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Nexus between Sportsmen Injuries and Economic Survival in Future Life

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Abstract
Movement is the essence of physical therapy. Due to the inherent nature of sports as a physical activity, they can often lead towards sport's injuries and therefore may have a bearing on the economic aspects of the field or industry of sports. Athletes cannot resume at their previous level of activities if they fear re-injury or serious injuries. Competitive athletes have the highest injury rates (for example, adolescent elite athletes). Anterior cruciate ligament (ACL) injuries are the highest sport's injuries found in female players. Athletes might end their career prematurely by halting sport participation. The study's primary objective is to identify and discuss health variables, injury patterns, and training modes. These health variables include self-esteem, nutritional behavior, self-perceived stress, risk factors, and nutritional behavior in adolescent elite athletes. This is done with a view to developing effective target prevention for sport's injuries and understanding the risk factors, fear of injury, and incidence/prevalence of injury in adolescent elite athletes. The health consequences of injury are rising due to the lack of prospective injury registration. The paper has analyzed the nexus between sportsmen's injuries and economic survival in the future. The paper is based on three variables: Sportsmen Injuries, Economic Survival, and GDP-and-GDP growth rates. The collected data was analyzed using SPSS-26 software to describe the nexus between Sportsmen's Injuries and Economic Survival. It was found that there's a significant impact of sportsmen's injuries on economic survival and GDP-and-GDP Growth Rates.
Keywords: Sport's Injury, Economic Survival, Physical Therapy, Sport's Activities, Elite Athletes, Health Variables, Injury Patterns.

Introduction

Sportsmen's Injuries and Economic Survival are exciting topics of study. Sports are now considered a full-fledged industry in the modern economy (Von Rosen & Heijne, 2018). In stock markets, financial experts maximize profits by making team sports a classical microeconomic tool. In sports activities, higher participation is a primary cause of injuries in young players (Frisch, Croisier, Urhausen, Seil, & Theisen, 2009).

Competitive athletes have the highest injury rates (for example, adolescent elite athletes). Anterior cruciate ligament (ACL) injuries are the highest sport's injuries found amon female players. Athletes cannot resume their previous level of activities if they fear re-injury or serious injuries. Athletes might end their career prematurely by showing halt sport participation. Over the last few decades, increased professionalization of youth competition is emerging, and therefore, it has pushed youth sports to adult sports (Rosen, 2017). Probably, competitiveness in the sports field has increased the risk of injuries occurrence even more. The consequences of health injury are rising due to the lack of prospective injury registration. This can result in incomplete understanding of adolescent elite athletes' performance as compared to adult elite athletes' performance. Therefore, it is important to develop effective target prevention for sports injuries and understand the risk factors, fear of injury, and incidence/prevalence of injury in adolescent elite athletes (Tulendiyeva, Saliev, Andassova, Issabayev, & Fakhradiyev, 2021). These factors are becoming the main reason for exploring the injury consequences and injury data among athletes. Movement is the essence of physical therapy. The primary responsibility of a physical therapist is the movement system. Therefore, this involves the nervous and musculoskeletal systems (Garit, Surita, Domínguez, Moya, & Castellanos, 2021). These systems support the endocrine system, respiratory system, and cardiovascular systems.

The goal of a physical therapist is to prevent, promote, rehabilitate, intervene, and treat sportsmen's injuries. In 1995, the "Movement Continuum Theory of Physiotherapist" presented a new theoretical framework (Savic et al., 2017). There are three main principles of the MCTP Theory. These include; the movement on a continuum for the movement of body parts and molecules to the society's whole body (Casals & Finch, 2017). Movement is influenced by social, environmental,

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physiological, and psychological factors. Movement is a significant element of human life. Furthermore, illness or injury can alter a person's ability to rapid movement (Lynch, Bedi, & Larson, 2017). In this article, factors (such as pain and injuries) that affect human body movements, training factors (elements of movement) (J. Ryan, DeBurca, & Mc Creesh, 2018), health factors (such as nutrition and sleep), and the experience of not being capable of impression and general movement. This article discusses the various aspects of human body movement compatible with physical therapy and reflects the multiple principles involved in the principle of continuity of movement (Ozturk & Kilic, 2018).

