



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. 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 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. 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.

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 [16]. In Germany, for instance, Ultimate Frisbee has also been utilized as a platform to

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promote the values of inclusivity and tolerance, primarily due to its unique nature of being a self-regulated game that does not require referees [11].

Despite its affordability, the implementation of Ultimate Frisbee still faces several challenges, especially in terms of budget allocation and training space. Aziz *et al.*, [10] 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 *et al.*, [6] 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 *et al.*, [6] 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 *et al.*, [7] 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.*, [4] 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 [5].

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

Kenedi *et al.*, [20] 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 *et al.*, [16] 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 [12] 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 *et al.*, [13] 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 *et al.*, [17] 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 *et al.*, [9] 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 fewer active students to engage in enjoyable and light exercise.

Ahmed *et al.*, [8] emphasized the sport's cultural adaptability, noting that Frisbee Game does not rely on physical size or socio-economic background. Their study, based in international schools, found that the sport promotes social integration among students from diverse racial and cultural backgrounds. Smith *et al.*, [18] demonstrated that incorporating Frisbee Game into co-curricular programs helps cultivate self-discipline and leadership skills. Students were trained to make quick decisions and take responsibility for game strategies, skills that can be applied to daily life. Taylor *et al.*, [3] further argued that Frisbee Game contributes to both individual development and community building. 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 [19].

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 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.

The research instrument was adapted from studies by Tianio *et al.*, [2] and Liu *et al.*, [1]. 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 analysed 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 illustrates that the study received more responses from parents compared to teachers. This difference may be due to the study's focus being more relevant to parents, their greater involvement in the topic being studied or possibly because parents were more accessible or more interested in providing feedback. This category distribution is important to ensure that the study's analysis reflects the perspectives and experiences of both groups, thereby assisting in evaluating differing viewpoints based on their roles within the study's context.

Table 1
Demographic profile by respondent category

Category	Frequency	Percentage
Parents	94	81%
Teachers	22	19%

Findings from Table 2 show that the study is more focused on the lower-income group (B40), which represents the primary target group in the research. The significant difference in group size may affect how the results are interpreted, especially in terms of income-based differences. This distribution also indicates that the study is either more focused on or finds it easier to access the B40 group, who are the main target for programs or interventions related to Frisbee.

Table 2
Demographic profile by income decile group

Income Group	Frequency	Percentage
B40	104	89.7%
M40	12	10.3%

Overall, the data indicates a high level of awareness, positive interest and strong support for Frisbee as a school sports event. Although there is a slight gap in the understanding of the basic rules of the game, the findings suggest that Frisbee has the potential to be introduced and well-received among parents, students and teachers.

The descriptive analysis focuses on respondents' levels of awareness, interest and perception of Frisbee's benefits as a school activity. Table 3 summarizes the mean scores and interpretation levels for three main aspects:

Table 3
Interpretation of mean scores for aspects in the questionnaire

No	Item	Mean	Level
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

The mean score of 3.89 (High) indicates that respondents, including students and teachers, demonstrate strong awareness and a positive attitude toward Frisbee. Although there are slight gaps

in understanding the basic rules, this finding suggests that Frisbee is well-positioned to be introduced and accepted as a school sport.

In addition, the study's findings also indicate that Frisbee offers various benefits to students, including the enhancement of social skills, physical fitness, sportsmanship and mental well-being. With a high level of acceptance of these benefits, Frisbee is seen as a suitable activity to be included in the physical education curriculum at schools.

The mean score of 4.32 shows very positive acceptance of the benefits of Frisbee. This reinforces the argument that Frisbee has strong potential to be introduced as a co-curricular activity that is not only fun but also provides multiple benefits to students in physical, mental and social aspects. With an overall mean score of 4.01 (Very High), the study highlights both challenges and the potential for implementing Frisbee in schools. Key findings include:

Table 4
Interpretation of mean scores for challenges and opportunities

	Item	Mean Score	Level
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
5	Lack of Support from School/Parents	3.65	High

These results suggest that while interest and acceptance are strong, technical and logistical issues such as promotion, equipment and coaching resources need to be addressed for successful implementation.

5. 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 5
Independent samples t-test results on awareness and interest toward the frisbee game by gender

Gender	N	Mean	Standard deviation	t	df
Male	55	20.40	3.16	3.17	114
Female	61	18.50	3.29		

The findings reveal a statistically significant difference between male and female respondents in terms of their awareness and interest in the Frisbee Game, $t(114) = 3.17$, $p = 0.002$. Male respondents reported a significantly higher mean score ($M = 20.40$, $SD = 3.16$) compared to female respondents ($M = 18.50$, $SD = 3.29$).

This suggests that male respondents possess greater awareness and a more pronounced interest in the Frisbee Game than their female counterparts. The significant p-value ($p < 0.05$) indicates that gender is a relevant factor in shaping attitudes toward Frisbee as a potential co-curricular sport in

schools. These findings underscore the importance of considering gender-specific strategies when promoting new sports initiatives such as Frisbee within the school context.

