

Article

# Analysis and evaluation of the effect of sports on promoting health in Traditional Wushu

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**Abstract:** Nowadays, the analysis and evaluation of traditional sport in wushu promotes health in the assessment of practice has been proved to keep the body healthy, making it an excellent complement to regular exercise. Sports are a vital element of a participant's growth and development and help in the development of psychological, physical health fitness of the body. Through involvement in sports and activities, a person learns numerous skills, experiences, and self-beliefs that are useful for developing their personality. The challenges to be facing in traditional wushu include a higher risk of headache, inhalation, spinal damage, arterial shatters, and neck injuries. This paper introduces the Data Mining technique (DM) for the effect of sports on promoting health in Traditional Wushu (TW) that assists the player in analyzing mutual information from health data. Presenting players with traditional wushu generates the pattern recognition outcomes of sports health-boosting operations. This research has been used to evaluate the influence of exercise on people's well-being, demonstrating the nutritional benefits of athletics participation. The findings indicate that the model has been used for assessing and analyzing the accuracy that can significantly influence the promotion of the effect of human health enhancement.

**Keywords:** Traditional Wushu; sports health; data mining; physical health fitness; martial arts

## 1. Introduction

Sports participation is encouraged by several athletic health approaches and lifestyle choices. Human health can be improved in various quantities by implementing different exercise intensities and patterns in traditional wushu. Due to the lack of an accurate evaluation of sports for promoting health, sports people might quickly lose their identity while working out due to a lack of understanding of the systematic and continuous connection between physical conditioning and fitness [1]. People's ability to recognize their health and the impact of sports on potential treatment development was evaluated by measuring the distance between their heartbeats, aligning, and performing various orientation strategies [2]. TW is an ancient form of fighting that has been reinvented for physical training and recreation in the modern world. A growing number of young individuals are joining TW, and sports training provides several benefits to the physical, mental, and emotional well-being of individuals worldwide. They may not promote combat as a treatment alternative for those at risk of becoming aggressive [3]. Analysis of current knowledge on the health and fitness-improving qualities of martial arts, highlighting the advantages of various styles of sport, and a foundation for future studies on wushu as an exercise prescription in physical therapy [4]. These exercises have been

utilized for generations by ancient Chinese individuals to improve people's fitness, encourage health, and avoid sickness [5]. Various cultural minorities place high importance on some of these activities because of the social and spiritual health benefits they produce. TW and the nutritional advantages of many traditional sports and physical activities for elderly Chinese adults have not been well evaluated in the period of this rich and diverse heritage [6]. The practice of TW sports may benefit a human personality and well-being in some ways, and educating participants about mental health is a top priority [7]. Physical activity may teach people about mental health and improve participants' psychological state through fighting arts education [8].

Practising Chinese martial arts may help people keep their health improved while also enabling players to deal with personal emotions and build relationships with people around them. TW classes are the most advanced kind of combat skills instruction, and participants represent the future of economic development. The strength and integrity of the community are directly linked to their mental character [9]. On the one hand, participants in martial arts programs use the combination of procedures necessary for education to enhance their Fighting experience and improve attributes like stamina, speed, quickness, and endurance. It provides a method for dealing with hardships [10]. Evaluation model of physical training with effect on physiological well-being, this paradigm combines the control of vigorous exercise with that of a nutrient-dense diet. People can discover if a person's present nutrition is fair and as much of an influence sports training has on their health using the model [11]. The internal body's ability to produce a significant volume of data during exercise complicates appropriate data processing. DM has been used to develop an approach to examining the connection between athletic participation and wellness [12]. People's mental health has various kinds of difficulty in today's society due to the rise in excessive wealth. There is no other sport that can match the tremendous western cultural benefits that come from practising martial arts. Because of this, TW is becoming increasingly prevalent in physical activity [13]. As a form of fitness and approach to instruction, martial arts initially appear to be a one-stop experience. Even though these aims are important, many martial artists consider their practising a pathway to personal success [14]. It's common for ancient TW training to include concentration and breathing exercises and an emphasis on self-discipline and civility to everyone else. Calming, conscience and imagination coordination are all benefits of these techniques, which help to promote general well-being [15]. Comparative abilities of choice have a significant role in healthy lifestyle practices related to wellness. Athletes, in general, must take the opportunity to lead good health. TW is thought to have exceptionally high learning benefits, linked to several positive ideals that promote healthy habits [16].

Athletes' fitness is reflected in their physiological well-being. Everyday practice, which is the accumulation of regular workouts, is the basis for determining the body's stress tolerance and limits in its capacity to endure impact and load [17]. Martial arts training is lengthy because of TW's high strength and density before the game. This training may be exhausting, and the mind is not focused on the task at hand while practising [18]. However, virtual reality technology (VR) and fitness are becoming more popular. The research on martial arts in this area lacks specific

application strategies and methods that need further exploration. Immersive practice spaces, real-time feedback, and safe simulations of complicated moves are ways virtual reality (VR) technology might improve conventional Wushu training. Despite its promise, current restrictions include high prices and a lack of mainstream adoption. The DM-TW model utilizes the proportion of health care models as a measuring indicator to examine the health-enhancing impact of community members and their well-being on following sports. The DM-TW approach finds better mental and physical wellness by mining data on Wushu practitioners' health patterns. The general health and happiness of people participating in sports and other forms of physical exercise may be better tracked using this approach when applied to larger community settings. As a result, this model can detect developments in human health data and is widely applicable [19]. The process of designing a method for detecting and responding to movement using target intelligent tracking video processing (ITVP), the equipment for a program's deployment to promote health, and adding a shielded tracker to the framework so that motion data can be protected from outside influences. Further combining the real-time target ITVP and establishing a moving participant [20].

