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Awareness and Attitude Among Physical Education Teachers Towards Sports-Related Injuries in Schools

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ABSTRACT

Background: Physical education (PE) teachers play a crucial role in promoting safe participation in school-based sports activities. Ensuring they have adequate knowledge and a positive attitude towards sports injury prevention is vital for the safety and well-being of students.
Objective: To assess the awareness and attitude of physical education teachers regarding sports-related injuries among school children and evaluate associations with demographic variables.
Methods: A cross-sectional survey was conducted among 100 certified physical education teachers from various high schools in Bangalore. A validated semi-structured questionnaire was used to collect data on demographics, awareness, and attitude related to injury prevention. Descriptive statistics and chi-square tests were used to analyze the data.
Results: The majority (95%) of PE teachers demonstrated adequate awareness regarding training, performance enhancement, and injury prevention. Nearly all teachers (99%) exhibited a favorable attitude towards injury prevention practices. A statistically significant association was found between awareness and years of experience ($p<0.05$), whereas no significant association was observed for other demographic variables.
Conclusion: The study highlights that PE teachers in Bangalore possess adequate awareness and favorable attitudes towards sports-related injuries. More experienced teachers tend to have higher awareness levels, indicating the importance of continuous professional development.

Keywords: Physical Education Teachers, Sports Injuries, Awareness, Attitude, Injury Prevention

INTRODUCTION

Participation in physical activities and organized sports is a common and encouraged part of the school curriculum for children and adolescents. However, with increasing involvement in these activities, the risk of sports-related injuries also rises. Studies indicate that approximately 40% of injuries among school-aged children are sports-related (Vanderlei et al., 2014). Common injuries include ankle sprains, fractures of the clavicle and radius, and anterior cruciate ligament (ACL) tears,

especially in young athletes (LaBella et al., 2014).

Physical education teachers are at the frontline of this challenge. They are responsible for planning, supervising, and instructing physical activities, and thus must possess sufficient knowledge and positive attitudes towards injury prevention to ensure student safety. Research has shown that many PE teachers lack formal training in injury management and prevention (Mohandas & Chandan, 2009; Neeraja et al., 2014). As schools often lack access to athletic trainers, PE teachers must serve dual roles as instructors and first responders in case of injury (Foss et al., 2014).

In addition, children's physical activity levels are significantly influenced by school environments. Quality physical education programs aim not only to develop students' motor skills but also to instill lifelong habits of physical fitness (Turner et al., 2014). PE teachers, therefore, become central figures in ensuring that physical activity is conducted in a manner that is both beneficial and safe. The onus is on the PE teacher to integrate injury-preventive strategies such as appropriate warm-up routines, stretching, strength training, and coordination exercises into their regular sessions (Jespersen et al., 2014).

Several studies have underlined the disparity between knowledge and practice among PE instructors. For instance, while instructors may have theoretical knowledge about injury prevention tools like mouthguards or proper footwear, they may not necessarily enforce or encourage their consistent use among students (Neeraja et al., 2014; Onyeaso & Adegbesan, 2003). This gap further emphasizes the need for research to assess both awareness and attitudes in this context.

The importance of early intervention and preventive education cannot be overstated. Teachers' attitudes, including their willingness to implement evidence-based training programs, can greatly influence outcomes related to injury prevention (Cheon et al., 2014). Additionally, fostering autonomy and responsibility in students to recognize and avoid injury risks begins with well-informed educators.

The present study was undertaken to assess the current level of awareness and attitude among physical education teachers in Bangalore towards sports-related injuries in schools. The insights gained can inform future training and curriculum design, ensuring that school environments are not only active but also safe.

MATERIALS & METHODS

Study Design: This was a descriptive, cross-sectional study using a survey approach.

Setting and Population: The study was conducted among physical education teachers employed in high schools across Bangalore, India.

Sample Size and Sampling Technique: A total of 100 PE teachers were selected using convenience sampling. Inclusion criteria were: (a) certified PE teachers with a minimum of diploma-level qualifications, and (b) currently employed in a high school. Non-certified and non-cooperative teachers were excluded.

Data Collection Tool: Data were collected using a semi-structured questionnaire validated by five experienced physiotherapists. The questionnaire consisted of three sections:

- **Demographics:** Age, gender, qualification, and teaching experience.
- **Awareness Section:** 8 items across domains of training session inclusion, team performance, and injury prevention, rated on a 5-point Likert scale.
- **Attitude Section:** 5 items assessing beliefs and willingness to engage in injury prevention, also on a 5-point Likert scale.

Scoring and Interpretation:

- Awareness scores: <50% (inadequate), 50–75% (moderate), >75% (adequate).

- Attitude scores: <50% (unfavorable), 50–75% (neutral), >75% (favorable).

STATISTICAL ANALYSIS

Data were analyzed using SPSS version 17. Descriptive statistics included mean and standard deviation for continuous variables, and frequencies for categorical data. Chi-square tests were applied to explore associations between awareness/attitude and demographic variables.

RESULT

Demographic Characteristics of Physical Education Teachers (N=100):

The participants in this study varied widely in their demographic background. The majority of teachers (47%) were above 40 years of age, suggesting a mature and possibly experienced group. Male teachers constituted a significantly higher proportion (74%) compared to females (26%), indicating a male-dominated field. In terms of professional experience, nearly half (46%) of the respondents had between 13–25 years of experience, reflecting a seasoned workforce. As for qualifications, most teachers held a Bachelor's degree in Physical Education (47%), followed by Diploma holders (40%) and a smaller number with a Master's degree (13%).

