# Sports Activities, Sports Risk Factors and School Sports Protection System in China 

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#### Abstract

This study focused on the relationship of the secondary school Students' Sports activities, sports risk factors and school sports safety regulations.This study utilize the descriptive comparative correlational research research design. This study utilize questionnaires and random sampling to select 375 students in Yulin City as the respondents.This study will focus on the relationship of the secondary school Students' Sports activities, sports risk factors and school sports safety regulations in Yulin city middle schools during the first semester of school year 2023-2024.


## Keywords

## Sports Activities, Sports Risk Factors, School Sports Protection System.

## 1. Introduction

The occurrence of risky accidents in school sports places a variety of burdens as well as losses on schools, parents, and students. Some schools, especially students, fear the riskiness of the sport itself by adjusting physical education curriculum standards and drastically reducing the amount of exercise in physical education classes with the intention of minimizing the occurrence of accidental injuries. The result is that while reducing the risk of student sports, it also reduces the exercise value of student sports and affects the healthy development of young people.Therefore, the issue of school sports accidents in China needs to be thoroughly researched and studied in order to develop a more scientific and reasonable sports protection system to protect the health and safety of students. The need for this study lies in the fact that by studying physical activity, physical education risk factors, and the school physical education protection system, the root causes of school physical education accidents can be identified and corresponding solutions can be proposed to effectively prevent and reduce the occurrence of school physical education accidents.

## 2. Results, Analysis, And Interpretation

### 2.1. The assessment of student-respondents execute their sports activities based on the FITT Principle

This section provides respondents' assessment of the student-respondents execute their sports activities based on the FITT Principle.It includes Frequency,Intensity, Time And Type.

Table 1 shows the level of frequency factor of the respondents in terms of practicing physical activities, where the following results were obtained for the following indicators:The highest scoring indicator is "2-3 times a week,Around 45 minutes" with a mean value of 3.14 or good, which means that the majority of the respondents performed well in terms of the frequency of physical activities and they practiced on average 2-3 times a week for a moderate amount of time each time. Some schools have mandatory physical education programs that allow students
to be physically active for a certain number of hours per week. Schools or communities provide a wealth of sports clubs and activities to encourage students to participate in a variety of sports.

Table 1. Assessment of student -respondents as regards their physical exercises in Terms of Frequency

| Frequency | Mean | Qualitative <br> Description | Interpretation | Rank |
| :--- | :---: | :---: | :---: | :---: |
| 1.Once a week only ,Less than 30 <br> minutes | 2.71 | Good | Agree | 4 |
| 2.2-3 times a week,Around 45 minutes | 3.14 | Good | Agree | 1 |
| 3.4-5 times a week,Around an hour | 3.02 | Good | Agree | 2 |
| 4. Daily,More than an hour | 2.87 | Good | Agree | 3 |
| Composite Mean | $\mathbf{2 . 9 3}$ | Good | Agree |  |

N=375.Parameter limits: 3.51-4.00 Very Good/Strongly agree; 2.51-3.50 Good/Agree; 1.512.50 Fair/Disagree; 1.00-1.50 Poor/Strongly disagree

Table 2. Assessment of student -respondents as regards their physical exercises in Terms of Intensity

| Intensity | Mean | Qualitative <br> Description | Interpretation | Rank |
| :---: | :---: | :---: | :---: | :---: |
| 1.I only do low-intensity exercise, such as <br> walking, jogging, stretching | 2.83 | Good | Agree | 4 |
| 2. I often do less intense exercise, such as <br> recreational volleyball, jogging, tai chi, etc. | 2.93 | Good | Agree | 2 |
| 3.I often do moderate intensity, more intense <br> and longer lasting exercises, such as cycling, <br> running, table tennis, badminton, etc. | 3.14 | Good | Agree | 1 |
| 4.I often perform high-intensity but not <br> sustained exercise, such as basketball, soccer, <br> lawn tennis, volleyball, etc., with shortness of <br> breath and sweating. | 2.88 | Good | Agree | 3 |
| 5.I often perform high-intensity exercise that <br> maintains endurance for a longer period of time, <br> such as marathons, complete aerobic programs, <br> triathlons, etc. | 2.57 | Good | Agree | 5 |
| Composite Mean | $\mathbf{2 . 8 7}$ | Good | Agree |  |