The Main Contribution of the paper:

- In combat sports, Data Mining (DM) algorithms are applied to analyze and evaluate the health effect for the participants and alterations in the procedure of sequence data in competition.
- Analyzing data and applying it to practice novel methods can increase player performance in DM-TW. Analysts use player experience data to make informed decisions about using them in the wushu game.

The remainder of the article is section 2 indicates a literature review on improving the analysis and evaluation of the effect of sports TW-DM section 3 denotes the evaluation of promoting health in traditional wushu, as section 4 mentions results and discussion on Traditional wushu, section 5 experimental analysis of health-promoting sports research and concludes this paper.

## **2. Literature review**

Ma et al. (2022) introduced martial arts, classified as wushu, a sport that emphasizes outsourcing. For many years, deep learning has been a vital tool for improving the quality of Wushu training evaluations [21], a prominent health-promoting study sector. Brian et al. (2020) introduced health disparities as becoming more prevalent in the public eye, and they go undiagnosed due to several factors. The huge amount of primary data gathered during Wushu training limits deep learning models. Real-time processing of this data requires a lot of computational power. The deep learning neural network may struggle to generalise across combat training data due to its wide range of fighting styles, manoeuvres, and body mechanics. According to a comprehensive study of Meta-Analysis in Sports Health evaluation (MASH) [22], martial arts training may be an effective sport-based mental well-being care. Yan et al. (2022) detailed Fieldwork on Martial Arts Biomechanics (FMAB) research can be aided by keeping an eye on the current trends in this area. Martial arts training may enhance mental health, decrease anxiety,

and treat mental health issues, but it cannot replace other psychological therapy. As a major mental health treatment, martial arts is also limited by its unstandardised training and injury hazards. Discussions and ideas based on relevant field research are included in the proposal [23]. Martial arts have a long tradition as a major sport, and there is always the considerable potential for expansion study. Potential next steps for martial arts biomechanics research include developing quantitative models to better gauge training efficacy. Most studies are concentrating their efforts on increasing test reliability and memorisation capacity. This covers studies that use BP neural networks as their foundation.

Gala et al. (2022) proposed a paper that analyses the features of ancient wushu with a standard movement based on cognitive Internet of Things (IoT) network gesture recognition [24]. When it comes to contemporary health concerns, such as chronic non-communicable illnesses, traditional Wushu has its limits, even if it's good for physical fitness and mental wellness. Wushu originated from the old ways of thinking and doing things, which may not be the best approach to modern health problems caused by unhealthy lifestyle choices. It investigates the characteristics of Cloud Health Promotion from Wushu Sports evaluation (CHPW) in the context of the current situation of sports education. Li et al. (2022) proposed that wushu practitioners with Conventional Neural networks (CNN) will benefit from regular training in core strength and traditional wushu moves [25]. Competitive martial arts routines are all examined in this paper to determine the strategic health promotion of ancient sports. Nasim Alnuman and Ahmad Alshamasneh (2022) proposed a potential method of enhancing players' health and quality of life in conjunction with regular exercise; inspiratory muscle training (IMT) has made its way into many players' daily routines [26]. Research in the future might look at the possibility of creating individualised IMT programs that consider each person's breathing demands and training intensity, as well as how IMT can be best integrated with other martial arts training methods. Additional information on its effectiveness might be gleaned from longer-term trials that include bigger groups of athletes.

