges of the Frisbee Game based on income category.

Table 5: Independent Samples t-Test on Respondents' Awareness, Respondents' Understanding the Benefits and Respondents' Perceived Challenges in the Frisbee Game Based on Income Level

Gender	N	Mean	Standard Deviation	t	df	Sig
Respondents' Awareness						
B40	104	19.62	3.31	2.01	114	
M40	12	17.58	3.34			
Respondents' Understanding of the Benefits						
B40	104	21.67	2.55	1.04	114	
M40	12	20.83	3.29			
Respondents' Perceived Challenges						
B40	104	20.29	2.10	.481	114	0.632
M40	12	20.00	1.12			

The findings in Table 5 reveal a statistically significant difference in respondents' awareness and understanding of the Frisbee Game based on income category, with $t(114) = 2.01, p = 0.046$. Respondents in the B40 income group reported a higher mean level of awareness ($M = 19.62, SD = 3.31$) compared to those in the M40 group ($M = 17.58, SD = 3.34$). The mean difference of 2.04 suggests that the B40 group demonstrates greater familiarity or awareness of the Frisbee Game.

This result may reflect differing socioeconomic factors or lived experiences between the two groups, potentially influencing their exposure to or interest in alternative sports such as Frisbee. Further research is recommended to explore the underlying causes of these differences and their implications for inclusive sports program development in schools.

The findings in the table also indicate that there is no significant difference in respondents' understanding of the benefits of the Frisbee game based on income category, with $t(114) = 1.04$, $p = 0.298$. Respondents in the B40 income category recorded a slightly higher mean understanding ($M = 21.67$, $SD = 2.55$) compared to those in the M40 category ($M = 20.83$, $SD = 3.29$). However, the mean difference of 0.84 is not statistically significant as the p-value exceeds the 0.05 significance level. This finding suggests that income category does not have a significant impact on respondents' understanding of the benefits of the Frisbee game.

The analysis revealed no significant difference in respondents' perceived challenges in the Frisbee game based on income category. Although B40 respondents reported slightly higher challenge scores than M40 respondents, the difference was not statistically significant ($t(114) = 0.481$, $p = 0.632$). This suggests that income level does not substantially affect how respondents perceive the challenges of playing Frisbee.

Table 6: Independent Samples t-Test on Respondents' Awareness, Respondents' Understanding of Frisbee Benefits and Respondents' Perceived Challenges of the Frisbee Game Based on Respondent Category

	Category	N	Mean	Standard Deviation	t	df	Sig.																				
Respondents' Awareness	Parents	94	19.35	3.47	-.414	114	0.680																				
	Teachers	22	19.68	2.90				Respondents' Understanding	Parents	94	21.51	2.69	-.637	114	0.525	Teachers	22	21.90	2.38	Respondents' Perceived Challenges	Parents	94	20.40	1.89	1.513	114	0.133
Respondents' Understanding	Parents	94	21.51	2.69	-.637	114	0.525																				
	Teachers	22	21.90	2.38				Respondents' Perceived Challenges	Parents	94	20.40	1.89	1.513	114	0.133	Teachers	22	19.68	2.47								
Respondents' Perceived Challenges	Parents	94	20.40	1.89	1.513	114	0.133																				
	Teachers	22	19.68	2.47																							

The analysis presented in Table 6 indicates that there is no statistically significant difference in respondents' awareness of the benefits of the Frisbee Game based on respondent category. The independent samples t-test yielded a value of $t(114) = -0.414$, $p = 0.680$. Although parents reported a slightly lower mean awareness score ($M = 19.35$, $SD = 3.47$) compared to teachers ($M = 19.68$, $SD = 2.90$), the mean difference of 0.33 was not statistically significant, as the p-value exceeded the 0.05 threshold. This finding suggests that respondents' roles, whether as parents or teachers, do not significantly influence their awareness of the benefits associated with the Frisbee Game.

Similarly, the results demonstrate no statistically significant difference in respondents' understanding of the benefits of Frisbee between parents and teachers, $t(114) = -0.637$, $p = 0.525$. Parents recorded a slightly lower mean score ($M = 21.51$, $SD = 2.69$) compared to teachers ($M = 21.90$, $SD = 2.38$); however, the mean difference of 0.39 was not statistically significant. This outcome further supports the conclusion that respondent category does not play a determining role in shaping understanding of the benefits of Frisbee.