$\mathrm{N}=375$. Parameter limits: $3.51-4.00$ Very Good/Strongly agree; 2.51-3.50 Good/Agree; 1.512.50 Fair/Disagree; 1.00-1.50 Poor/Strongly disagree

Table 2 shows the level of intensity factor of the respondents in practicing physical activities, where the following results were obtained for the following indicators:
The highest scoring indicator is "I often do moderate intensity, more intense and longer lasting exercises, such as cycling, running, table tennis, badminton, etc" with a mean of 3.14 or good, which means that most of the respondents tend to do moderate intensity exercises when choosing exercises that help improve cardiorespiratory fitness and physical health. schools and communities can provide relevant training and support to encourage more students to participate in prolonged high-intensity sports to promote their physical activity levels and
fitness levels. However, higher-intensity exercise is accompanied by certain exercise risks, while moderate and lower-intensity exercise is relatively safe.

Table3. Assessment of student -respondents as regards their physical exercises in Terms

| Time | Mean | Qualitative <br> Description | Interpretation | Rank |
| :--- | :---: | :---: | :---: | :---: |
| 1.Less than 15 minutes. | 2.57 | Good | Agree | 3 |
| 2.Around 30 minutes. | 2.84 | Good | Agree | 1 |
| 3.Around 45 minutes. | 2.64 | Good | Agree | 2 |
| 4.Around an hour. | 2.51 | Good | Agree | 4 |
| 5.More than an hour. | 2.32 | Fair | Disagree | 5 |
| Composite Mean | $\mathbf{2 . 5 8}$ | Good | Agree |  |

N=375.Parameter limits: 3.51-4.00 Very Good/Strongly agree; 2.51-3.50 Good/Agree; 1.512.50 Fair/Disagree; 1.00-1.50 Poor/Strongly disagree

Table 3 shows the level of time factor of the respondents in terms of their physical activities where the following results were obtained for the following indicators:The highest scoring indicator is "Around 30 minutes" with a mean value of 2.84 or good, which means that most of the respondents are performing better in terms of time spent on physical activities and they usually keep their time spent on each physical activity around 30 minutes. The second highest scoring indicator was "Around 45 minutes" with a mean of 2.64 or good.

### 2.2. Significant difference on the assessment of the sports activities when the profile of the student-respondents when profile variables are considered.

This section describes the differences in respondents' levels of assessment of the sports activities when grouped according to profile variables such as sex,age and grade level.

Table 4. Differences in the Respondents' Level of physical exercises when they are Grouped According to Sex

| INDICATORS | Sex | Mean | SD | Computed T-value | Sig | $\begin{aligned} & \text { Decision } \\ & \text { on Ho } \end{aligned}$ | Interpretation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | Male | 3.00 | . 686 | 2.383 | . 018 | Rejected | Significant |
|  | Female | 2.84 | . 598 |  |  |  |  |
| Intensity | Male | 2.90 | . 610 | 1.360 | . 175 | Accepted | Not Significant |
|  | Female | 2.82 | . 521 |  |  |  |  |
| Time | Male | 2.62 | . 512 | 2.050 | . 041 | Rejected | Significant |
|  | Female | 2.51 | . 499 |  |  |  |  |
| Type | Male | 3.26 | . 618 | 1.182 | . 238 | Accepted | Not Significant |
|  | Female | 3.19 | . 547 |  |  |  |  |
| Over-all | Male | 2.95 | . 446 | 2.474 | . 014 | Rejected | Significant |
|  | Female | 2.84 | . 360 |  |  |  |  |

Table 4 shows the results of the comparative analysis of the means of the respondents' assessment of physical activity when grouped by sex.
The calculated $t$-value for frequency is 2.383 with a significance value of 0.018 . the original hypothesis is rejected since the significance value is less than 0.05 which means that there is a significant difference in the assessment of the student respondents when their sex is used as a
testing factor.Grouping the respondents by sex resulted in significant differences in the assessment of frequency and duration of physical activities, while there were no significant differences in the assessment of intensity and type. Overall, sex proved to be a significant determinant of physical activity among students.