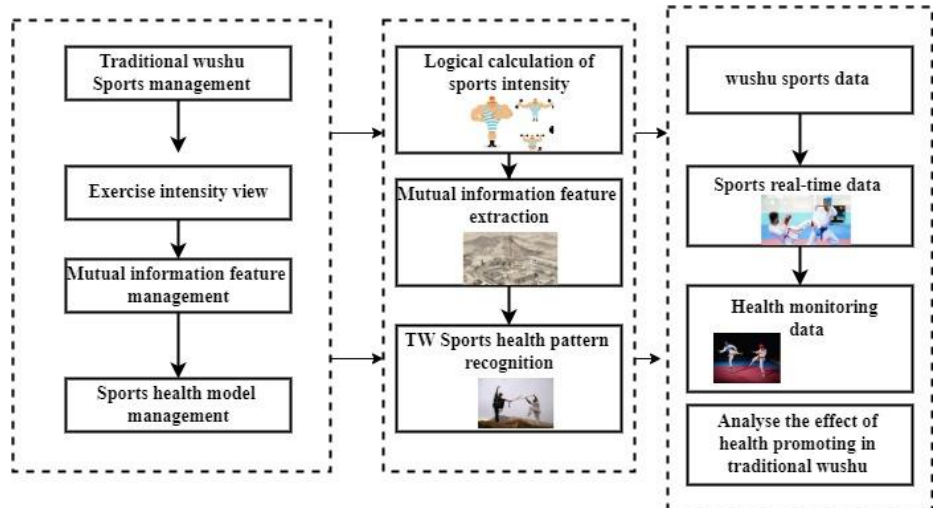
Santos et al. (2022) introduced a qualitative approach to analyzing interactions with people who have sent their family youngsters to do a martial arts education course offered through distance learning to promote health in ancient sports [27]. Miyata et al. (2020) proposed quantitative studies have begun to establish the usefulness of therapy depending on martial arts in the healthcare context [28]. Multiple aspects of wushu include physical training and increased internal and external mindfulness of one's body. Learners of martial arts had substantially better scores on mindfulness and subjective health and lower scores on depression compared to healthy martial arts. Song et al. (2022) introduced the assessment of the teaching method innovation of Combat Sports as Practical Self-Reflection (CSPSR) and martial arts [29]; this study was able to gather information on the volume and quality of lectures to promote health and research in education.

Data Mining (DM) techniques are proposed to address the present issues in assessing traditional wushu's health benefits. This method outperforms its predecessors by enhancing pattern and correlation detection by zeroing in on the mutual information included in health data. The many ways traditional wushu fosters health and well-being are better understood.

### **3. Proposed methodology**

Martial arts are becoming increasingly popular as a form of health for a rising population. Combat sports, like any other type of exercise, may increase a person's sense of well-being and teach them to defend themselves. Athletes' doctors should be knowledgeable about martial arts, including its advantages and hazards, joint injuries, and strategies to prevent them. In combating growing obesity rates, practitioners must do everything they can to persuade their patients to improve their health. Exercise has been found to reduce the risk of illness and incidence. For many people, martial arts are a great alternative to "conventional" fitness, and they provide unique opportunities to learn self-defence and new abilities in a group environment. The benefits of martial arts training aren't limited to the young; middle-aged individuals outperformed inactive controls in terms of aerobic capacity, balance, strength, and increased fat percentages attributed to their involvement in the study. Elderly individuals increased the number of push-ups done, trunk flexion, and the amount of time spent standing on one foot. If a patient is looking for a new kind of exercise, doctors should consider prescribing martial arts. Because of its mild consequences, ancient sports are commonly advised for individuals with mobility problems or the elderly.

**Figure 1** illustrates the traditional wushu-based data mining methodology for athletics aiming to promote population well-being. The person's body's natural sporting project information, essential information, and healthcare tracking data are all obtained from a personally identifiable information region, which is then transmitted and utilized to identify similar qualities from these data sources. In terms of giving users historic games managing projects, concentration observation, wellness modes, and other facts, this approach for improving care services relies on data mining. After healthcare pattern detection and rational calculation of athletic intensity, consumers may fully comprehend the wellness effects of current sporting. The body makes a wide range of physiological data, such as the current pulse beat, circulatory timings, and altered body water and fat, as a result of traditional gameplay. As a result of the many data sources and preservation formats, this data source is multispectral and complex. In acquiring data mining procedures, it is vital to mix various pieces of individual wellness data and extract personal well-being information gain features. Healthcare medicare information may be gleaned from multiple sites using dynamic difference pattern detection.

