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ORIGINAL

EFFECTIVENESS OF VIRTUAL REALITY TRAINING IN ENHANCING COGNITIVE AND PHYSICAL SKILLS IN SPORTS

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ABSTRACT

When athletes are given such an environment, they become so immersed in it that they feel like actual sports performers. There are various technologies in virtual reality training systems by which athletes can be better engaged, and the possibility of diversion is reduced. We can say that virtual reality training systems have provided athletes with training systems that can increase focus levels, thus improving performance. This is an important implication of the virtual reality training system in enhancing the cognitive skills of athletes. The important implication of the virtual reality training system is the aspect of an immersive training environment for athletes. The research study was based on primary data analysis to determine whether the research used SPSS and AMOS software. When physical training is provided to athletes, many aspects can cause a diversion of attention from athletes. There is also the factor of boredom in physical training, which can divert the attention of Athletes. However, by using a virtual reality training system, an immersive training environment can be provided to athletes to make them feel like they are part of that sport. Such an immersive training environment will help increase athletes' cognitive skills. The overall research found a positive and significant relationship between virtual reality and physical skills. They are directly enhancing cognitive and physical skills in sports. The important implication of the virtual reality training system is that it can help boost athletes' memory.

KEYWORDS: Virtual reality Training (VRT), Cognitive (CC), Physical Skills (PS), Sports (SS), AMOS software, Effectiveness (EE)

1. INTRODUCTION

Virtual reality means creating such a computer-based system in which the created scenes feel like just reality. Virtual reality is common in video games, screens, medical science, cognitive therapies, and others. However, virtual reality users are not confined to these aspects only. These days, virtual reality is also used in sports. Virtual reality is used in sports to enhance thinking or cognitive skills and improve athletes' physical skills. In this introduction, we will understand how virtual reality can be used in athletes' training to enhance performance by focusing on athletes' cognitive and physical skills (Ahir et al., 2020). As we already know, the thinking of an athlete must be clear enough to make swift but wise decisions. An athlete must be clear in terms of his goal, which can only be achieved by firm determination. For such firm determination, athletes need improved cognitive skills. In this introduction, we will first focus on improving cognitive skills, and then we will talk about enhancing athletes' physical skills. There are many ways by which cognitive skills are enhanced by using virtual reality. The first way is that by using virtual reality, the level of concentration of athletes can be enhanced better (Qian et al., 2020). As virtual reality feels just like true reality, an athlete has to focus just like the original performance in sports; this aspect will help to increase the concentration level of the athlete. Consistent training is given to athletes through virtual reality. These trainings help athletes to develop a habit of continuous concentration and focus on sports. The other way by which cognitive skills can be improved by virtual reality is the enhancement of athletes' memory (Romeas et al., 2019). There are some parts in training by virtual reality in which some tasks are given. These tasks are based on sharpening the memory of athletes. The betterment of memory in athletes is also a positive point towards betterment in the performance of athletes. The main factor in cognitive skills is the decision-making power of athletes. Sometimes, during sports, an athlete must confront such conditions to make a swift and timely decision. Proper and continuous training in virtual reality will help athletes develop better decision-making (Richlan et al., 2022). The main decisive factor in the athlete's performance is the athlete's anxiety and stress levels. Sometimes, during performance, an athlete may suffer from high levels of stress and anxiety because of fear of failure or some other factors. An athlete must be emotionally stable to such a level that he can bear stress without any impact on performance. An athlete must be able to control their emotions to avoid poor performance or injury during sports (Stone et al., 2011). This aspect of controlling anxiety and stress levels can also be learned in a better way by training in virtual reality. This training gives such an environment to the athlete in which they seem to suffer from true anxiety about performance, so they understand how to control this factor during their performance. There are also different ways in which athletes' physical skills can be improved through training in virtual reality. The first way is that there is no need for a physical trainer in