Table 5. Differences in the Respondents' Level of physical exercises when they are Grouped
According to Age

| INDICATORS | Age | Mean | SD | Computed F-value | Sig | Decision on Но | Interpretation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 12 y/o and under | 2.84 | . 644 | 32.762 | . 000 | Rejected | Significant |
|  | $13 \mathrm{y} / \mathrm{o}$ | 2.58 | . 402 |  |  |  |  |
|  | $14 \mathrm{y} / \mathrm{o}$ | 3.25 | . 663 |  |  |  |  |
|  | 15 y/o and above | 3.32 | . 623 |  |  |  |  |
| Intensity | $12 \mathrm{y} / \mathrm{o}$ and under | 2.87 | . 586 | 16.979 | . 000 | Rejected | Significant |
|  | $13 \mathrm{y} / \mathrm{o}$ | 2.59 | . 453 |  |  |  |  |
|  | $14 \mathrm{y} / \mathrm{o}$ | 3.05 | . 548 |  |  |  |  |
|  | $15 \mathrm{y} / \mathrm{o}$ and above | 3.10 | . 571 |  |  |  |  |
| Time | $12 \mathrm{y} / \mathrm{o}$ and under | 2.53 | . 451 | . 604 | . 613 | Accepted | Not Significant |
|  | $13 \mathrm{y} / \mathrm{o}$ | 2.56 | . 543 |  |  |  |  |
|  | $14 \mathrm{y} / \mathrm{o}$ | 2.62 | . 509 |  |  |  |  |
|  | 15 y/o and above | 2.60 | . 546 |  |  |  |  |
| Type | $12 \mathrm{y} / \mathrm{o}$ and under | 3.24 | . 544 | 9.095 | . 000 | Rejected | Significant |
|  | $13 \mathrm{y} / \mathrm{o}$ | 3.02 | . 611 |  |  |  |  |
|  | $14 \mathrm{y} / \mathrm{o}$ | 3.42 | . 491 |  |  |  |  |
|  | 15 y/o and above | 3.36 | . 617 |  |  |  |  |
| Over-all | 12 y/o and under | 2.87 | . 392 | 24.511 | . 000 | Rejected | Significant |
|  | $13 \mathrm{y} / \mathrm{o}$ | 2.69 | . 307 |  |  |  |  |
|  | $14 \mathrm{y} / \mathrm{o}$ | 3.09 | . 393 |  |  |  |  |
|  | $15 \mathrm{y} / \mathrm{o}$ and above | 3.10 | . 437 |  |  |  |  |

Level of Significance: *is noteworthy at the 0.05 level. (2-tailed)

Table 5 shows the analysis of variance (ANOVA) of student respondents' assessment of physical activity when they were grouped by age:
The overall result shows that the calculated f-value of 24.511 with a significance value of 0.000 , which means that it is interpreted as significant, is less than the criterion of significant value of 0.05 and the original hypothesis is rejected. When the student respondents were grouped according to age, there was a significant difference in their assessment of physical activity. This indicates that age is a significant factor that influences physical activity among the student respondents.

Table 6. Differences in the Respondents' Level of physical exercises when they are Grouped According to Grade level

| INDICATORS | Grade level | Mean | SD | Computed F-value | Sig | Decision on Ho | Interpretation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | Grade 7 | 2.86 | . 641 | 76.555 | . 000 | Rejected | Significant |
|  | Grade 8 | 2.56 | . 403 |  |  |  |  |
|  | Grade 9 | 3.40 | . 597 |  |  |  |  |
| Intensity | Grade 7 | 2.89 | . 577 | 31.084 | . 000 | Rejected | Significant |
|  | Grade 8 | 2.61 | . 460 |  |  |  |  |
|  | Grade 9 | 3.12 | . 559 |  |  |  |  |
| Time | Grade 7 | 2.54 | . 458 | . 524 | . 592 | Accepted | Not Significant |
|  | Grade 8 | 2.56 | . 529 |  |  |  |  |
|  | Grade 9 | 2.61 | . 530 |  |  |  |  |
| Type | Grade 7 | 3.24 | . 537 | 14.660 | . 000 | Rejected | Significant |
|  | Grade 8 | 3.04 | . 592 |  |  |  |  |
|  | Grade 9 | 3.42 | . 566 |  |  |  |  |
| Over-all | Grade 7 | 2.88 | . 388 | 47.500 | . 000 | Rejected | Significant |
|  | Grade 8 | 2.69 | . 311 |  |  |  |  |
|  | Grade 9 | 3.14 | . 407 |  |  |  |  |