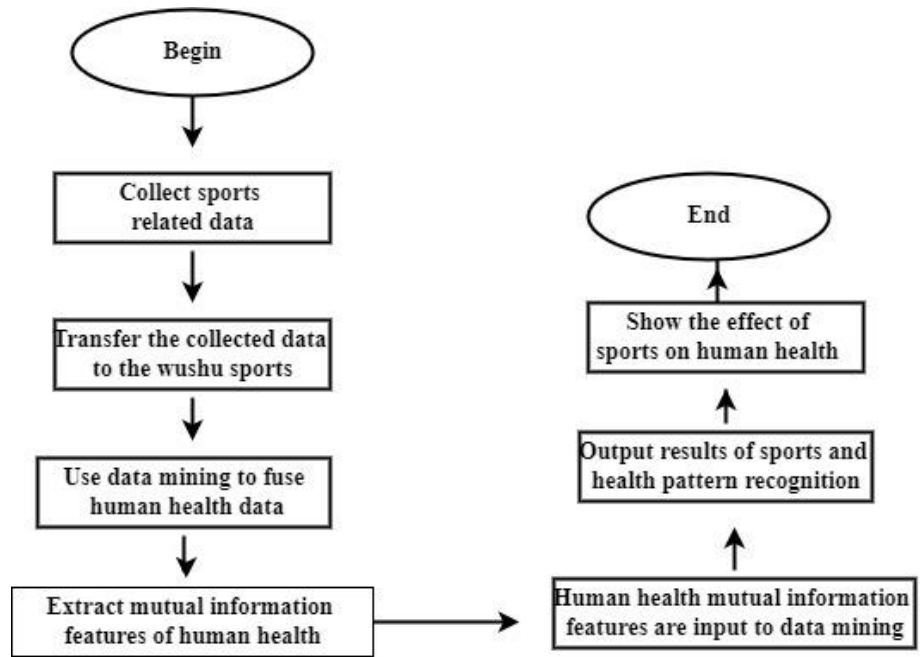


**Figure 1.** Structure of Wushu in the human health enhancement model.

Equation (1)'s transient sample value is essential for capturing discrete moments in qualitative studies on sports health promotion. It stands for the information useful for gauging health and fitness in conventional sports. Researchers may better understand the consequences of sports activity on individual health outcomes by analysing trends in health-related data and focussing on these transitory values. A more thorough assessment of health promotion initiatives within the framework of conventional sports activities may be accomplished by including temporary data. denotes the weight of deconstructing the scalar time series in the traditional sports for the time series of B-Height. indicates the transient sampling value at the moment of qualitative research in sports health-promoting, represents the Age of Information concerning people's fitness shared between parties,  $p(a, b)$  denotes the probability function and analysis of the bandwidth collapse, and  $t$  means time. Analyzing and evaluating sport as a nutrition education tool is done using the above Equation (1).

$$o = p(a, b)a^2t \quad (1)$$

To collect sports data, real-time information about the sport, and health monitoring information for the server database, users, need a data layer. **Figure 2** presents ancient sports that employed the active distinction characteristic to develop the knowledge in information extraction to combine the individual personal medical information, retrieve a normalized component, and input the feature into the data mining, as shown below. Recognition of patterns results in health-promoting activity after noticing and studying the impact of individual activity on athletics of local community inhabitants and participants. Athletic wellness behaviours can be analyzed and sent on top of the numerical layer. The model on the beneficial effects of athletics on nutrition is demonstrated for the general public. According to the concept presented in this research, the more fit citizens and athletes there are, the higher the mental well-being effect.

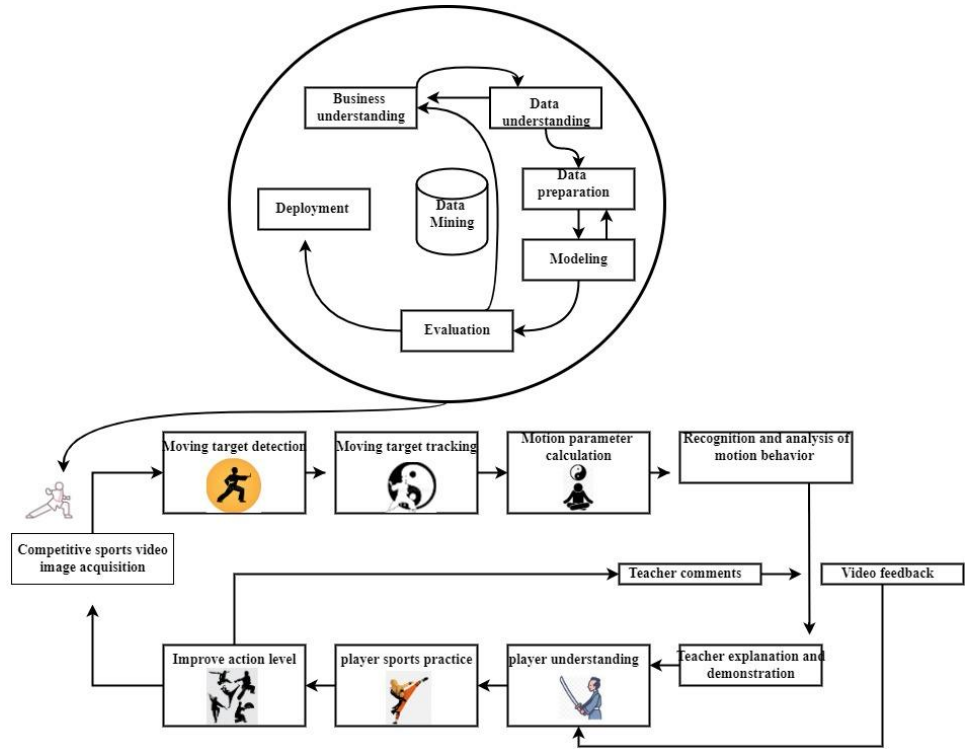


**Figure 2.** Role of sports in the human health promotion framework.

$o_i$  refers to eigenvector distribution distance to the variable of B-Location data distribution state, the weight input variable for the health-promoting  $u_i$  the value of a differential function is is strikes-clinch Leg strikes-attempts is accustomed to calculating outcomes using the average over the period. as follows in Equation (2), to produce the quadratic expected wide variety of medical care data.

$$o_i = \min\{f_i(o_i, u_i)\}D(o_i) \quad (2)$$

Competitive activities are documented and evaluated using combative arts visual assessment methodology, which captures the sensory input sequentially. Precision in combat sports scoring is achieved by genuine identification, monitoring and classification of targets, and supposed to conduct and recognize, in particular, to actualize the innovation of video-aided training feedback misjudgment. Platform and professional software are combined in a new development approach. **Figure 3** shows the data processing function model of DM-TW that makes a motion positioning in the observation of sports. A picture's altered area can be extracted from the consecutive image using motion detection. Moving region segmentation is critical for post-processing tasks like target classification, tracking, and behaviour analysis since these operations only take into account pixels in the picture that are located inside the moving region. Analytics and predictive modelling methods can help competitors to make better, higher educated decisions based on data mining. It is possible to solve athletics difficulties in a short period using business intelligence tools. It's because they're not going to discover anything that they scan databases for similarities that experiences would find. This method requires sorting through a large volume of data or employing sophisticated techniques to determine where the real value originates.