Sports activities and physical movement can provide numerous health benefits to players. These health benefits include reduced chances of depression, osteoporosis, diabetes, cardiovascular disease, premature death, cancer, hypertension, psychological issues, and obesity. Sport's participation can reduce the chances of permanent disabilities, workload, and anxiety (J. Ryan et al., 2018). Furthermore, 1.5-3.0% of the total direct healthcare cost is incurred a sresult of physical inactivity (Moser, 2019). Approximately 1 million adolescents and children are engaged in organized sports activities in Sweden. About 2,80,000 people get injured in Sweden during physical activities every year. Therefore, it represents half of all emergency visits due to sports injuries. For sports injuries, the direct medical cost (DMC) is about 1.3 billion SEK (Swedish Krona)(Oksuzyan, Gumà, & Doblhammer, 2018). This cost excludes the long care, rehabilitation, pharmaceutical equipment, and transportation costs (Herdy et al., 2017). Even if these expenditures are included, it is estimated that the total cost of sports injuries is likely to exceed SEK 1.3 billion annually (J. L. Ryan, Pracht, & Orban, 2019). The study's primary objective is to identify and explore health variables, injury patterns, and training modes. These health variables include self-esteem, nutritional behavior, self-perceived stress, risk factors, and nutritional behavior in adolescent elite athletes (Doob, 2018). Furthermore, the paper will analyze sport's injuries, economic survival, and athletes' impressions of athletes.

Health variables such as stress, sleep deprivation, nutrition, and self-esteem in adolescent elite athletes can help us more effectively understand a young elite athlete (Spaite et al., 2019). It can identify sportsmen's performance and injury risk, as well as unhealthy behaviors and health-related markers. For treating young elite athletes, the in-depth knowledge of injury experiences and impressions in athletes can enhance our study for developing rehabilitation methods and identifying potential gaps in improvement and rehabilitation chains. For example, the true burden of injury in young elite athletes is unknown (Forsdike, Marjoribanks, & Sawyer, 2019). The lack of clarity pertaining to factors that make a young elite athlete more likely to be injured can hinder injury prevention programs. Identifying injury data, risk factors, and injury outcomes in elite teen athletes using potential data collection methods and interview methods is highly relevant and prevents injury from health and sports performance (Song & Montenegro-Marin, 2021).

Therefore, a more holistic view of injury risk should be developed using the bio-psychosocial model, which considers factors other than biological ones presumed within the biomedicine model. For introducing subjectivity, the bio-psychosocial model has been criticized. This model provides unclear boundaries between psychological, biological, and social factors, lacking clear frames in the analytic approach (Spaite et al., 2019).

Literature Review

In the modern world, sports injuries and economic survival are among the special issues of the journal (de Jonge, Vermeulen, & Maas, 2021). The importance of a comprehensive description of the injury mechanism, including the injury situation (such as the playing situation, the hostile attitude) and the biomechanics of the whole body and joints before and during the injury, has been discussed in previous studies. The model has since been expanded to consider how risk factors and injury etiology change into dynamic, repetitive cycles over time (Kader et al., 2021). Although, this approach can complicate data analysis, it accurately reflects the true nature of injury etiology, and accounts for post-injury events. To understand how risk factors are communicated, the researcher must be aware of the interaction between risk factors and potential entanglement variables to fully understand the complex injury process. There are two main branches of the sports industry; Sports services, and the Sports goods industry (Baryeh et al., 2021).

The sports goods industry refers to the modern market where all sports equipment and accessories are produced and sold. At the same time, sports services deal with two branches: viewing and participation. As an amateur or professional, participation in sports activities is just a matter of choice. A person must be sure about participating in sport's activities and the time they will spend building a sport's career (Rojas Castro et al., 2021). However, increasing participation in sports activities should consider the financial costs and strategies needed to prevent potential sports injuries. Globally, intervening

economic survival with high compliance to reduce injuries significantly has a strong tendency. In contrast, studies with low program compliance showed only minor effects (Hemachandra, Viduranga, & Gamalath, 2021). Previous studies indicate that the home-based exercise program may be less encouraging and motivating. A home-based exercise program might result in poor compliance with athletes' peers-organized and supervised training schedules (Behzadnia, Adachi, Deci, & Mohammadzadeh, 2018).

Environment can easily influence the attitude of a younger athlete, as well as the attitudes of coaches and parents who also play a significant role. Previous studies indicate that 88% of the reduction in sports injuries is 100% compliance with team management among female soccer players (Rodrigues & Neiva, 2020).Similarly, another study indicates that 87% of club members were willing to participate in the proposed intervention program. In another result, it was found that after taking precautionary measures, a 50% reduction was found in severe injuries to young handball players. Furthermore, a study indicates that team sports experienced a 72% reduction in knee injuries (Doob, 2018). All the girls in the intervention group followed a four-week prevention program, and 70% completed an entire training program. Another report found that in male and female high schools, there is 91% compliance leading to a 38% reduction in ankle sprains in basketball and soccer players (Budd, 2021).