Table 6 shows the analysis of variance (ANOVA) of the student respondents' assessment of physical activity when they were grouped by grade level:
The overall result shows that the calculated f-value of 47.500 with a significance value of 0.000 , which means that it is interpreted as significant, is less than the criterion of significant value of 0.05 and the original hypothesis is rejected. When the student respondents were grouped by grade level, there was a significant difference in their assessment of physical activity. It indicates that grade level is a significant factor that influences physical activity of student respondents.

### 2.3. The assessment of the student -respondents as regards their sports risk factors

This section provides respondents' assessment of the sports risk factors of the student respondents. It includes teacher factor,student factor,environmental factor and school

Table 7. Assessment of respondents as regards their sports risk factors in terms of teacher factors

| Teacher Factors | Mean | Qualitative <br> Description | Interpretation | Rank |
| :---: | :---: | :---: | :---: | :---: |
| 1. The teaching task is not clear and the teacher does not stop <br> the dangerous behavior in time | 1.98 | Low Level | Disagree | 7 |
| 2The teacher does not stop the dangerous behavior. | 1.87 | Low Level | Disagree | 9 |
| 3. Physical education teachers physically punish or disguise <br> corporal punishment in physical education classes. | 1.97 | Low Level | Disagree | 8 |
| 4. The physical education teacher's teaching methods are not <br> scientific and well organized. | 1.98 | Low Level | Disagree | 7 |
| 5. The teacher exceeds the syllabus and makes excessive <br> demands on the students. | 2.07 | Low Level | Disagree | 4 |
| 6. The physical education teachers do not explain and <br> demonstrate the technical movements enough and do not <br> correct the students' wrong movements in time. | 2.02 | Low Level | Disagree | 5 |
| 7. Loose discipline and disorganization in class. | 2.01 | Low Level | Disagree | 6 |
| 8. Neglecting proper preparation or relaxation activities. | 2.07 | Low Level | Disagree | 4 |
| 9. Lack of proper protection and assistance for students. | 2.14 | Low Level | Disagree | 1 |
| 10. Lack of education on sports safety for students. | 2.11 | Low Level | Disagree | 2 |
| 11. Not good at finding students with physical abnormalities <br> during physical activities. | 2.09 | Low Level | Disagree | 3 |
| Composite Mean | 2.03 | Low Level | Disagree | 4 |

Legend: 3.51-4.00 Very High Level/Strongly agree; 2.51-3.50 High Level/Agree; 1.51-2.50 Low Level/Disagree; 1.00-1.50 Very Low Level/Strongly disagree

Table 7 shows the level of teachers' factors in terms of risk in sports among the respondents, where the following results were obtained for the following indicators:
The highest scoring indicator is "Lack of proper protection and assistance for students" with a mean value of 2.14 or low level, which means that the respondents believe that teachers do not perform well in providing proper protection and assistance for students in sports activities. The overall composite mean of 2.03 was interpreted as low level. this indicates that the respondents as a whole perceived that the management of risk factors in physical activities by teachers is low level, indicating more deficiencies in the area of teacher factors.

Table 8. Assessment of respondents as regards their Sports Risk Factors in Terms of Student
Factors