**Figure 3.** Data processing function model of Wushu in data mining technique.

$N$  is the round1\_grappling\_reversals\_landed data in the calculus function owing to the positive impact of games on personal well-being, and is the number of observations in traditional wushu. denotes the sequence of quadratic regular nutrition information’s resonance frequencies, is set up to get the multiple linear regression qualitative characteristic for well-being, as expressed as follows: in Equation (3).

$$\langle o(n) \rangle = \frac{(o)}{N} \tag{3}$$

Equation (3) investigates the correlation between nutritional data and health outcomes reported by traditional wushu practitioners. By normalising the data and representing the sequence as the resonance frequencies of quadratic regular nutrition-related information, the positive benefits of wushu on personal health can be effectively shown. The links between health and athletic performance have been enhanced by this study, which demonstrates that sports have benefits beyond those of an exercise program.

The results of the analysis and evaluation of the effect of sports health promotion in DM-TW proposed that several organizations are switching to martial arts as a way of staying fit as the technology continues to grow in popularity. Combat sports, like any other sort of activity, may boost a person’s physical and mental health and ability to defend themselves.

#### 4. Experimental analysis

To evaluate and analyze the traditional wushu, the players in martial arts use data mining techniques, which makes it possible for players to learn martial arts from afar. As an intelligent system, the platform has the potential to assist people in better

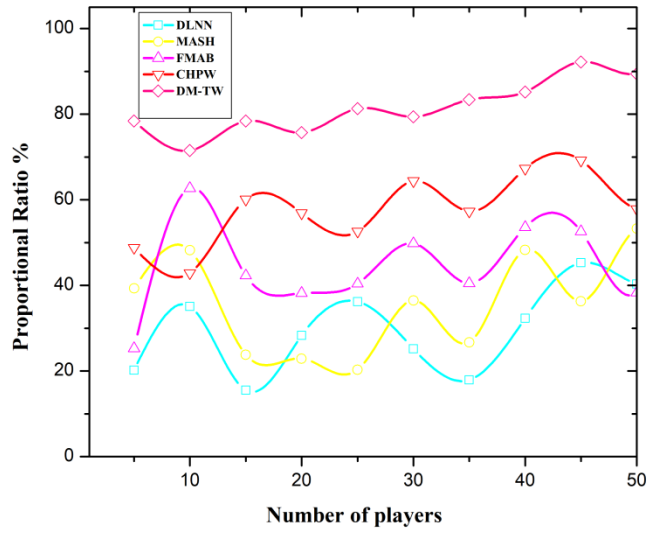


improving physical and emotional well-being. Players are utilizing the text system as an experimental platform to learn martial arts to study the impact of combat fighting on the individual to improve one's cognitive and psychosocial well-being. Traditional sports training and exercise programs exercise two very different things. It's a novel approach to sporting activities that has a significant relationship and helps a lot. A player's performance level, including overall health and condition and physical fitness, is the foundation of the person's athletic skill in activities. Players in sports now have a high level of physical fitness; the value of 50 players participating in specialized sports performance are at risk for various illnesses or conditions. Athlete can't be readily remedied using traditional wellness treatment procedures. Sports' fitness levels may be significantly restored and improved through comprehensive training. Resistance, dietetics, and well-being sciences are all included in primary healthcare learning [30].

Dataset Description: Fighting and grappling are permitted in mixed martial arts, a full-contact combat sport involving activities from different movement sports and martial arts. Fighting promoter showcases the sport's top-ranked competitors, including Conor McGregor and Floyd Mayweather. For the UFC, which is based in the United States, twelve weight categories and the Unified Rules of Mixed Martial Arts are the norms in a sport with a great degree of unpredictability.

The local population, particularly those practicing traditional wushu, experiences a significant improvement in their physical well-being after implementing the proposed approach. Community members who have trouble balancing work and personal life and whose schedules are often changing are less likely to have good health than their younger counterparts in college, who are more likely to adhere to regular work schedules, eat healthily, and have a high metabolism. Equation (4) maximises athletic metrics such as Grappling-Takedowns-Landed and Ground Head Strikes by eliminating extraneous disturbances in the obtained data. Equation (4) integrates transition field allocation intervals. When testing the efficacy of traditional wushu practices on health outcomes, this model outperforms methods such as DLNN, MASH, FMAB, CHPW, and DM-TW [31].