Similarly, in another study, it was found that 91% of athletes trained their entire balance (Kader et al., 2021). The authors found an overall 77% reduction in injuries. This is found unlike previous studies, and despite the need to continue regular contact with coaches and the intervention program(Garit et al., 2021).

In recent years, the trend of big data analytics and new technologies has made data more critical. Information about sportsmen's experiences, injury records, and other records opens up new analytical possibilities for investigating data resources such as complexity, variables, and reliability. However, it is worth remembering that research only needs sportsmen records and the correct data to answer the right questions (Baryeh et al., 2021). A previous paper focused on the growing opportunities that statisticians have to research sports injury or what is now recognized as an expert in injury monitoring, injury prevention, and performance enhancement (Palmer et al., 2021). For example, a combination of epidemiology, statistics, public health, sport's science or medicine gives birth to a profession now known as sports biostatistics (Budd, 2021). This paper takes advantage of research gaps in the sport's field within the statistics, in the same way as a smart scientist or statistical scientist, to discuss the identity of the sports biostatistics professional. Previous research has already found injury statistics professionals like sports biostatisticians for better modeling (Baroni & Oliveira Pena Costa, 2021).

Although sports injury has seen significant progress in biostatistics in medical research and public health, the profession of sports biostatistics is rarely talked about or promoted (Jarraya et al., 2021). The updates impact social care services and the quality of health on life expectancy, especially sportsmen with spinal cord injury (SCI) planning the necessary arrangements for lifelong care (de Jonge et al., 2021). Life expectancy is used to create a personal care package for people with SCI in everyday practice and to calculate SCI care's lifetime cost (Ohana & Alabiad, 2021). Changes in life expectancy trends are among the key findings of the review of the areas of quality of healthcare, its shortcomings, its improvement over time, and further improvement (Dixit et al., 2021).Generally, to diagnose sportsmen's injury and resulting complications, the direct cost is calculated by considering the cost of using resources for health (Rocchi & Pelletier, 2017). For calculating this type of cost, the researcher needs data on the use of health care, such as the cost of injury treatment per day and the tenure of hospital stay for a specific injury (Smet, Dyck, Gielen, & Vanhoenacker, 2021).

On the other hand, the previous study indicates the indirect costs indicate a loss of productivity due to sports injury and absenteeism (Budd, 2021). Furthermore, researchers have used the human capital approach in previous studies (Khalil et al., 2021). Expectedly, the human capital approach has lost production cost by assuming that the value of human life is equal to its expected (discounted) future income in terms of lost earnings (Latz, 2021).

However, researchers have criticized the human capital approach because it can over-understand the cost of production losses (Enz et al., 2021). In the short term, the immediate recovery and treatment of injured players can be completed by other workers (Arraya, 2017), and unnecessary work can be canceled or completed when they return to work (Enz et al., 2021). Injured sportsmen can be replaced by uninjured players or redistributed in the long run (Baryeh et al., 2021). Friction cost can be changed after changing the friction period, when estimating the direct cost of the injury (Ly-Yang, Gómez-Calleja, Pérez-García, Pascual-Prieto, & Santos-Bueso, 2021). The view of human capital has been criticized. However, it can also reduce costs because it values life using market earnings(Fathy Mohamed Mahran, 2021). However, if a significant portion of the study population consists of retired seniors

and children, the results will underestimate production losses. In addition, the human capital approach ignores psychological costs and ramifications of injuries (Sharma & Sharma, 2021).

In the labor market, there may be shortcomings; production costs are not an appropriate indication of real potential in this case. General criticism about injury cost reflects pre-existing data from health statistics (Ušpurienė & Žiglytė, 2021). In addition, if a particular injury has a high economic cost, it requires a prevention policy. However, resource allocation to treat or prevent a costly injury will lose the benefits that would be reaped if resources were devoted to another activity (Hu, 2021). It identifies an important economic concept called opportunity to value and means that it is important to know the costs and benefits of the activity to maximize social benefits (Ly-Yang et al., 2021). In this regard, Health Economics plays an important role in preventing injuries by reviewing the costs and benefits of injury prevention strategies (Hemachandra et al., 2021).