| Student Factors | Mean | Qualitative <br> Description | Interpretation | Rank |
| :---: | :---: | :---: | :---: | :---: |
| 1. Students do not have a good grasp of the <br> correct exercise methods and essentials, <br> overestimate their physical abilities, and make <br> incorrect technical movements or move <br> incorrectly. | 2.13 | Low Level | Disagree | 4 |
| 2. The student's discipline is lax, and the <br> student engages in activities unrelated to the <br> course that result in injury. | 2.00 | Low Level | Disagree | 9 |
| 3. The student has a special physique or a <br> specific disease that he/she does not inform. | 2.06 | Low Level | Disagree | 8 |
| 4. Fault or negligence of third party students. | 2.09 | Low Level | Disagree | 7 |
| 5. The student does not follow the discipline <br> and does not follow the standard movement <br> requirements. | 2.09 | Low Level | Disagree | 7 |
| 6. The student's poor mental state caused by <br> poor sleep and diet indirectly leads to the <br> occurrence of injuries. | 2.13 | Low Level | Disagree | 4 |
| 7. Emotional tension or excessive excitement. | 2.15 | Low Level | Disagree | 3 |
| 8. Safety accidents caused by impulsive <br> psychology. | 2.12 | Low Level | Disagree | 5 |
| 9. Not listening carefully to the teacher's <br> explanation and demonstration, not <br> concentrating. | 2.19 | Low Level | Disagree | 2 |
| 10. Safety accidents caused by violating sports <br> rules during the game. | 2.11 | Low Level | Disagree | 6 |
| 11. Students' own lack of sports safety |  |  |  |  |
| awareness. |  |  |  |  |

N=375.Parameter limits: 3.51-4.00 Very High Level/Strongly agree; 2.51-3.50 High Level/Agree; 1.51-2.50 Low Level/Disagree; 1.00-1.50 Very Low Level/Strongly disagree

Table 8 shows the level of student factors in terms of sports risk among the respondents where the following results were obtained for the following indicators:
The highest scoring indicator is "Students' own lack of sports safety awareness" with a mean of 2.23 or low level,which implies that students' own awareness of safety in sports activities is inadequate. The overall composite mean of 2.13 is interpreted as low level.This indicates that the influence of the student's own factors on risk in physical activity. Students' safety awareness,
concentration, emotional state, skill mastery and decision-making behavior are all closely related to safety in physical activities.

Table 8. Assessment of respondents as regards their Sports Risk Factors in Terms of Environmental Factors

| Environmental Factors | Mean | Qualitative <br> Description | Interpretation | Rank |
| :---: | :---: | :---: | :---: | :---: |
| 1. Poor conditions of physical <br> activity venues and substandard <br> hygiene conditions. | 2.02 | Low Level | Disagree | 6 |
| 2. The physical activity site is <br> deformed and the layout is <br> unreasonable. | 2.03 | Low Level | Disagree | 5 |
| 3. The physical activity site is small, <br> and the students' activities are very <br> crowded. | 2.06 | Low Level | Disagree | 4 |
| 4. The site does not meet the <br> relevant national standards and <br> causes accidents. | 1.98 | Low Level | Disagree | 7 |
| 5. The design of sports equipment is <br> unreasonable and not firmly <br> installed. | 1.98 | Low Level | Disagree | 7 |
| 6. Sports facilities and equipment <br> are old and damaged. | 2.02 | Low Level | Disagree | 6 |
| 7. Sports equipment is placed in an <br> unreasonable position. | 2.03 | Low Level | Disagree | 5 |
| 8. Sports equipment installation <br> does not meet the specifications. | 2.03 | Low Level | Disagree | 5 |
| 9. Sudden weather changes. | 2.27 | Low Level | Disagree | 1 |
| 10. The temperature is too low or <br> too high. | 2.21 | Low Level | Disagree | 2 |
| 11. Sudden natural disasters <br> (earthquake, lightning). | 2.11 | Low Level | Disagree | 3 |
| Composite Mean | 2.07 | Low Level | Disagree |  |

N=375.Parameter limits: 3.51-4.00 Very High Level/Strongly agree; 2.51-3.50 High Level/Agree; 1.51-2.50 Low Level/Disagree; 1.00-1.50 Very Low Level/Strongly disagree

Table 8 shows the level of environmental factors of the respondents in terms of risk in sports, where the following results were obtained for the following indicators:
The highest scoring indicator is "Sudden weather changes" with a mean value of 2.27 or low level, which means that sudden weather changes are an important risk factor in sports activities.The overall composite mean of 2.07 was interpreted as low level. this means that when considering the impact of environmental factors on the safety of sporting activities, respondents as a whole perceived these factors to be at a low level.

### 2.4. Significant Difference on the Assessment of the sports risk factors when the profile of the student-respondents when Profile Variables are Considered

This section describes the differences in respondents' levels of assessment of the sports risk factors when grouped according to profile variables such as sex,age and grade level.