**Figure 4** indicates that the actual physical quality of neighbourhood inhabitants and players has been improved after applying this model to generate data on human health enhancement following sports. There was a significant rise in healthful pupils with a value of 50 players and participatory members in the health model of traditional wushu. Overall, college students' physical health is superior to that of their neighbours. Because learners have a regular work and rest schedule, healthy food, a young age, and high metabolism, they are more susceptible to health issues than the general population. Contrary to popular belief, community members face a significant amount of work-life balance stress, which can be exacerbated by irregular work schedules or a restrictive diet. In summary, this approach has a wide variety of positions and is capable of completely identifying trends in personal wellness.

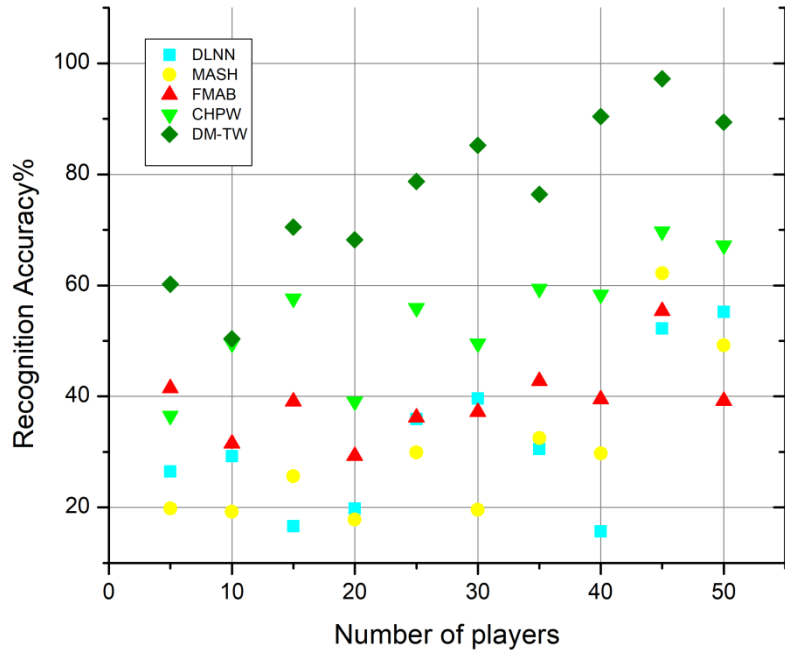


**Figure 4.** Sport’s positive impact on physical health.

$o_n$  corresponds to transition field allocation intervals in wavelet transform distributions for enhancing the Grappling-Takedowns-Landed, and if is a body significant strikes, the collection of a large number of individual patient clinical information is Distance Body Punches with dimensional  $N$ ; is time interval;  $ot_o$  relates to the beginning time. The reducing operational plan, relates to this timeframe, the geometric invariants of Ground Head Strikes component calculations are made, and unnecessary disturbance output is eliminated. Using this variable in current studies on the health-developed techniques in traditional wushu movement and physical activity for persons, this paper intended to discuss a portion of that practical experience gap as follows in Equation (4). Compared to the methodologies shown in the plotted figure, DLNN, MASH, FMAB, CHPW and DM-TW, the process of analyzing and evaluating sports on promoting health in traditional wushu improves the best and most complete results [32,33].

$$o_n = ot_o + no\Delta t = h(t + n\Delta t) + \omega \tag{4}$$

Based on the recognition accuracy and an experimentation inhabitant from the dataset, Using this model, researchers can keep control of the progress of the fitness reference to compare it to the actual nutritional framework, as shown in **Figure 5**. The health quality prediction presented in this research is identical to the residents’ natural health grade. Players participate in sports, and their happiness increases from a bad to a good one. With this approach, the final solution appears to be somewhat realistic. They have a thorough understanding of the wellness benefits of games and can discuss how they have affected the population’s welfare. Analysis and evaluation of traditional wushu’s health-promoting activities are superior to the methods given in the plotted figure (DLNN, MASH, FMAB, CHPW and DM-TW) it comes to achieving the highest rated results.



**Figure 5.** Comparison of the human health recognition.

$j$  refers to the ability to be customized in probability function Ground Significant Kicks with modifying the direction and magnitude, and  $h(t)$  denotes the corrections to the periodicity with output scalar timing, perform an analysis of dynamic development for every instance of the dataset in the Knock Down dataset with  $z(t)$  The period equivalent circuit variable to correlation feature state of Significant Strikes data,  $t$  is a time series for academics. The most challenging aspect of martial arts is not only a physical workout but a whole body-mind-spirit activity. It has a wide range of implications compared to the methods described in the paper, DM-TW in health, regardless of whether it improves the accuracy and can be solved using this equation as follows in Equation (5).

$$z(t) = s(t) + js(t) \times h(t) \tag{5}$$

The DM-based martial arts on promoting health described in the Learners’ personal and social well-being can benefit from the document, according to the studies cited above in **Table 1**. The paper will be able to sample these results after they are collected. Learning martial arts improves their wellness more than those who pursue body composition education, with a final value of 60.3 with a high ratio of increased health benefits. DM-based platforms for fighting arts education have the potential to make a significant impact on pupils’ general well-being and well-being.