virtual reality(Casella et al., 2024). We know that when there is a need for a physical trainer, there comes fatigue and error. However, virtual reality is based on computer systems, so this training has no aspect of fatigue. The other aspect is an error in physical training, but in virtual reality training, there is accuracy to such an extent that there is no risk of any minor error. The other way of enhancing athletes' physical skills through virtual reality is the aspect of motivation. As we know, motivation is quite necessary for athletes because sometimes they feel down. Not all the time, an athlete may find success; rather, in some cases, an athlete may also have to confront failure. To excel in a career, it is very important to accept failure as a way of motivation as well. One of the benefits of virtual reality is that it is a consistent way of motivating athletes(Stone et al., 2018). This motivation leads to better engagement in training. This better engagement may help to improve the physical skills of athletes. The other way of using virtual reality for the enhancement of the physical skills of athletes can be explained in terms of competitive edge. Coaches provide the competitive edges during physical training, but in virtual reality training, competitive edges are provided by computer-based systems. In virtual reality training, there is a strong and difficult competitive edge provided to athletes. By practicing at such competitive edges, athletes' performance may be enhanced (Bedir & Erhan, 2021). The other way of improving physical skills through virtual reality can be explained in terms of continuous training. As we know there is no use of human professional skills in virtual reality training. Rather, it is based on computer systems, so it can provide uncountable attempts to improve athletes' physical and cognitive skills. Such continuous training will lead to betterment in the performance of athletes by improving the physical and mental skills of athletes(Ng et al., 2019). The other important benefit of virtual reality training is that it is a safety training in which there is a risk of any injury. As we know, injuries in athletes may take too much time to recover. These injuries may also result in overuse injuries or just the end of the athlete's career. To avoid such injuries, virtual reality trainings are promoted and suggested. In this way, when athletes are not injured, there will be no hindrance to their better performance. The other important factor is that the cost of virtual reality training is far less than that of physical training. Along with this, there are more benefits to virtual reality training, which makes it a more reliable and useful way of training for athletes(Richlan et al., 2023).

1.1 Research Objective

The main objective of this research is to understand the use of virtual reality training in sports. This study has explained all the aspects of virtual reality training that can enhance the cognitive and physical skills of athletes. The research study determines the Effectiveness of Virtual Reality Training in Enhancing Cognitive and Physical Skills in Sports. The research paper is divided into five specific research chapters. The first portion represents the

introduction and includes the objective of the study. The second section describe that literature review the third section present methods of study. The fourth portion represent that result and its descriptions also that its explain the implication related to the physical skills and sports. The last section summarized overall research study and describe recommendations about topic.

2. Literature Review

The current study broadcasts an accounting survey of mediation (for example., preparing) that concentrates on utilizing Computer-generated certainty in athletics settings. It gives a subjective outline and account rundown of these examinations to explain the latent advantages of virtual reality innovation for athletics execution upgrade, to extricate the fundamental qualities of the current investigations, & to illuminate and direct subsequent exploration. The neurological cognition systems (for example., optical inquiry conduct, symbolism), strategic viewpoints (for example., versatile preparation trouble), & the problems of certifiable exchange and quality of being generalizable through that such prospective games execution associated enhancements might happen are talked about(Richlan et al., 2023). Researchers reveal that computer-generated certainty & expanded certainty improved practice preparation is an original way to deal with advancing well-being. Just 2 examinations inspected the viability of augmented reality preparing schemes on actual execution, & the discoveries regarding such impacts were not independently revealed. A rundown of conceivable mediators was tried; however, that fickle was not fundamentally connected with the impacts of virtual reality on the 3 results(Ng et al., 2019).

The purpose of this survey is to assess the impact of Computer-generated certainty symbolism preparing schemes by shooting execution and symbolism abilities of competitors, & to direct an examination with Computer-generated Engine Conduct Practice and tape-record Demonstration. Accordingly, it was noticed that researchers demonstrate quicker advancement in shooting exhibitions. From such discoveries, one might say that virtual reality based imagery scheme is greater proficient with regards to shooting execution and symbolism abilities than Visual Motor Behavior Rehearsal & Video Modeling, that is the much utilized envision preparing pattern(Bedir & Erhan, 2021). A quickly creating field of exploration is centered around the utilization of Computer-generated certainty frameworks to upgrade competitor execution in athletics. The supposition is that will be that execution of those innovations will upgrade the ability to obtain and facilitate competitor advancement. Also, utilization of these advancements for improving competitor improvement and execution readiness should be productively and actually utilized by mentors and competitors to rescue clock, strength and different assets practically speaking and preparing. An environmental element's reasoning suggests how virtual