In addition, the analysis revealed no statistically significant difference in perceived challenges associated with the Frisbee Game between parents and teachers, $t(114) = 1.513$, $p = 0.133$.

Although parents reported a marginally higher mean score ($M = 20.40$, $SD = 1.89$) than teachers ($M = 19.68$, $SD = 2.47$), the mean difference of 0.72 did not reach statistical significance. These findings collectively indicate that respondent role does not significantly affect perceptions of awareness, understanding of benefits, or perceived challenges related to the Frisbee Game.

Given the absence of significant differences across respondent categories, future research may consider examining other influencing factors, such as prior experience with the sport, level of physical activity, exposure to co-curricular programmes, or personal interest in sports. These variables may provide deeper insights into the determinants of awareness, understanding, and perceptions of Frisbee within the school community.

5. Discussion

The results of the Independent Samples t-Test revealed a statistically significant difference in respondents' understanding of the challenges involved in implementing the Frisbee Game based on gender, $t(114) = 3.17$, $p = 0.002$. Female respondents recorded a slightly higher mean score ($M = 20.50$) compared to male respondents ($M = 20.00$). Although the numerical difference between the mean scores appears small, the statistically significant p-value ($p < 0.05$) indicates that this difference is consistent and unlikely to have occurred by chance. One possible explanation for this difference is that female respondents may be more sensitive to structural and organisational barriers within educational settings. O'Connell & McKinnon (2021) explored how women academics perceive barriers affecting their career progression relative to male colleagues. The research found that female academics consistently reported a higher awareness of biases, stereotypes, obstacles, and barriers.

This study also found that the level of awareness and interest among students, parents, and teachers towards Frisbee is generally positive, with an overall mean score of 3.89, indicating a high level of acceptance. These findings suggest significant potential for introducing Frisbee as a school sport, supported by strong interest from all three respondent groups. The results align with previous studies indicating that non-traditional sports like Frisbee can effectively attract students due to their fun and flexible nature. For instance, Johnson et al. (2018) found that such sports are preferred by students because they do not require expensive equipment or complex technical skills, making them more accessible. This is consistent with the high mean scores of 4.07 and 4.14 recorded in this study for students', parents', and teachers' interest if given the opportunity. Moreover, Smith and Taylor (2019) emphasized that team-based sports like Frisbee enhance students' social skills. This finding is supported by the mean score of 4.26 in the current study, which reflects a strong belief among respondents that Frisbee promotes both physical and social development. These benefits are thus acknowledged not only in this study but also in existing literature.

However, the study also highlights a gap in understanding of basic Frisbee rules, as shown by a mean score of 2.99. This corresponds with Lopez et al. (2020), who noted that new sports often face challenges in terms of basic awareness and knowledge. As a result, the study recommends targeted training for both teachers and students to ensure effective implementation. Furthermore, Wang and Chen (2017) emphasized the importance of school and parental support in the successful introduction of new sports. While the current study indicates strong support for Frisbee, it also underscores the need for more structured promotion

and training. This is in line with prior recommendations advocating collaboration between schools, communities, and professionals to enhance acceptance of new sports.

Higher awareness among B40 respondents suggests that Frisbee may be particularly accessible, relevant, and strategically suitable for lower-income school communities. The finding that respondents from the B40 income category demonstrated significantly higher awareness of the Frisbee Game ($M = 19.62$) compared to those in the M40 group ($M = 17.58$) carries several important practical and policy implications for school sports development. Frisbee is generally inexpensive, requires minimal equipment, and does not depend on specialised facilities. Higher awareness among B40 respondents may indicate that the sport aligns well with lower-income communities where cost-effective and accessible activities are highly valued. This suggests that Frisbee could be strategically positioned as an inclusive sport that reduces financial barriers to participation.

The findings indicate a lack of understanding of basic Frisbee rules ($M = 2.99$), aligning with Lopez et al. (2020), who highlighted that introducing new sports often faces awareness and knowledge barriers. This suggests the need for targeted training for both teachers and students to enable effective implementation. Wang & Chen (2017) emphasized that school and parental support are vital for the success of new sports programs. While this study found strong support for Frisbee, it also highlights the need for further promotion and structured training, in line with past recommendations advocating collaboration between schools, communities, and professionals.