Research Framework

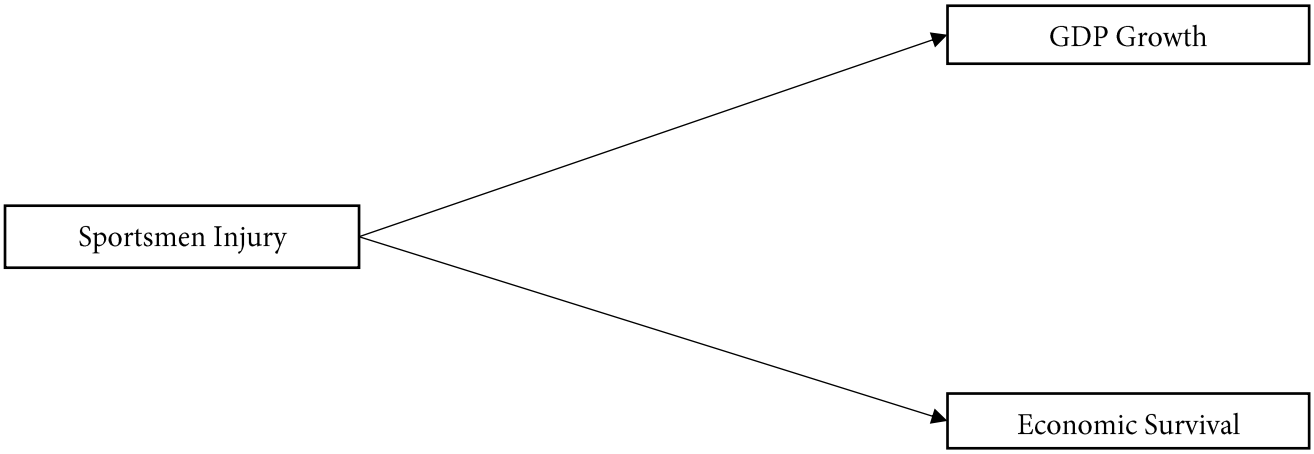

Figure 1. Research Framework

Methodology

To better analyze the nexus between sportsmen injuries and economic survival in the future, this paper has used Sportsmen Injuries as an Independent Variable. Economic Survival and GDP-GDP growth were used as Dependent Variables. The research is based on primary data, and 100 responses were collected from questionnaires. The collected data was analyzed using SPSS-26 software to describe the nexus between Sportsmen Injuries and Economic Survival. The research design is a quantitative research method and is a descriptive correlation study. The data was collected through a questionnaire, and we had 100 respondents for the questionnaires.

Where;
SI= Sportsmen Injuries
ES= Economic Survival
GDPG= GDP and GDP Growth

Result and Discussions

The univariate data parameters state that the variables (Sports Injuries, Economic Survival, and GDP Growth) are normally distributed, where SI is scaled at .81470, ES is scaled at .69479, and GDPG is scaled at .47768. The unweighted fit of the cases to $y= a*x$is the yield at the location of SI=1.77, ES= 1.6100, and GDPG= 1.2900. The results in Table 1 one show the normality of data collected.

Table 1

Estimated Distribution Parameters

Estimated Distribution Parameters				
		Sportsman Injuries	**Economic Survival**	**GDP and GDP Growth Rate**
Normal Distribution	Location	1.7700	1.6100	1.2900
	Scale	.81470	.69479	.47768

The cases are unweighted.

One sample T-test Analysis

Table 2 shows the one-sample t-test statistics for Sportsmen is 21.726, Economic Survival is 23.173, and GDP and GDP growth is 27.005, and the p-value for all three variables is significant (p=.000). The table shows the 95% confidence interval of the difference using upper and lower limits. The upper and lower limit of SI is 1.9317-1.6083, ES is 1.7479-1.4721, and GDPG is 1.3848-1.1952. However, the mean difference for SI is 1.77, ES is 1.4721, and GDP is 1.1952.

Table 2

One-Sample T-Test Analysis

One-Sample Test

	Test Value = 0				
	T	DfSig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
Sportsman Injuries	21.726	99 .000	1.77000	1.6083	1.9317
Economic Survival	23.173	99 .000	1.61000	1.4721	1.7479
GDP and GDP Growth Rate	27.005	99 .000	1.29000	1.1952	1.3848

Regression Analysis

The proposed research model hypothesized two relationships that portray the impact of Sportsmen Injuries (SI) on Economic Survival (ES) and GDP and GDP Growth (GGDP). R showed multiple correlation coefficients in regression analysis (Table 3). Regression Analysis is the combined Correlation of Sport's Injuries with Economic Survival and GDP &GDP Growth. Table 3 tests the correlation between SI (IV) and ES (DV), and its value is .135 with SI and .088 with GDP and GDP growth. The value of t-stats was between +2 to -2; therefore, the results are acceptable. Table 3 shows significant results for sportsmen injuries (0.003) and insignificant results for GDP-and-GDP Growth Rate.