Table 9. Differences in the Respondents' Level of Sports Risk Factors when they are Grouped According to Sex

| INDICATORS | Sex | Mean | SD | Computed T-value | Sig | $\begin{gathered} \hline \text { Decision on } \\ \mathrm{Ho} \\ \hline \end{gathered}$ | Interpretation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Teacher Factors | Male | 2.07 | . 840 | 1.164 | . 245 | Accepted | Not Significant |
|  | Female | 1.97 | . 752 |  |  |  |  |
| Student Factors | Male | 2.14 | . 847 | . 574 | . 566 | Accepted | Not Significant |
|  | Female | 2.09 | . 754 |  |  |  |  |
| Environmental Factors | Male | 2.07 | . 824 | . 123 | . 902 | Accepted | Not Significant |
|  | Female | 2.06 | . 759 |  |  |  |  |
| School Management Factors | Male | 2.12 | . 844 | . 088 | . 930 | Accepted | Not Significant |
|  | Female | 2.11 | . 741 |  |  |  |  |
| Over-all | Male | 2.10 | . 795 | . 512 | . 609 | Accepted | Not Significant |
|  | Female | 1.06 | . 724 |  |  |  |  |

$\mathrm{N}=375$. Level of Significance: *is noteworthy at the 0.05 level. (2-tailed)

Table 9 shows the results of the comparative analysis of the means of the respondents' assessment of the risk factors of physical education when grouped by sex.There is no significant difference in the impact of risk factors in sports activities on male and female students.

Table 10. Differences in the Respondents' Level of Sports Risk Factors when they are Grouped According to Age

| INDICATORS | Age | Mean | SD | Computed F-value | Sig | $\begin{gathered} \text { Decision on } \\ \text { Ho } \\ \hline \end{gathered}$ | Interpretation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Teacher Factors | $12 \mathrm{y} / \mathrm{o}$ and under | 2.13 | . 802 | 1.550 | . 201 | Accepted | Not Significant |
|  | $13 \mathrm{y} / \mathrm{o}$ | 1.91 | . 639 |  |  |  |  |
|  | $14 \mathrm{y} / \mathrm{o}$ | 2.04 | . 888 |  |  |  |  |
|  | $15 \mathrm{y} / \mathrm{o}$ and above | 2.00 | . 926 |  |  |  |  |
| Student Factors | $12 \mathrm{y} / \mathrm{o}$ and under | 2.21 | . 805 | 1.256 | . 289 | Accepted | Not Significant |
|  | $13 \mathrm{y} / \mathrm{o}$ | 2.01 | . 664 |  |  |  |  |
|  | $14 \mathrm{y} / \mathrm{o}$ | 2.14 | . 858 |  |  |  |  |
|  | $15 \mathrm{y} / \mathrm{o}$ and above | 2.07 | . 945 |  |  |  |  |
| Environmental Factors | $12 \mathrm{y} / \mathrm{o}$ and under | 2.14 | . 783 | . 981 | . 446 | Accepted | Not Significant |
|  | $13 \mathrm{y} / \mathrm{o}$ | 1.97 | . 660 |  |  |  |  |
|  | $14 \mathrm{y} / \mathrm{o}$ | 2.09 | . 841 |  |  |  |  |
|  | $15 \mathrm{y} / \mathrm{o}$ and above | 2.05 | . 952 |  |  |  |  |
| School Management Factors | $12 \mathrm{y} / \mathrm{o}$ and under | 2.18 | . 775 | . 998 | . 394 | Accepted | Not Significant |
|  | $13 \mathrm{y} / \mathrm{o}$ | 2.01 | . 653 |  |  |  |  |
|  | $14 \mathrm{y} / \mathrm{o}$ | 2.11 | . 838 |  |  |  |  |
|  | $15 \mathrm{y} / \mathrm{o}$ and above | 2.15 | . 990 |  |  |  |  |
| Over-all | $12 \mathrm{y} / \mathrm{o}$ and under | 2.17 | . 762 | 1.231 | . 298 | Accepted | Not Significant |
|  | $13 \mathrm{y} / \mathrm{o}$ | 1.98 | . 610 |  |  |  |  |
|  | $14 \mathrm{y} / \mathrm{o}$ | 2.10 | . 815 |  |  |  |  |
|  | $15 \mathrm{y} / \mathrm{o}$ and above | 2.07 | . 917 |  |  |  |  |