reality frameworks, when painstakingly executed, may improve and upgrade erudition plans, yet may by no means substitute training for picking up over actual convention(Stone et al., 2018). Studies target to trial whether a virtual reality-located cognitive motor dual task convention might be utilized for engine and mental expertise improvement in youthful, sound themes. Expanding proof demonstrates that augmented experience preparing is exceptionally successful in mental and engine restoration. The virtual reality reaction training viability on corporal and mental capabilities demonstrates that Computer-generated simulation uses may be utilized by the youthful populace for amusement intentions as well as mental engine prepare(Casella et al., 2024). Scholars gives a subjective outline and account synopsis of those investigations to explain the expected advantages of virtual reality innovation for athletics execution improvement, to extricate the fundamental qualities of the current examinations, & to illuminate and direct subsequent exploration. Subsequently, mediations in virtual reality or broadened certainty can possibly evoke genuine impacts in athletics execution upgrade via preparing of the engine and mental abilities and capacities in competitors, involving discernment activity abilities, key, strategic and navigation, answering surprising occasions, & improving mental strength and psychological execution below tension(Richlan et al., 2022). Researchers investigated the mental and actual impacts of a virtual reality-located practice scheme on more seasoned grown-ups with mental impedance. The virtual reality tai chi practice represented a defensive impact on a few mental and actual capabilities in more established grown-ups with mental impairment. The really captivating the scheme, the more noteworthy the advancement in the mental execution(Hsieh et al., 2019). Studies suggest that Computer based certainty is arising newly in the area of cross-disciplinary examination (Soares Costa et al., 2022).

The energetic circumstances may respond as per the mortal speech, structure, etc., quickly that people may speak with Computer-based climate in evident period. Hence, virtual reality innovation might be placed into applying in schooling, armed forces, athletics preparing, & is depicting a significant portion in the development(Ahir et al., 2020). Researchers seemed to survey the effect of preparing on work execution and decide ideal preparation requirements for development and erudition. Discoveries show that the double errand worldview was related to execution past possibility degree on the two three-dimensional multiple object tracking & dynamic undertakings, however, a significant double assignment charge. Strangely, the outcomes appeared to incline toward merged three-dimensional multiple object tracking preparing beyond synchronous three-dimensional multiple object preparing when joined with an engine dynamic undertaking yet not when joined with an intuitive dynamic errand(Romeas et al., 2019). Scholars reviewing the impacts of Computer-generated certainty- put together activity with respect to corporeal, mental, & reconstructive results in different populaces. The discoveries

recommend that virtual reality practice can possibly apply a definite effect on a person's corporeal, mental, & reconstructive results contrasted with conventional activity. In any case, the peculiarity, amount, & test measure of current examinations is not even close to great. In this manner, further thorough examinations are expected to affirm the noticed constructive outcomes(Qian et al., 2020). Scholars suggest that visual-focused preparing is a usually utilized technique to foster dynamic in competitors and authorities. This research meant to explore the viability of the two 360-degree virtual reality & correspond disseminate film on further developing direction. The 360-degree virtual reality executed altogether greater than the benchmark bunch in the 360-degree virtual reality maintenance trial. No gatherings genuinely worked on beyond the mediation(Kittel et al., 2020). Researchers fostered a measured Computer-generated experience game utilization that may be utilized to combine practice trains for clamor athletics. The outcomes demonstrate that a computer generated simulation game utilization, for example, the inspected Computer generated experience ping pong video game, might without a doubt be utilized really as the two an activity and a preparation device(Liu et al., 2020). Studies elaborate that Computer generated certainty is a boundless innovation draft a rising concern for performers and mentors, particularly in group soccer athletics as it presents a straightforward device to mimic, break down and coach circumstances that are much of the time very complicated to even consider repeating in the area (Robert et al., 2023).