Table 3

Regression Analysis

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.241	.241		5.156	.000
	Sportsman injuries	.115	.086	.135	1.342	.003
	GDP and GDP growth rate	.128	.146	.088	.874	.384

a. Dependent Variable: economic survival

Model Summary

The value of R-Square must be between 0 to 1 (Israeli, 2007). The value of R square is 0.028 which means there is a 2.8% variation in the dependent variable (Economic Survival) due to the independent variable (Sportsmen Injuries). However, the significant value of the variable (SI) is greater than 0.05. At the same time, the t value is more than 2.

Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.168[a]	.028	.008	.69195

a. Predictors: (Constant), GDP and GDP growth rate, sportsmen injuries

ROC Curve

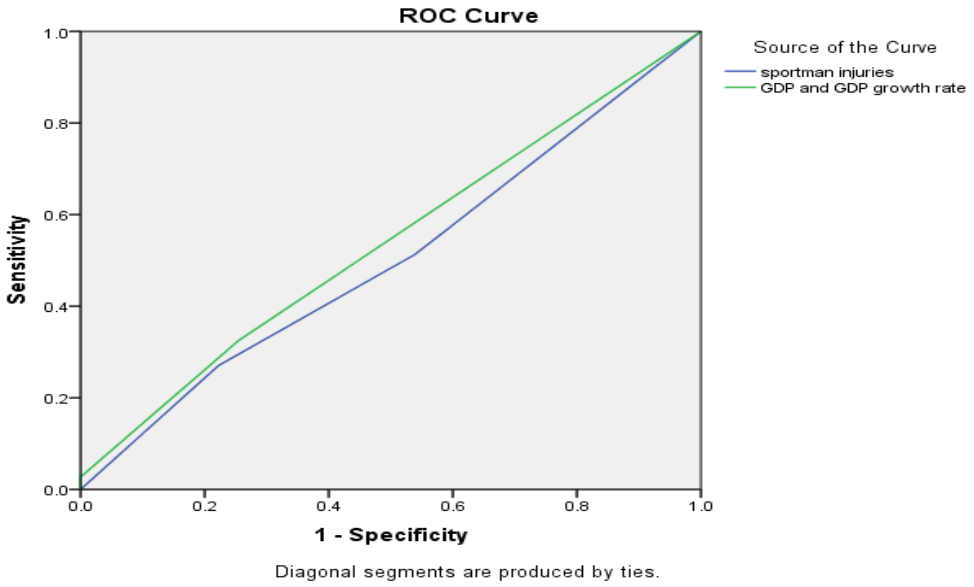

Figure 2. ROC Curve

The curve shows the trade-off between sensitivity and specificity. A random classifier has been placed that predicted 1 with some probability for the baseline. The ROC curve showed that there was a random separation between the sources of the curve. The curve showed that there was a poor separation between sportsmen's injuries and GDP and GDP Growth.

Correlation Coefficient

Table 4

Correlation

Correlations				
		Sportsmen Injuries	**Economic Survival**	**GDP and GDP Growth rate**
Sportsmen Injuries	Pearson Correlation	1	.143	.095
	Sig. (2-tailed)		.155	.346
	N	100	100	100
Economic Survival	Pearson Correlation	.143	1	.101
	Sig. (2-tailed)	.155		.319
	N	100	100	100
GDP and GDP growth rate	Pearson Correlation	.095	.101	1
	Sig. (2-tailed)	.346	.319	
	N	100	100	100

Table 4 presents the correlation coefficient between SI, ES and GGDP. Sportsmen Injuries are considered an independent variable. The SI shows a positive impact at Economic Survival, which is 0.143, which means that 14.3% is significant. Furthermore, the Pearson Correlation between SI and GDP-and-GDP Growth is .095, which means that 9.5% is significant.

The correlation between ES and GDP-and-GDP growth is .319, which means their relationship is 31.9% significant. The GDP-and-GDP Growth rate positively correlates with Sportsmen Injuries and Economic Survival, which are .346 and .101, respectively.

Figure 3 shows the standard control limits of Sportsmen Injuries. The average limit of Sportsmen Injuries is 1.7776. The mean value of SI is false between 1.7 to ~1.95. The curve of the control chart shows that the results for sportsmen injuries were stable. The mean responses were recorded on a 3 Likert-scale between Strongly-Agree and

Agree.