Variable	Category	Frequency (n)	Percentage (%)
Age	< 30 years	23	23%
	30–40 years	30	30%
	> 40 years	47	47%
Gender	Male	74	74%
	Female	26	26%
Experience	≤ 5 years	26	26%
	6–12 years	23	23%
	13–25 years	46	46%
	> 25 years	5	5%
Qualification	D.P. Ed	40	40%
	B.P. Ed	47	47%
	M.P. Ed	13	13%

Awareness of Sports Injuries:

Overall, the awareness levels of physical education teachers were encouraging. Only 1% had inadequate awareness in any single domain. The majority showed adequate awareness regarding inclusion of training components (87%), team performance enhancement (91%), and injury prevention strategies (93%). The cumulative awareness rating showed 95% of teachers falling into the adequate category.

Domain	Inadequate (%)	Moderate (%)	Adequate (%)
Training Inclusion	1%	12%	87%
Team Performance	0%	9%	91%
Injury Prevention	1%	6%	93%
Overall Awareness	0%	5%	95%

Attitude towards Injury Prevention:

The attitude analysis revealed that 99% of respondents had a favorable attitude, with only 1% demonstrating neutrality. There were no respondents with an unfavorable attitude, highlighting a uniformly positive perspective among the cohort regarding the importance of injury prevention.

Attitude Level	Frequency	Percentage
Unfavorable (<50%)	0	0%
Neutral (50–75%)	1	1%
Favorable (>75%)	99	99%

Correlation between Awareness and Attitude:

While most awareness domains did not show significant correlations with attitude,

the domain of injury prevention awareness had a statistically significant positive correlation ($r = 0.275$, $p < 0.05$). This suggests that teachers who are more informed about injury prevention also tend to have a more favorable attitude.

Awareness Domain	Correlation (r)	Significance (p-value)
Training Inclusion	-0.023	>0.05 (NS)
Team Performance	-0.024	>0.05 (NS)
Injury Prevention	0.275	<0.05 (S)

Association with Demographic Variables:
Experience was the only demographic variable significantly associated with awareness ($p < 0.05$), suggesting that teachers with more years in service had a deeper understanding of injury prevention. However, there were no statistically significant associations between attitude and any demographic factors, indicating a uniformly positive outlook regardless of age, gender, qualification, or experience.

Variable	p-value	Significance
Age	>0.05	Not significant
Gender	>0.05	Not significant
Experience	<0.05	Significant
Qualification	>0.05	Not significant

The data clearly indicates a high level of awareness and a highly favorable attitude among the study population. Teachers with more experience tend to have stronger knowledge, though positive attitudes are consistent across all backgrounds.

Statistical Associations:

- A significant association was observed between awareness and teaching experience ($p<0.05$).
- No significant associations were found for age, gender, or qualification with awareness or attitude.

DISCUSSION

This study aimed to understand how well PE teachers in Bangalore are prepared to manage and prevent sports injuries among schoolchildren. The findings indicate a high level of awareness and positive attitude, consistent with earlier studies that emphasized the evolving role of PE teachers as gatekeepers of student safety (Turner et al., 2014).

The strong association between experience and awareness suggests that on-the-job exposure may contribute more significantly to knowledge accumulation than formal education. This aligns with findings by Atay (2014), who emphasized the importance of practical experience in injury prevention. Experienced teachers are more likely to have encountered a broader range of injury scenarios and thus appreciate the necessity of proactive preventive strategies.

Interestingly, while the overall awareness was high, other studies such as those by Neeraja et al. (2014) and Mohandas & Chandan (2009) have highlighted gaps in specific areas like dental trauma management. This may indicate variability across types of injuries and emphasize the need for comprehensive training modules that address various injury types, including soft tissue, musculoskeletal, and dental trauma.

Moreover, the almost universal favorable attitude among respondents highlights a readiness among PE teachers to engage with injury prevention practices. This positive outlook provides a strong foundation for introducing structured professional development programs. As Foss et al. (2014) suggest, middle- and high-school settings increasingly require medically-informed supervision due to rising participation rates and injury incidence among adolescents.

Another important aspect is the potential role of curriculum reform in physical education training programs. Currently, many certification programs do not include detailed modules on injury prevention or first response training. Incorporating such topics as part of the standard curriculum could bridge the gap between theory and practice. Teachers with such training would be better equipped to implement warm-up routines, stretching, strength training, and

use of protective equipment—measures shown to reduce injury risk (Jespersen et al., 2014).

The absence of significant associations between awareness or attitude and other demographic variables such as gender, age, or educational qualification may reflect the universal emphasis placed on student safety within the teaching profession. This homogeneity suggests that efforts to enhance knowledge and practices will be broadly received and effective across diverse groups of educators.

Limitations of this study include the relatively small and regionally constrained sample, which may affect the generalizability of the findings. Future research could expand to include a larger and more diverse geographic population, as well as incorporate qualitative methods (e.g., interviews or focus groups) to explore teachers' perspectives in greater depth.

CONCLUSION

- PE teachers in Bangalore show high levels of awareness and favorable attitudes toward sports-related injury prevention.
- Experience significantly enhances awareness levels.
- There is no significant relationship between demographic factors and attitude, indicating that positive outlooks may be universal among teachers.
- Continued education and training opportunities are recommended to sustain and improve knowledge and practice.

Declaration by Authors
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