Concentrates on that involved virtual reality in group soccer athletics actually have a few limits, chiefly because of specialized problems or experiment plan. Studies additionally depicts the manner in which virtual reality ought to be utilized to upgrade comprehension of execution in group soccer athletics(Faure et al., 2020). Studies claim that Computer based certainty innovation is progressively utilized by competitors, mentors, and other game associated experts. From the audit, scholars demonstrate that intelligent virtual reality uses have improved a scope of execution, corporeal, & mental results(Alhadad & Abood, 2018). The objective behind this survey was to explore the impacts of psychological equilibrium preparing schemes on engine cooperation and expertise move. Researchers' discoveries recommend that the two preparation mediations may fundamentally further develop cooperation and expertise move trial outcomes. Also, virtual reality psychological preparation might enjoy a few upper hands beyond customary psychological preparation(Köyağasıoğlu & Özgürbüz, 2022). Scholars explain that Computer generated certainty innovation is by and large progressively utilized by competitors, mentors, and other game associated experts. From the survey, researchers demonstrate that intuitive virtual reality uses have upgraded a scope of execution, corporeal, & mental results. The particular impacts became affected by elements connected with the competitor & the virtual reality framework, that include competitor elements, virtual reality climate components,

work components, & the non-virtual reality climate components (Neumann et al., 2018). Studies show that athletics experts seemed progressively utilizing Computer generated certainty for preparing and appraisal of ability located athletics. Researcher discoveries sustain the thought that perplexing abilities might be mastered in virtual reality & that acquired abilities may move to this present reality. This study presents an economical virtual reality ping pong preparing stage, empowering powerful preparation through constant engine and soccer reverting procedure criticism (Ogaz et al., 2021). Scholar studies reveal that execution in the goal tending work enhanced from preliminary test to terminal test similarly over the 2 force requirements. Essentially, execution on an alternate errand that necessary quick reactions to optical aims additionally expanded from preliminary test to terminal test, as well similarly for the 2 power requirements. Generally speaking, such outcomes contest the normal confidence in athletics that greater serious preparation than an ensuing trial is useful for execution (Shimi et al., 2022). Studies explain that virtual reality innovation is turning out to be further famous with obvious effect on gathering different physical angles, distinguishing and working on sensory-motor capacities, repeating rivalry and climate circumstances where response period is basic, & creating expertise securing. This study will elevate better approaches to sharpen explicit, difficult to acquire abilities, empowering unique reasoning for mentors (Farley et al., 2019). Studies proof referred to and thinking produced in the study sustain the possibility that, below specific circumstances & about explicit students, Computer generated certainty innovation maybe a valuable device to upgrade erudition in active work sites by working with the calculated modify procedure (Pasco, 2013).

Athletic learning specialists have discovered that master entertainers in several games utilize better intuitive-mental abilities than perceive designs in rivals' activities, subsequently preparing fast reaction determination and engine implementation. Specialists have created advancements and techniques for estimating intuitive-mental abilities that might be utilized to work on such abilities (Fadde & Zaichkowsky, 2018). Researchers examines the current proof to help the plausibility and viability virtual reality frameworks utilize by more seasoned grown-ups indoors to empower active work to tackle impedances, action restrictions and interest is feeble with a greater gamble of inclination. The discoveries of this audit might illuminate subsequent, extra thorough examination (Miller et al., 2014). Scholars revealed that in the cutting-edge period of athletics preparing, the collaboration among movement catch and Computer-generated certainty presents an imaginative way to deal with upgrading preparing accuracy. Because of a complete writing hunt, researchers inspected the bunch implications, from functional preparing upgrades to sped up recovery procedures. Researchers discoveries highlight the ability of ongoing criticism, vivid preparation conditions, & customized systems that such combination gives (Li et al., 2024). Scholars elaborate that athletics direction is

a mind-boggling cycle and assumes a conclusive part in athletics execution. The utilization of VR innovation in athletics dynamic preparation has gotten far reaching consideration. By the audit, it is inaugurating that computer experience innovation has significant incentive for athletics dynamic preparation. In athletics procedure, computer experience innovation may recreate athletics dynamic undertakings, evaluate & break down competitors' games dynamic execution (Yunchao et al., 2023). Researcher studies reveal that athletics might join VR innovation with greater accuracy preparing to improve the preparation viability of clients. Because of the similar trial with 4 information following patterns, the adequacy and predominance of the sporting event showing means coordinated with VR innovation were confirmed (Pan, 2024).