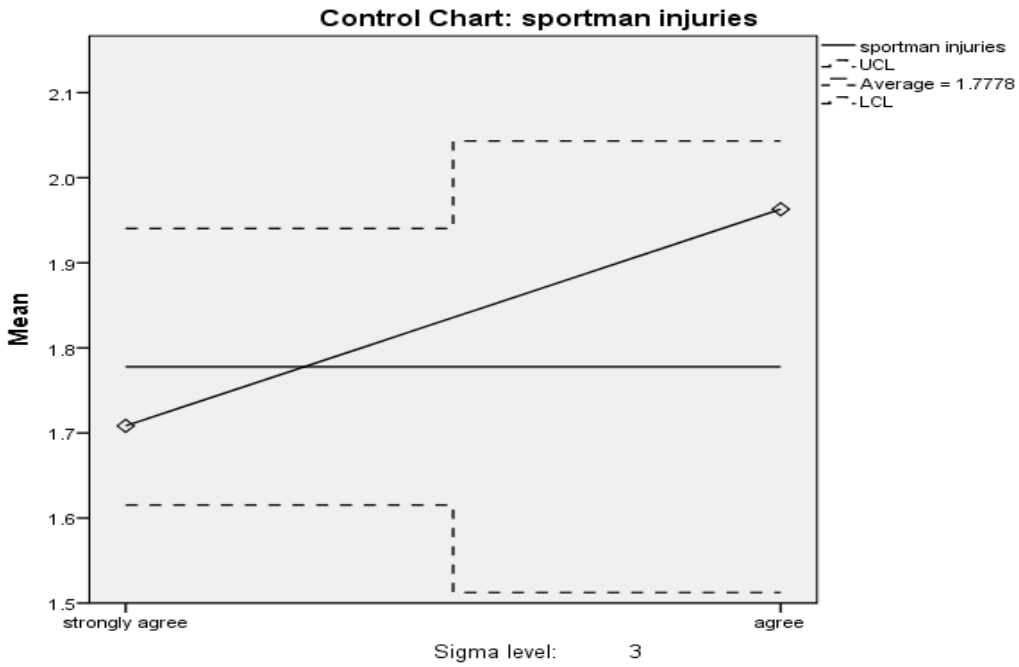

Figure 3. Control Chart of Sportsmen Injuries

Reliability Analysis

The reliability of the instrument scale was calculated through Cronbach's Alpha, and the value was .721 (which falls within the acceptable range). As the data was calculated through a questionnaire, it had three items.

Reliability Statistics	
Cronbach's Alpha	N of Items
.721	3

Figure 4 is the Pareto Chart, used to indicate the frequency of defects and the cumulative impact of the defects. The figure showed the responses between strongly agree, neutral, and agree for Economic Survival and Sportsmen Injuries. The chart shows 26 defects for strongly agreed cases for Economic Survival, and its cumulative percentage went above 100%. The left vertical axis showed the Pareto chart for Sportsmen Injuries, and the right vertical axis showed the response indicator for Economic Survival. The vital responses as well as trivial responses and their cumulative percentage are shown in the chart.

Pareto Chart

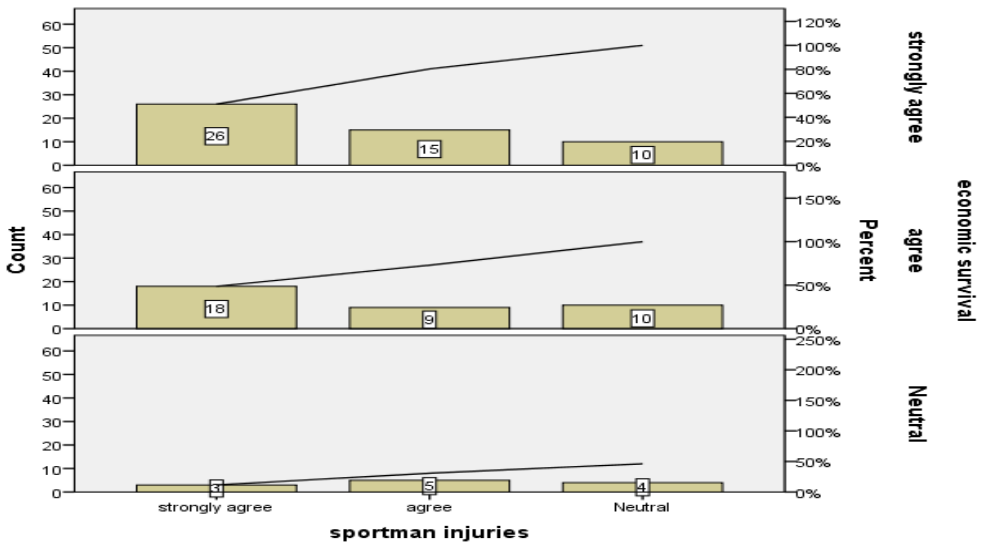

Figure 4. Pareto Chart

Table 5 shows the test statistics of the study. The asymp. Sig. Values for SI, ES, and GDP-and-GDP Growth rate are significant as p<0.005. The Chi-square is right-skewed for the variables. Therefore, the difference between the observed frequencies and expected frequencies is acceptable. As shown in Table 5, the degree of freedom (df) for the variables is 2, which means that SI, ES, and GDP-and-GDP growth rates can move in 2 dimensions without violating constraints.