**Table 1.** Evaluating physical health analytically.

Number of players’ health evaluation	DLNN	MASH	FMAB	CHPW	DM-TW
1	26.5	19.8	41.5	36.5	57.5
2	29.2	19.2	31.5	49.5	32.4
3	16.6	25.6	39.1	57.6	50.5
4	19.8	17.8	29.3	39.1	56.3
5	35.9	29.9	36.2	55.9	68.5

**Table 1.** (Continued).

Number of players' health evaluation	DLNN	MASH	FMAB	CHPW	DM-TW
6	39.6	19.6	37.2	49.5	67.6
7	30.5	32.5	42.8	59.4	70.3
8	15.7	29.7	39.5	58.3	79.3
9	52.2	62.2	55.4	69.7	85.6
10	55.2	49.2	39.2	67.2	72.5
11	42.3	34.3	58.6	62.3	81.3
12	38.3	44.4	67.6	59.4	72.6
13	53.3	46.3	53.2	67.4	86.5
14	30.2	42.5	59.4	67.5	79.2
15	15.8	26.5	48.5	64.6	59.6
16	26.9	17.6	39.9	65.3	42.5
17	22.3	39.3	26.4	58.7	73.1
18	35.5	46.3	59.6	68.2	39.7
19	45.7	53.3	68.3	51.8	78.2
20	59.2	48.2	68.7	52.9	60.3

$\Delta o_i$  represents in the Ground Time of the process step, the total amount of resources consumed, denotes the variable of coefficient matrices in time-invariant for Guard Control Time, is an activated function with an input layer of the weight matrix with a hidden layer and is a value of Takedowns-Landed output gate with non-linear activation function with Body Total Strikes is calculated as follows in Equation (6). Compared to the methodologies shown in the plotted figure, DLNN, MASH, FMAB, CHPW and DM-TW, the process of analyzing and evaluating sports on promoting health in traditional wushu improves the best and most complete results [34].

$$\Delta o_i = a + bo_n - a \quad (6)$$

The comparison of human health-promoting in traditional wushu's inability to recognize patterns is based on comparing new information with knowledge currently stored in the brain. **Table 2** shows a classification stage when memories and newly acquired information are linked. The classification and processing of signal sequences form the core of health and economic pattern recognition. Movement in a continuous activity may necessitate successive iterations of a participant's action. It may be done by looking at the dynamic link between mutual information pieces of individual data. Personal healthcare pattern recognition relies on the identification and processing of signal sequences.

**Table 2.** Changes in the factor of human health.

Number of players	DLNN	MASH	FMAB	CHPW	DM-TW
1	28.3	40.3	69.8	54.2	77.6
2	42.2	58.7	52.9	42.3	92.5
3	21.8	29.3	39.1	59.3	71.8
4	21.9	30.2	51.9	67.5	53.9

**Table 2.** (Continued).

Number of players	DLNN	MASH	FMAB	CHPW	DM-TW
5	15.3	36.4	58.7	40.1	70.5
6	32.5	42.8	59.4	70.3	58.6
7	21.7	35.5	57.3	72.1	85.5
8	42.3	58.6	62.3	81.3	72.3
9	19.3	42.6	37.2	57.7	78.3
10	53.3	65.3	53.8	44.2	93.6
11	41.2	56.7	47.9	67.3	86.5
12	37.9	29.3	30.1	65.3	67.8
13	57.3	69.3	41.8	49.2	72.6
14	48.2	58.7	59.9	46.3	87.5
15	22.2	45.4	62.7	88.6	68.4
16	55.2	53.2	69.2	72.5	79.6
17	40.3	54.6	62.3	88.3	72.3
18	46.3	59.6	68.2	56.7	81.3
19	56.3	61.3	59.8	50.2	72.6
20	59.2	55.4	66.7	87.6	79.4

$$k = N \sum_n^i x_i - \mu_i \quad (7)$$

where  $k$  is the number of action sequences segmented for the enhancement of Back Control Time. Values for the Distance Time feature and are used to indicate the value of the classification model at the given  $n$ th time. An analysis of the signal's frequency denotes a matrix multiplication with, the frequency domain is an attribute that incorporates the signal's convolution with coefficients and Grappling-Stand-ups-Landed as follows in Equation (7). DM-TW method results in human health pattern recognition with data mining on enhancing the health with the beneficial impacts of athletics and traditional games provide more conditions for the use of this psychological technique.

In traditional wushu, exercising for a long time, athletes run the risk of muscle exhaustion or joint instability, which can lead to various injuries. Sports training necessitates the use of effective injury prevention strategies. Injury prevention and treating ankle sprain may be practised by understanding the mechanisms that cause pain, developing appropriate training plans, and avoiding activities that damage competitors. As a point of comparison for the healing process, this experiment examined the influence of the relevant acts on the connected injuries. **Table 3** illustrates that flipping can injure the ankle, while bouncing can damage the knee.