3. Methodology

The research study determines that Effectiveness of Virtual Reality Training in Enhancing Cognitive and Physical Skills in Sports. The research based on primary data analysis for determine these data used SPSS and AMOS software and generate the informative result included ANOVA test analysis, the chi square analysis, also that graphical analysis between them.

3.1 Implications

The importance of cognitive and physical skills for better performance and swift recovery can never be underestimated or denied. There are various ways that are used for enhancing cognitive and physical skills in sports. Virtual reality training is one of these ways that can be proven effective for enhancing cognitive and physical skills in sports. Virtual reality training has been used as a mandatory part of training for athletes. There are many important implications of virtual reality training systems in enhancing cognitive and physical skills; a few of these implications are described below:

3.1.1 Enhanced Level of Focus, Immersive Training Environment, Boost Memory

The level of focus and concentration are decisive factors in the performance of Athletes in any kind of sport. When there is proper focus and attention by athletes toward the sport, the level of better performance increases, and at the same time the risk of injury decreases. So, there was a need for such a suitable training system that could enhance the focus and attention level of athletes so athlete could perform well in sports. The level of memory in athletes increases by improving focus and attention levels. When focus and attention levels are enhanced by the virtual reality training system, memory will automatically become better. These implications convince us about the importance of virtual reality training systems for enhancing the cognitive skills of athletes.

3.1.2 Enhanced Situational Awareness, Better Emotional Intelligence, Better Visual Processing

Situational awareness is mandatory for athletes to such a level that when an athlete is mentally aware of his surroundings and situation, he can perform well in sports. The virtual reality training system has much importance in this aspect of training. During physical training, it is very difficult to create such a situation which can make the athletes aware of their surroundings. But by using a virtual reality training system, such situations can be easily created in the form of illusion which seems to be real for athletes. When any stressful condition arises, there is activation of the sympathetic system of the human body which responds to such conditions. In this way, athletes find a better platform to become habitual of such sympathetic responses. The other important implication of virtual reality training systems in enhancing cognitive skills is the aspect of emotional intelligence and emotional regulation in athletes. As we know emotional intelligence is a decisive factor in the Mental Health of athletes. If an athlete is aware of controlling his emotions in a better way, he can confront any stressful condition of sports in a better way. Virtual reality training systems have provided such training tools that helped enhance the emotional intelligence of athletes. As we know there is no surety that an athlete will always find success, sometimes the opposite of it happens. In such a condition, an athlete must be mentally prepared for it. Emotional intelligence helps in emotional regulation in athletes so that they control themselves in every type of condition. The other important implication of the virtual reality training system is better visual processing. In every kind of sport, there is a need for better vision so that tragedy must be clear in the vision of the athlete. As there is some training related to physical health, there is also some training which is related to the enhancement of visual processing. In this way, virtual reality training systems can be proved effective because they enhance the visual ability of Athletes as well. The better vision results in better performance of athletes in sports.

3.1.3 Personalized Experience and Real-Time Feedback:

We know that individual differences are present in every field of life. The same is the case of athletes, there is a presence of individual differences in them. These individual differences suggest that there should be a personalized training system for every athlete. Virtual reality training systems have solved this problem as well. This system can provide personalized training for athletes according to their personal needs. In addition to it, the other positive impact of virtual reality training is that there is no bound of time or place in it. Moreover, this system is based on real-time feedback which gives an idea about the performance of athletes. It is closely observed how much is there impact of virtual reality training on the performance and skills of athletes. All of these

implications make the virtual reality training system an effective training system for athletes.

3.2 Numerical Results

Table 1: Result of ANOVA

ANOVA		SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.
VIRTUAL REALITY TRAINING 1	Between Groups	.128	2	.064	.185	.832
	Within Groups	16.192	47	.345		
	Total	16.320	49			
VIRTUAL REALITY TRAINING 2	Between Groups	1.532	2	.766	2.574	.087
	Within Groups	13.988	47	.298		
	Total	15.520	49			
COGNITIVE 1	Between Groups	.492	2	.246	.723	.491
	Within Groups	15.988	47	.340		
	Total	16.480	49			
COGNITIVE 2	Between Groups	1.308	2	.654	1.601	.212
	Within Groups	19.192	47	.408		
	Total	20.500	49			
PHYSICAL SKILLS 1	Between Groups	1.308	2	.654	1.787	.179
	Within Groups	17.192	47	.366		
	Total	18.500	49			