Table 5

Test Statistics

Test Statistics			
	Sportsmen Injuries	**Economic Survival**	**GDP and GDP growth rate**
Chi-Square	8.780[a]	23.420[a]	77.420[a]
df	2	2	2
Asymp. Sig.	.012	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 33.3.

Two-Stage Least Square Analysis

Table 6 shows the Variables are uncorrelated with the error terms and estimates values of the problematic predictors. The value of t-stats is between +2 to -2, and therefore, it is acceptable, and the value of SI is significant. Beta value is 1.058, and this means that if changes with the degree of 1.058, then 1 unit of SI will change.

Table 6

Two-Stage Least Square Analysis

Coefficients						
		Unstandardized Coefficients		**Beta**	**t**	**Sig.**
		B	**Std. Error**			
Equation 1	**(Constant)**	.014	2.159		.006	.005
	SI	.902	1.219	1.058	.740	.001

One-way ANOVA Test Analysis

Table 7 explains the equality of mean Economic Survival with the help of probability level, the values, and df rates. This test analysis used ANOVA F-test, analysis of variance, between the variables. The value of the ANOVA f-test is .521, and the results are significant. Therefore, the ANOVA test analysis shows a comprehensive mean equality test.

Table 7

ANOVA

ANOVA						
		Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Economic Survival	Between Groups	.508	2	.254	.521	.005
	Within Groups	47.282	97	.487		
	Total	47.790	99			
Sportsmen Injuries	Between Groups	1.872	2	.936	1.422	.000
	Within Groups	63.838	97	.658		
	Total	65.710	99			

Descriptive Statistical Analysis

Table 8 shows that the range of minimum and max is between 1-5. Therefore, the minimum and maximum show the correctness of data, and it should be within the limits of the measurement scale of the instrument. As shown above, the maximum and minimum values range from 1 to 3 Likert scale. No value is less than 1, and no value is above 5 for all the independent and dependent variables. Therefore, the data collected for this study is

normal (Mardia, 1974). This is also the first and foremost assumption of regression analysis.

Table 8

Descriptive Statistics

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Sportsmen Injuries	100	1.00	3.00	1.7700	.81470
Economic Survival	100	1.00	3.00	1.6100	.69479
GDP and GDP growth rate	100	1.00	3.00	1.2900	.47768
Valid N (listwise)	100				

Histogram Analysis

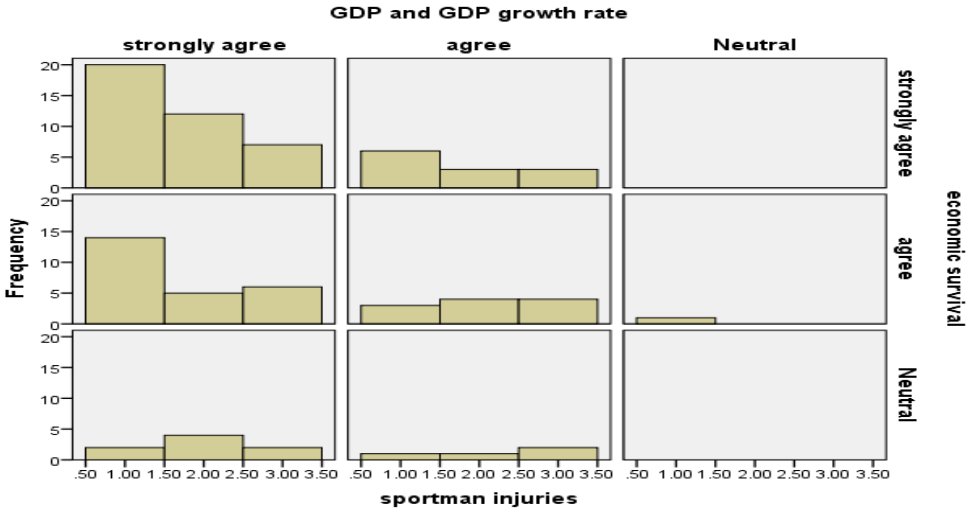

Figure 5. Histogram of Economic Survival, GDP-and-GDP Growth Rate and Sportsmen Injuries

Figure 5 shows the histogram of SI, ES, and GGDP with bars representing numerical values between 0 to 5. The data is categorized by frequency and 3-Likert scale is used for measuring SI, ES, and GGDP. There were no neutral responses recorded, and the maximum range of responses was recorded on the Strongly Agree option.