Frisbee is viewed as an effective platform to develop social skills, mental well-being, and positive character traits. The overall mean score of 4.32 supports its potential as a valuable co-curricular activity across physical, mental, and social domains. These findings echo Johnson et al. (2018), who noted that non-traditional sports like Frisbee foster fitness and teamwork in a fun and inclusive way. Smith & Taylor (2019) found that sports promoting sportsmanship can help instil core values such as honesty and ethical behaviour. This is supported by the current study's mean score of 4.30, indicating Frisbee's potential to nurture such values. Furthermore, Frisbee was found to reduce stress and promote enjoyment ($M = 4.31$), supporting Wang & Chen's (2017) assertion that simple sports are effective in relieving academic pressure. A high mean score of 4.33 on fitness and stamina outcomes also aligns with Lopez et al. (2020), who reported that Frisbee enhances cardiovascular health and endurance, suggesting its inclusion in physical education curricula.

Implementation challenges for Frisbee in schools were rated high ($M = 4.01$), especially in terms of insufficient promotion ($M = 4.27$), equipment ($M = 4.18$), and trained coaches ($M = 4.40$). Although competition with existing sports ($M = 3.78$) and lack of support from schools and parents ($M = 3.65$) were noted, these were perceived as secondary barriers. These findings highlight the importance of collaborative efforts to strengthen acceptance. Lopez et al. (2020) emphasized the need for sufficient resources and facilities when introducing new sports. Without such support, implementation is unlikely to succeed. Similarly, Wang & Chen (2017) identified the lack of trained coaches as a critical barrier, reflected in this study's highest challenge score ($M = 4.40$). They argued that without proper training for educators, new sports programs often fail. The issue of competition with more established sports ($M = 3.78$) is consistent with Smith & Taylor (2019), who noted that popular school sports can overshadow new ones. However, they also observed that with effective promotion and sustained effort, sports like Frisbee can gain traction. Johnson et al. (2018) also stressed the need for strong

school and parental backing. The moderate support level ($M = 3.65$) found here confirms that stakeholder involvement is crucial in promoting new sports.

In conclusion, the study's findings align with previous research emphasizing the need to overcome technical and institutional challenges. With enhanced promotion, resource allocation, training, and stakeholder support, Frisbee holds strong potential as a widely accepted and impactful school sport.

6. Conclusion

This study makes a significant contribution by providing one of the first empirical, school-based evaluations of the feasibility, acceptance, and perceived value of Frisbee as a co-curricular sport within a Malaysian school context, with a specific focus on lower-income (B40) communities. It moves beyond descriptive advocacy by integrating descriptive and inferential analyses, demonstrating how gender, income category, and respondent role (parents vs. teachers) shape awareness, perceived benefits, and perceived challenges. Notably, the study identifies gender as a significant differentiating factor across multiple dimensions (awareness, interest, benefits, and challenges), while showing that income level and respondent category do not significantly influence perceptions of benefits and challenges. This nuanced, evidence-based mapping of stakeholder perceptions represents a novel contribution to school sports and physical education research, particularly for non-traditional or alternative sports in formal education systems.

However, key challenges remain, including limited understanding of game rules, lack of equipment, inadequate promotion, and shortage of trained coaches. To enhance implementation, it is recommended that training programs be developed for teachers and students to build foundational knowledge of the sport. Next, schools and educational authorities should invest in basic equipment and structured promotional effort. Collaborative initiatives involving stakeholder, schools, parents, and the wider community be established to foster sustained support. Frisbee should be integrated into physical education curricula, leveraging its simplicity, inclusiveness, and character-building qualities. Addressing these areas will support the successful adoption of Frisbee in schools and maximize its educational and developmental impact.

The finding provides a strong evidence base for policy makers and curriculum planners to legitimize Frisbee as a structured co-curricular sport within school programmes. Given the high levels of acceptance and perceived benefits, Frisbee can be strategically integrated into Physical Education (PE) curricula and co-curricular frameworks, particularly in B40-dominant school communities, as a low-cost, inclusive, and developmentally beneficial sport.

At the curriculum level, Frisbee can be positioned as a holistic development activity that supports physical fitness, teamwork, social skills, and mental well-being, aligning with 21st-century education goals and student-centred learning frameworks. Overall, the study provides a policy-relevant, curriculum-ready evidence base for introducing Frisbee not merely recreational activity, but as a strategic, inclusive, and scalable school sport initiative.

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Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this study.

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