The above result shown in table 1 demonstrates that ANOVA test analysis, according to the result represents the sum of the square value, the mean square value, the F statistic rate, also the significant level of each variable, including dependent and independent. The first indicator is virtual reality training 1 its shows that sum of square value is 0.128, 16.192 also that its mean square value ia 0.064 and 0.345 shows that 6% and 34% average square rate. According to the result its F statistic value is 0.185 and its significant level is 0.83 shows that positive and 83% significantly value between them. similarly, the virtual reality 2 is another independent variable result represent that

between the group rate is 1.532 the mean square rate is 0.766, 0.298 shows 76% and 29% average square value. The significantly rate is 0.087 shows that 8% significantly value between them. the cognitive 1 and 2 play as mediator role in between two variables according to the table-1 result its t statistic value is 1.601 and 0.723 its significant rate is 0.491 and 0.212 shows that 49% and 21% significant level between them. the physical skills 1 is main dependent variable result describe that t statistic level is 1.787 the significant rate is 0.179 shows that positive t statistic value and 17% significantly rate between them. according to the result its sum of square values related to between the group and within the groups is 1.308, 17.192 and 18.500 respectively.

Table 2: Result of Model Summary

MODEL SUMMARY				
MODEL	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.463 ^a	.215	.145	.56826

a. Predictors: (Constant), Cognitive 2, Virtual Reality Training 1, Cognitive 1, Virtual Reality Training 2

The above result shown in table 2 demonstrate that model summary result describes R rate, R square value also that adjusted R square and standard error of the estimated value of model 1. The R rate is 46% which is clearly shows that model fit for analysis and positive link between them. similarly, the adjusted R square value is 0.145 also that standard error of the estimated value is 0.5682 its shows that 56% estimated value between them.

Table 3: Result of ANOVA^a

ANOVA^a						
MODEL		SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.
1	Regression	3.968	4	.992	3.072	.025 ^b
	Residual	14.532	45	.323		
	Total	18.500	49			

a. Dependent Variable: Physical Skills 1
 b. Predictors: (Constant), Cognitive 2, Virtual Reality Training 1, Cognitive 1, Virtual Reality Training 2

The above result shown in table 3 describe that sum of square, values, the mean square values, also that F statistic value and significant rate of regression and residual model. The regression model shows that the sum of the square rate is 3.968, the mean square value is 0.992, the F statistic value is 3.072, also, the significant level is 0.025 shows that there is a positive and 25% significant level between them. the overall result shows a positive and significant level between them. similarly, the residual model shows that the sum of the square rate is 14.532 and the mean square rate is 0.323 sho, which means that the positive mean value is also the positive sum of the square rate.

Table 4: Result of Coefficients

COEFFICIENTS						
MODEL		UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS	T	SIG.
		B	STD. ERROR	BETA		
1	(Constant)	.541	.398		1.357	.181
	Virtual Reality Training 1	.279	.141	.262	1.978	.054
	Virtual Reality Training 2	.279	.147	.256	1.895	.065
	Cognitive 1	.272	.142	.256	1.918	.062
	Cognitive 2	-.150	.129	-.158	-1.166	.250

a. Dependent Variable: Physical Skills 1

The above result shown in table 4 demonstrates that linear regression analysis results describe unstandardized coefficient analysis, including beta value, and standard error value. The result also describes the t-statistical analysis and significant value of independent variables. virtual reality training 1 is the main independent variable. According to the result, its unstandardized coefficient value is 0.279, the standard error rate is 0.141 also, that t statistic value is 1.978, and the significant value is 0.054 shows that the positive and 5% significant level between virtual reality training and physical skills. Virtual reality training 2 is another independent variable. According to the result, its t statistic value is 1.895, and the significant value is 0.065, showing that there is a 6% significant rate between them. cognitive 1 and 2 both are considered dependent variables. The result demonstrates that the t statistic value is 1.918 and -1.166, respectively. The significant levels are 0.062 and 0.250, with 6% and 25% significant rates between the cognitive and physical skills.