Mean Test Analysis

Table 6 shows the total missing and included values from the respondents. Therefore, it was noticed that there were 100 respondents, and no value was missing or skipped. All 100 values were included in the analysis.

Table 9

Mean Test Analysis

Case Processing Summary						
	Cases					
	Included		**Excluded**		**Total**	
	N	**Percent**	**N**	**Percent**	**N**	**Percent**
Economic Survival * Sportsmen Injuries	100	100.0%	0	0.0%	100	100.0%

Analysis Overview

Table 10 shows the analysis report of responses. It can be seen that 47 respondents strongly agreed that sportsmen injuries impact economic survival, 29 agreed, and 24 out of 100 responded neutral. The mean and standard deviation of the analysis is given in Table 10.

Table 10

Analysis Reports

Report			
Economic Survival			
Sportsmen's Injuries	**Mean**	**N**	**Std. Deviation**
Strongly Agree	1.5106	47	.62109
Agree	1.6552	29	.76885
Neutral	1.7500	24	.73721
Total	1.6100	100	.69479

Discussions and Conclusion

This study comes is one of the pioneer works to focus on the relationship between sportsmen injuries and economic survival. To our knowledge, no other research has worked on the nexus between sportsmen injuries and economic survival in the past. The current study is quantitative and uses questionnaire as the main instrument of data collection. A total of 100 responses were collected to study the impact of sportsmen injuries on economic survival and GDP-and-GDP Growth Rates. The study helped to ensure players' experiences about injuries and their significant implications for economic survival. The analysis shows that there's an essential relationship between SI, ES and GGDP. Sportsmen's Injuries are considered an independent variable, whereas the ES and GGDP are considered Dependent Variables. The study indicates that SI has a positive impact on Economic Survival and states that SI creates a 14.3% impact on ES, which is a significant one. Furthermore, the correlation between ES and GDP-and-GDP growth rate was .319. In the modern world, sports injuries and economic survival are special issues. The study was conducted to examine the nexus between sportsmen's injuries and economic survival in the future. It was found that to develop effective target prevention for sport's injuries, it is important to understand the associated risk factors, fear of injury, and incidence/prevalence of injury in adolescent elite athletes. The consequences of health injury are rising due to the lack of prospective injury registration. This can result in a relatively incomplete understanding of adolescent elite athletes' performance compared to adult elite athletes' performance. To develop effective target prevention for sport's injuries and understand the risk factors, fear of injury, and incidence/prevalence of injury in adolescent elite athletes. The sports goods industry refers to the modern market where all sports equipment and accessories are produced and sold. A person must be sure about participating in sport's activities, and the time they will dedicate to building a sport's career.

Identifying injury data, risk factors, and injury outcomes in elite teen athletes using potential data collection methods and interview methods is highly relevant and prevents injury from health and sports performance. The analysis of the study was run for studying the impact of sportsmen injuries on economic survival and GDP-and-GDP Growth rates. The study has two hypotheses, and both were accepted. Sportsmen injuries are found to have a significant impact on economic survival as treating injured sportsmen is a costly process. When sportsmen have a higher risk of being injured, their performance is negatively impacted. Therefore, this may be interpreted as both a limitation of the current research design as well as a recommendation for future studies. Injuries have a significant impact on the level of performance and sport's involvement. The current study notably lacks an emphasis on the role of sports involvement, psychological traits, and negative experiences of players.

Future Recommendations

Future Recommendations of the study are based upon its clinical implications. In the future, researchers can seek to reduce the gap within the current study by enhancing the cooperation between the sportsmen and the medical team. Furthermore, this research can provide a clear pathway for sportsmen to recover from their injuries at the right time in the right way. It is compulsory to educate medical staff about the consequences of sportsmen's injury at an initial level. The research work can also ensue transparent communication and awareness about the risks and causes of injury on sportsmen's performance. The researchers can use the experiences of injured sportsmen to demonstrate how injury can minimize self-blame. In the future, researchers can study the role of sport's involvement, the relationship of coach and players, the players' past experiences, and the players' psychological traits to expand the productive dimensions of the study.

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