From Table 6, the results of the independent sample t test indicate a statistically significant difference in respondents' understanding of the benefits of the Frisbee Game based on gender, with $t(114) = 3.37$ and $p = 0.001$. The mean score for male respondents ($M = 22.40$) was notably higher than that of female respondents ($M = 20.80$), suggesting that male respondents demonstrated a significantly greater understanding of the potential benefits associated with the Frisbee Game.

Table 6

Independent samples t-test results on respondents' understanding of the benefits of the frisbee game by gender

Gender	N	Mean	Standard Deviation	t	df
Male	55	22.40	2.20	3.37	114
Female	61	20.80	2.79		

These findings imply that gender is a determining factor in shaping how the benefits of Frisbee are perceived and they highlight the need for targeted awareness or training programs that ensure equitable understanding and engagement across all demographic groups. The statistical significance ($p < 0.05$) further reinforces the reliability of this difference in interpretation between genders.

There were significant differences in respondents' understanding of the challenges associated with the Frisbee Game based on gender. The results are summarized in Table 7.

Table 7

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.

The findings in Table 8 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.

Table 8

Independent samples t-test on respondents' awareness of the frisbee game based on income level

Gender	N	Mean	Standard Deviation	t	df
B40	104	19.62	3.31	2.01	114
M40	12	17.58	3.34		

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 Table 9 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.

Table 9

Independent samples t-Test on respondents' understanding of the benefits of the frisbee game based on income level

Gender	N	Mean	Standard Deviation	t	df	Sig.
B40	104	21.67	2.55	1.04	114	0.298
M40	12	20.83	3.29			

The analysis in Table 10 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 10

Independent samples t-test on respondents perceived challenges in the frisbee game based on income category

Gender	N	Mean	Standard deviation	t	df	Sig.
B40	104	20.29	2.10	.481	114	0.632
M40	12	20.00	1.12			

The analysis presented in Table 11 indicates that there is no statistically significant difference in awareness of the benefits of the Frisbee game based on respondent category, as demonstrated by

the t-test results, $t(114) = -0.414$, $p = 0.680$. Respondents in the parent category reported a slightly lower mean awareness score ($M = 19.35$, $SD = 3.47$) compared to respondents in the teacher category ($M = 19.68$, $SD = 2.90$). However, the mean difference of 0.33 was not statistically significant, as the p-value exceeds the 0.05 threshold. These findings suggest that the role of the respondent, whether as a parent or a teacher, does not significantly influence their level of awareness regarding the benefits of the Frisbee game.

Table 11

Independent samples t-test on respondents' awareness of the benefits of the frisbee game based on respondent category

Category	N	Mean	Standard deviation	t	df	Sig.
Parents	94	19.35	3.47	-.414	114	0.680
Teachers	22	19.68	2.90			

Table 12 shows no significant difference in respondents' understanding of Frisbee benefits between parents and teachers, $t(114) = -0.637$, $p = 0.525$. Parents reported a slightly lower mean ($M = 21.51$, $SD = 2.69$) than teachers ($M = 21.90$, $SD = 2.38$), but the difference of 0.39 was not statistically significant. This suggests that respondent role does not influence understanding of Frisbee benefits. Future studies could examine factors such as experience or interest in the sport for deeper insights.

Table 12

Independent samples t-test on respondents' understanding of frisbee benefits based on respondent category

Category	N	Mean	Standard Deviation	t	df	Sig.
Parents	94	21.51	2.69	-.637	114	0.525
Teachers	22	21.90	2.38			

Table 13 shows no statistically significant difference in perceived challenges of the Frisbee game between parents and teachers, $t(114) = 1.513$, $p = 0.133$. Parents reported a slightly higher mean ($M = 20.40$, $SD = 1.89$) than teachers ($M = 19.68$, $SD = 2.47$), but the mean difference of 0.72 was not significant. These findings suggest that respondent role does not significantly affect perceptions of challenge. Future research should explore other factors such as prior experience, physical fitness or personal interest, which may better explain these perceptions.

Table 13

Independent samples t-test on respondents perceived challenges of the frisbee game based on respondent category

Category	N	Mean	Standard Deviation	t	df	Sig.
Parents	94	20.40	1.89	1.513	114	0.133
Teachers	22	19.68	2.47			

6. Discussion

This study 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.*, [13] 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 *et al.*, [15] 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.*, [14], 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 *et al.*, [21] 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.

The findings indicate a lack of understanding of basic Frisbee rules ($M = 2.99$), aligning with Lopez *et al.*, [14], 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 *et al.*, [21] 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.*, [13], who noted that non-traditional sports like Frisbee foster fitness and teamwork in a fun and inclusive way. Smith *et al.*, [15] 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 *et al.*, [21] 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.*, [14], 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.*, [14] emphasized the need for sufficient resources and facilities when introducing new sports. Without such support, implementation is unlikely to succeed. Similarly, Lopez *et al.*, [14] 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 *et al.*, [15], 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.*, [13] 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.