**Table 3.** Traditional sports and the impact of connected disabilities.

Number of players injured in sports	DLNN	MASH	FMAB	CHPW	DM-TW
1	32.3	60.3	59.8	44.2	72.6
2	47.2	58.7	52.9	42.3	92.5
3	19.2	29.3	30.1	53.3	69.8

**Table 3.** (Continued).

Number of players injured in sports	DLNN	MASH	FMAB	CHPW	DM-TW
4	21.9	30.2	51.9	67.5	53.9
5	18.3	24.4	67.7	49.1	72.5
6	32.5	42.8	59.4	70.3	58.6
7	23.7	33.5	51.3	71.3	85.5
8	42.3	58.6	62.3	81.3	72.3
9	41.3	58.6	67.2	47.7	72.9
10	53.3	65.3	53.8	44.2	93.6
11	25.2	39.7	52.9	47.3	69.1
12	37.9	29.3	36.1	65.3	67.8
13	23.3	45.3	59.8	40.2	78.6
14	48.2	58.7	59.9	46.3	87.5
15	50.2	61.4	62.7	85.6	65.4
16	55.2	53.2	69.2	72.5	79.6
17	41.3	54.6	67.3	88.3	72.3
18	26.3	39.6	58.2	46.7	81.3
19	53.3	65.3	53.8	44.2	82.6
20	59.2	55.4	66.7	87.6	79.4

$\min(f_i)$  and indicate the grade platform's lowest and highest readings, and  $x_i$  represents the value of the  $i^{\text{th}}$  dimensional feature, the process of after normalization is shown by  $y_i$  denotes a Body Significant, using a moderate bandwidth with strong class separability, specialists conduct classification techniques on the data sample. Consequently, it minimizes the skill required by avoiding the dimensionality of the Clinch Significant Kicks data. Sufficiently large sample data exposed to multiple quadratic regression increases the test information's average capacity invariance ratio of the interclass distance and similarity proximity. Analysis and evaluation of traditional wushu's health-promoting activities are superior to the methods given in the plotted figure (DLNN, FMAB, CHPK and DM-TW) when it comes to achieving the best and most detailed findings as follows in Equation (8).

$$y_i = \frac{x_i - \min(f_i)}{\max(f_i)} \quad (8)$$

It is difficult to accurately evaluate the health advantages of Wushu due to a lack of standardised measurements and the fact that it is difficult to determine both the short-term and long-term impacts on mental and physical health. Because of these obstacles, athletes may lose sight of their progress, get distracted, or even stop training completely

For martial arts athletes, this result is of considerable reference relevance in enhancing their periodic movement health structure and quality. This paper proposed a future study on fighting skills diagnostic increased performance level with health enhancement will be even better.

## **5. Discussion**

Traditional Wushu health data analysis includes data mining. Analysis of athletes' health data may indicate trends in their health improvement initiatives. Wushu's health benefits may be better measured using this method. Traditional Wushu players risk inhalation issues, migraines, artery shatters, spine injuries, and neck injuries. These dangers demonstrate the practice's physical toll, making rigorous training and periodic health checks essential to prevent long-term harm. Wushu is wonderful for fitness despite these limitations. The model's proposed solution takes on the complexity of Clinch Significant Kicks data by shortening the analytical process and significantly lowering the level of knowledge required. Employing appropriately large sample data subjected to repeated quadratic regression, the model enhances the average capacity invariance ratio of the test data. This increases the gap between groups and the proximity of shared characteristics. Future studies might analyse the health advantages of traditional wushu more thoroughly if the model could handle even more datasets and use advanced regression algorithms. However, more complex, nonlinear relationships in the data could go unnoticed if quadratic regression is used consistently. That is particularly the case when dealing with data from various sports, not limited to traditional wushu.

## **6. Conclusion**

This paper concludes with the mental well-being benefits of athletics analyzed using this activity paradigm in individual development. However, after participating in sports regularly, an individual's weight drops to normal, illustrating that sports may have a significant impact on overall health and well-being in the population. It is accurate that more data would have helped validate the model's usefulness, but this study still has several flaws. In needed to guarantee that the conclusions of this study are accurate, more data will be used in future research. The investigation indicated that participants who studied a martial arts academic requirement positively impacted their mental health. To improve their psychological health through martial arts training, people must engage in the practice over an extended time. Martial arts training takes a comparatively short amount of time for these trainees. Martial arts training can help students gain muscle mass and improve their fitness. According to the institute, the limitations in martial arts have a greater chance of concussion, suffocation, spinal damage, vascular bursts, or other head and neck injuries. The Institution warns that these dangerous actions include direct punches to the head, repeated head thrusts to the floor, and choking. The martial arts course still impacts academic participants' mental health, as observed. As a result, to achieve the study objectives of using sports and traditional games to promote health with the experiment's findings led to the development of suggestions for successful execution. Future work is a sense of accomplishment and self-awareness that come from martial arts training, and it's a great way to help people attain their full potential. The experimental results show the proposed method to achieve proportional ratio of 86.1%, recognition accuracy ratio of 90.3%, health evaluation of 60.3%, and Physical Health Analytically 79.4% compared to other methods.

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