$\mathrm{N}=375$. Level of Significance: *is noteworthy at the 0.05 level. (2-tailed)

Table 10 shows the analysis of variance (ANOVA) of student respondents' assessment of sports risk factors after grouping the student respondents by age:
The overall result shows that the calculated f-value of 1.231 and the significance value of 0.298 , which means that it is interpreted as non-significant, is greater than the criterion of a significant value of 0.05 and the original hypothesis is accepted.

Table 11. Differences in the Respondents' Level of Sports Risk Factors when they are Grouped According to Grade level

| INDICATORS | Grade <br> level | Mean | SD | Computed Fvalue | Sig | Decision on Ho | Interpretation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Teacher Factors | Grade 7 | 2.13 | . 804 | 1.798 | . 167 | Accepted | Not Significant |
|  | Grade 8 | 1.94 | . 661 |  |  |  |  |
|  | Grade 9 | 2.01 | . 925 |  |  |  |  |
| Student Factors | Grade 7 | 2.22 | . 792 | 1.694 | . 185 | Accepted | Not Significant |
|  | Grade 8 | 2.03 | . 694 |  |  |  |  |
|  | Grade 9 | 2.11 | . 919 |  |  |  |  |
| Environmental <br> Factors | Grade 7 | 2.13 | . 770 | 1.002 | . 368 | Accepted | Not Significant |
|  | Grade 8 | 1.99 | . 688 |  |  |  |  |
|  | Grade 9 | 2.07 | . 915 |  |  |  |  |
| School <br> Management <br> Factors | Grade 7 | 2.19 | . 763 | 1.325 | . 267 | Accepted | Not Significant |
|  | Grade 8 | 2.03 | . 676 |  |  |  |  |
|  | Grade 9 | 2.13 | . 937 |  |  |  |  |
| Over-all | Grade 7 | 2.17 | . 745 | 1.549 | . 214 | Accepted | Not Significant |
|  | Grade 8 | 2.00 | . 638 |  |  |  |  |
|  | Grade 9 | 2.08 | . 844 |  |  |  |  |

$\mathrm{N}=375$. Level of Significance: *is noteworthy at the 0.05 level. (2-tailed)

Table 11 shows the analysis of variance (ANOVA) of student respondents' assessment of risk factors in sports after grouping student respondents by grade level:
The overall result shows that the calculated f -value of 1.549 with a significance value of 0.214 , which means that it is interpreted as non-significant, is greater than the criterion of a significant value of 0.05 and the original hypothesis is accepted. Schools typically educate students about physical education risks at different grade levels to ensure that students acquire similar risk perception and assessment skills.