7. Conclusion

This study concludes that Frisbee holds strong potential as a school-based co-curricular activity due to its high acceptance among students, parents and teachers and its benefits in promoting physical fitness, social skills and mental well-being. 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.

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References

- [1] Liu, Songjie, Ye Jin and Yutao Chen. "'Frisbee on football field': the intergenerational conflict between two sports at grassroots level in China." *The Journal of Chinese Sociology* 11, no. 1 (2024): 4. <https://doi.org/10.1186/s40711-023-00202-8>
- [2] Tianio, J. S., De Castro, J. M., Sabinay, C. D., & Gura, F. R. "Ultimate Frisbee as a potential team sports for physical education in colleges and universities." *International Journal of Multidisciplinary Research and Studies*, 6(1), (2023): 1-10.
- [3] Taylor, D., & Brown, A. "Community Building Through Team Sports: The Role of Frisbee Game in Schools." *Journal of Youth Development*, 28(2), (2022): 56–72.
- [4] Peiris, D. L. I. H. K., Yanping Duan, Corneel Vandelanotte, Wei Liang, Min Yang and Julien Steven Baker. "Effects of in-classroom physical activity breaks on children's academic performance, cognition, health behaviours and health outcomes: a systematic review and meta-analysis of randomised controlled trials." *International journal of environmental research and public health* 19, no. 15 (2022): 9479. <https://doi.org/10.3390/ijerph19159479>
- [5] Kim, J., & Lee, H. "Adopting Frisbee Game in South Korean Schools: Challenges and Opportunities." *Asian Journal of Sports Studies*, 10(3), (2022): 215–228.
- [6] Ismail, H., & Kadir, A. "Policy Gaps in Introducing Emerging Sports in Malaysian Schools." *Malaysian Journal of Education Policy*, 8(2), (2021): 67–79.
- [7] Zainal, A., & Jamaluddin, F. "Awareness and Popularity of Frisbee Game Among Malaysian School Students." *Malaysian Journal of Youth Sports*, 9(2), (2021): 78–93.
- [8] Ahmed, M., & Noronha, R. "Ultimate Frisbee as a Tool for Social Integration in Multicultural Schools." *International Journal of Physical Education*, 15(4), (2021): 87–99.
- [9] Hancock, C., & Roetert, P. "Physical Benefits of Ultimate Frisbee for Children and Adolescents." *Journal of Physical Activity and Health*, 17(1), (2020): 45–58.
- [10] Aziz, Z. A., & Kamaruddin, N. "Aktiviti Kokurikulum di Sekolah Rendah: Perspektif Guru dan Ibu Bapa Pelajar." *Jurnal Pendidikan Malaysia*, 46(2), (2021): 45–58.

- [11] European Ultimate Federation. "Ultimate Frisbee as a Tool for Inclusion in Schools." (2021). <https://www.ultimatefederation.eu/ultimate>
- [12] Traykova, T. "The place of the 'frisbee game' in the physical culture curriculum in the kindergartens." *Trakia Journal of Sciences* 19, no. 1 (2021): 539-534.
- [13] Johnson, T., & Lane, K. "Frisbee Culture: A Sociological Perspective." *American Journal of Sports History*, 9(2), (2020): 150-166.
- [14] Lopez, M., Garcia, R., & Perez, F. "Challenges in Introducing New Sports to School Curricula: A Case Study on Ultimate Frisbee." *Education and Sport Studies*, 12(4), (2020): 45-59.
- [15] Smith, J., & Taylor, L. "The Impact of Team Sports on Social Skills Development Among High School Students." *International Journal of Sport Psychology*, 50(2), (2019): 89-102.
- [16] Johansson, L., Meyer, S., & Wagner, F. "The Integration of Ultimate Frisbee in European Physical Education: A Case Study in Sweden and Germany." *European Journal of Physical Education and Sport Sciences*, 5(2), (2019): 121–134.
- [17] Simon, M., & Fitzpatrick, L. "Exploring the Competitive Nature of Ultimate Frisbee in Schools." *Sports Education Review*, 9(3), (2018): 133–148.
- [18] Smith, J., Morgan, T., & Lee, P. "Incorporating Ultimate Frisbee in School Co-Curricular Programs: A Study of Leadership Development." *Journal of Educational Sports*, 11(2), (2017): 201–215.
- [19] Rahman, M., Zainuddin, S., & Hashim, N. "The Challenges of Implementing Low-Cost Sports in Rural Schools." *International Journal of Sports Management*, 6(4), (2020): 112–125.
- [20] Kenedi, Alief Dedi, Mr Soegiyanto and Sulaiman Sulaiman. "The Model Development of Frisbee Game as an Alternative Learning of Physical Education Sport and Health of Senior High School Students." In *International Conference on Science and Education and Technology 2018 (ISET 2018)*, pp. 91-93. Atlantis Press, 2018. <https://doi.org/10.2991/iset-18.2018.19>
- [21] Wang, Z., & Chen, H. "Parental and Institutional Support in Promoting Non-Conventional Sports in Secondary Schools." *Asian Journal of Education and Training*, 3(1), (2017): 20-30.