Table 5: Result of Test Statistics

TEST STATISTICS							
	VIRTUAL REALITY TRAINING 1	VIRTUAL REALITY TRAINING 2	COGNITIVE 1	COGNITIVE 2	PHYSICAL SKILLS 1	PHYSICAL SKILLS 2	
CHI-SQUARE	23.680 ^a	31.360 ^a	21.280 ^a	18.760 ^a	19.240 ^a	14.920 ^a	
DF	2	2	2	2	2	2	
ASYMP. SIG.	.000	.000	.000	.000	.000	.001	

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 16.7.

The above result shown in table 5 represent that test statistical analysis result demonstrate that chi square values also the significant rates of each variables included dependent and independent. The chi square value of virtual reality training 1,2, is 23.680 and 31.360 the cognitive 1,2 shows that chi square rate is 18.760 and 21.280 respectively. According to the result overall significant rate is 0.000 shows that 100% significant level between them.

3.3 Histogram Analysis

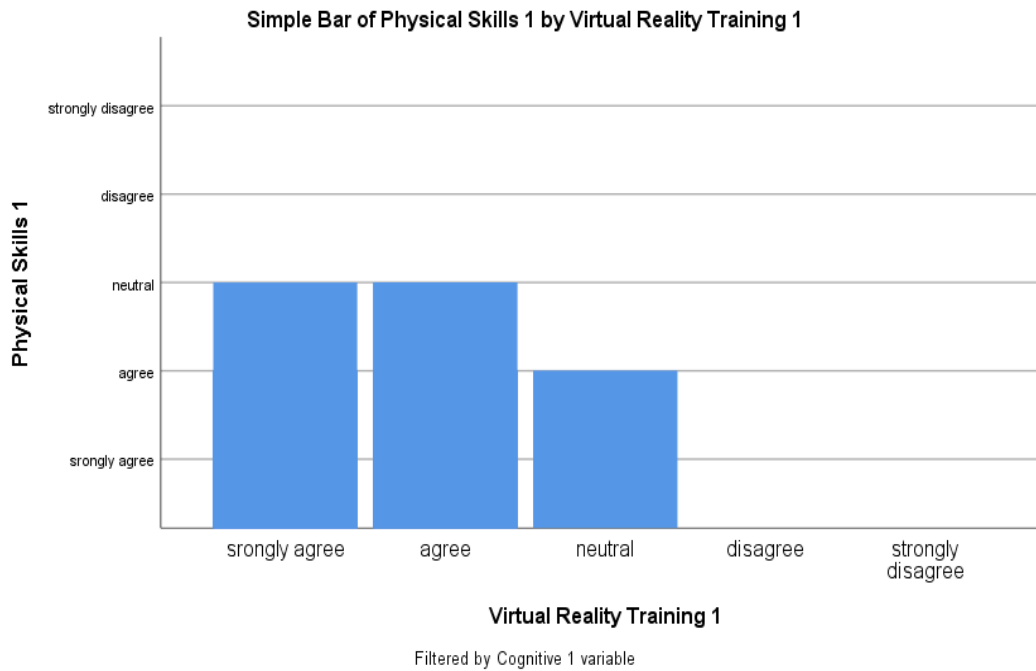


Figure 1: Simple Bar of Physical Skills 1 by Virtual Reality Training 1

The above graph of figure 1 presents a histogram analysis between physical skills and virtual reality training. The result shows that the vertical side presents the range of physical skills, and the horizontal side shows virtual reality training 1. The above blue bar line presents the performance and relation between them. Overall, the graph shows a positive and significant relation between physical skills and virtual reality training.

4. Conclusion

Virtual reality training systems have solved this problem very well. The virtual reality training system is based on the creation of illusions that seem to be real for athletes. It provides such an environment that all the parameters in virtual reality feel just like the reality of the environment. The memory of athletes must be better to such a level that they can make decisions in less time by keeping in view all the factors related to it.

The memory of athletes can be enhanced by engaging them in a virtual

reality training system. Such illusions are repeated again and again, and they become fixed in athletes' minds. Such illusions are created, which an athlete may confront during a performance in sports. The overall research concluded that there is a positive and significant relation between virtual reality training and physical skills in sports. After overall research overview of these aspects of the implications of the virtual reality training system, we can conclude that the virtual reality training system has gained much importance in recent years because of its different benefits.

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