### 2.5. The relationship between the extent of execution of sports activities and the sports risk factor

Table 12. Relationship between physical exercises and Sports Risk Factors

|  |  | Teacher Factors | Student <br> Factors | Environmental Factors | School Management Factors | Sports Risk <br> Factors |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | r | 0.114 | 0.058 | 0.077 | 0.093 | 0.090 |
|  | sig | 0.027 | 0.264 | 0.136 | 0.071 | 0.083 |
|  | Decision on Но | Rejected | Accepted | Accepted | Accepted | Accepted |
|  | Interpretation | Significant | $\begin{gathered} \text { Not } \\ \text { Significant } \\ \hline \end{gathered}$ | Not Significant | Not Significant | Not Significant |
| Intensity | r | 0.207 | 0.127 | 0.130 | 0.112 | 0.151 |
|  | sig | 0.000 | 0.014 | 0.011 | 0.030 | 0.003 |
|  | Decision on Но | Rejected | Rejected | Rejected | Rejected | Rejected |
|  | Interpretation | Significant | Significant | Significant | Significant | Significant |
| Time | r | -0.049 | -0.066 | -0.025 | -0.025 | -0.043 |
|  | sig | 0.349 | 0.203 | 0.633 | 0.633 | 0.406 |
|  | Decision on Но | Accepted | Accepted | Accepted | Accepted | Accepted |
|  | Interpretation | Not Significant | $\begin{gathered} \text { Not } \\ \text { Significant } \\ \hline \end{gathered}$ | Not Significant | $\begin{gathered} \text { Not } \\ \text { Significant } \\ \hline \end{gathered}$ | Not Significant |
| Type | r | 0.063 | 0.030 | 0.034 | 0.026 | 0.040 |
|  | sig | 0.226 | 0.556 | 0.512 | 0.619 | 0.439 |
|  | $\begin{gathered} \hline \text { Decision on } \\ \text { Ho } \end{gathered}$ | Accepted | Accepted | Accepted | Accepted | Accepted |
|  | Interpretation | Not Significant | Not Significant | Not Significant | Not Significant | Not Significant |
| physical exercises | r | 0.124 | 0.057 | 0.080 | 0.077 | 0.089 |
|  | sig | 0.016 | 0.267 | 0.121 | 0.135 | 0.086 |
|  | Decision on Но | Rejected | Accepted | Accepted | Accepted | Accepted |
|  | Interpretation | Significant | Not Significant | Not Significant | Not Significant | Not Significant |

$\mathrm{N}=375$.Legend: a significance value of sig less than 0.05 rejects the original hypothesis and indicates a significant difference.

As shown in Table 12, the calculated r-value of the level of practice of physical activities and exercise risk factors is 0.089 with a significance value of 0.086 , the original hypothesis is accepted as the significance value is greater than the set level of significance of 0.05 . This indicates that there is no significant correlation between the level of physical activity and exercise risk factors.

## 3. Summary of the Study Findings

3.1The number of female students is more than male students. Most of the respondents belonged to the age group of 12-13 years. The proportion of students in the three grades was relatively balanced in the sample.
3.2The assessment of the respondents' students in practicing physical activities, where the mean of frequency is 2.93 or good; the mean of intensity is 2.87 or good; the mean of time is
2.58 or good; and the mean score of type is 3.23 or good. The overall mean score is 2.90 , which is considered as good.
3.3After grouping the respondents by sex, the comparative analysis of the means of the respondents' assessment of physical activity, the significance value of Frequency, Time, and Physical Activity overall is less than 0.05 and there is no significant difference in their assessment. Whereas, the significance value on, intensity and type dimensions is more than 0.05 and there is no significant difference in their assessment. The overall results of the ANOVA of student respondents' assessment of physical activity after grouping student respondents by age showed that the calculated f-value was 24.511 with a significance value of 0.000 , which means that it was interpreted as significant and there was a significant difference in the frequency, intensity and type dimensions, but there was no significant difference in the time dimension. The overall results of the ANOVA of the student respondents' assessment of physical activity after grouping the student respondents by grade showed that the calculated f -value was 47.500 with a significance value of 0.000 , which means that it is interpreted as significant and there is a significant difference in the frequency, intensity and type dimensions but not in the time dimension.
3.4The assessment of the respondents students in terms of Risk Factors.The mean of Teacher Factors was 2.03 or low level; the mean of Student Factors was 2.12 or low level; the mean of Environmental Factors was 2.07 or low level; the mean score of School Management Factors The overall mean score was 2.08 , which is a low level.
3.5After grouping the respondents by sex, age, and grade, the assessment of sports risk factors showed that the significance values were all greater than 0.05 , which is interpreted as not significant, and the original hypothesis was accepted that there was no significant difference in their assessment of sports risk factors.
3.6 the $r$ value of the level of physical activity and sports risk factors is 0.089 with a significance value of 0.086 . the $r$ value of the frequency of physical activity and teachers factor is 0.114 with a significance value of 0.027 . the $r$ value of the level of physical activity and teachers factor is 0.124 with a significance value of 0.016 . although the significance value satisfies the level of significance, the correlation is also not very high. Intensity of physical activity has an r-value of 0.151 with a significance value of 0.003 and it has a significance value of less than 0.05 with the other four factors of the physical risk factor.
3.7the current physical education safety regulations in the school, which include the safety of physical education teachers, the safety of physical education students, the safety of physical education equipment and devices, and the organization and management.

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