How to Implement the Talent Training of "Integration of Sports and Medicine" in Colleges and Universities under the New Development Concept

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Abstract

In light of contemporary developments, the convergence of sports and medicine has emerged as a novel proposition and healthcare concept in the modern era. The realization and execution of this concept necessitate active involvement from diverse sectors of society, with a particular emphasis on the indispensable role of physical education programs within colleges and universities. Against this backdrop, the present study was devised to assess the factors conducive to enhancing the integration of sports and medicine through talent development. Consequently, a cross-sectional research design was employed, and quantitative data were gathered from Chinese students via a simple random sampling technique. The collected data were subsequently subjected to examination using Partial Least Squares (PLS) analysis. The findings underscore the support for all stipulated hypotheses in the study. These results hold significant implications for the transformation and advancement of physical education curricula within higher education institutions.

Keywords: Sports, Medicine, Innovation, Connotation, Social Needs

1. Introduction

In alignment with the evolving trajectory of the new socialist era, the notion of integrating sports and medicine has progressively gained popularity and deeper comprehension. In fact, the integration of sports and medicine began to germinate as early as 2004, with the advocacy of the concept of "body and heart health" and the proposition that "the finest physicians prioritize disease prevention" (Smith et al., 2022). Subsequently, in 2007, research efforts converged health management experts, sports specialists, and nutrition authorities to refine the standardized and professional processes associated with the "integration of sports and medicine" (Jonvik et al., 2022). Furthermore, over the span of more than a decade, this concept has garnered increasing attention, manifesting in both national-level strategic initiatives, such as the establishment of the National Health Commission, and its pervasive influence at the grassroots level (Andreeva et al., 2016), exemplified by the widespread phenomenon of square dancing.

The integration of medicine and sports constitutes a pivotal subject within the realm of higher education. This amalgamation of medicine and sports is defined as the fusion of medical and sporting practices with the aim of enhancing the physical well-being of individuals (Wang et al., 2023). It involves the utilization of rehabilitation, treatment, preventative roles, and medical supervision to advance the objective of physical health. This concept represents a novel paradigm within the domain of health behaviour. Previous investigations into the integration of medicine and sports have encompassed the exploration of informational resources, material assets, medical personnel, scientific research methodologies (Thompson et al., 2020), and medical techniques aimed at fostering the welfare of students.

The concept of integrating sports and medicine has evolved from a theoretical concept to a practical reality, gaining recognition and acceptance among the populace. In this context, as trailblazers of their time, universities and colleges should demonstrate the courage to perceive and experiment, leveraging this opportunity to expand their educational paradigms and enhance the quality of their educational offerings (Haugen et al., 2019). For majors closely aligned with the integration of sports and medicine, such as medicine and sports education, there exists a corresponding obligation to dare, contribute, and shoulder the responsibilities presented by the zeitgeist. This also aligns with the broader societal mission. As elucidated in an article titled 'On the Development of School Sports in China with Integration of Sports and Medicine' (Tsai & Zhou, 2017), 'To construct a healthy China, sports must not be overlooked.' Furthermore, the '13th Five-Year Plan for the Sports Industry,' promulgated by the General Administration of Sport of China on July 13, 2016, underscores the imperative of fostering integration and actively promoting sports-related health services across the entire lifespan (Tu et al., 2022), a theme that has garnered significant attention in recent sessions of the National People's Congress and the Chinese People's Political Consultative Conference.

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As is widely acknowledged, health represents a dynamic state and process, continuously evolving rather than remaining static. Across the lifespan, achieving optimal equilibrium within changing seasons is imperative, as any imbalance can manifest in various physiological changes. This realization imparts a profound insight: while engagement in sports is a fundamental right, it also demands lifelong guidance and education (Malm, Jakobsson, & Isaksson, 2019). Only through such guidance can individuals truly comprehend the nuances of sports, harness its functional benefits, view it as an integral facet of their lives, and ultimately cultivate the concept of lifelong physical activity (Siedentop & Van der Mars, 2022).

From early childhood physical education to the primary and secondary school stages, the role of physical education teachers remains indispensable, placing substantial responsibilities on those pursuing physical education majors (Xie, 2019). Through the effective transmission and guidance of correct principles by physical education educators, students acquire a more systematic and profound comprehension of the fitness benefits associated with sports, thus facilitating a harmonious physical and mental development throughout their lives. In light of this, the future direction and educational models for talent development in physical education majors within higher education institutions, particularly in the context of medicine and sports education (Zhang, 2023), as well as the strategies for molding students into educators aligned with the needs of the contemporary era, warrant contemplation by every college and university. These considerations serve as pivotal starting points and anchors for this research endeavour.

In recent years, we have observed a decline in sports activities at the school level, despite the recognized significance of physical education (Fenesi et al., 2022). Simultaneously, evidence has surfaced highlighting deficiencies within the educational curriculum. Studies have consistently reported shortcomings pertaining to program quality, gender disparities, financial resources, human resources, instructional materials, subject status, and the allocation of time for such activities by educational decision-makers (Khakimovich & Rozmatovich, 2022). Several previous studies have underscored that, despite international advocacy supported by cultural, social, economic, scientific, and medical rationales, educational institutions continue to allocate insufficient time to physical activities. Furthermore, research has indicated that a global health concern has arisen, with over sixty percent of adults grappling with health issues, largely attributed to the escalating prevalence of childhood obesity (Kumar, 2017).

Hence, this study aimed to evaluate the factors that can enhance the integration of sports and medicine within Chinese higher education institutions.

2. Literature Review

One of the most recent trends in education in the current century is integrated learning, a concept that has been embraced in both developed and developing nations. This approach is implemented through various pedagogical practices, textbook designs, and curricular frameworks. Concurrently, the primary objective of sports education is to enhance the physical fitness and overall health of students (Cosh & Tully, 2015). There are several avenues for enhancing the integration of sports and medicine at the higher education level, including curriculum development, teacher support, addressing societal needs, and fostering innovation (Wang et al., 2023). An Investigation into Talent Development Strategies for Physical Education Programs in Higher Education Institutions: Examining the Integration of Sports and Medicine

2.1 Curriculum Construction and Sports Integration

The curriculum development process entails distinct stages and is realized through the adherence to specific predefined Standard Operating Procedures (SOPs). Curriculum development relies on the evaluation, implementation, and planning of a curriculum via various methodologies, processes, and stakeholders (Li & Han, 2023). In terms of curriculum construction, it is imperative to emphasize the curriculum theory within the domain of physical education while underscoring the integration of sports and medicine as a pivotal concept.

Various nations hold distinct interpretations of the curriculum. Research has defined it as follows: "Curriculum pertains to the deliberate and systematic learning experiences and instructional content for students, organized by educational institutions and crafted by educators" (Steiner, 2017). This definition underscores that the curriculum is a purposeful endeavour and remains in a constant state of evolution. Under the influence of diverse educational objectives, diverse approaches to curriculum development can be undertaken, thereby effectively fulfilling the instructional purpose, a relationship that is mutually reinforcing and indivisible (Giese & Ruin, 2018). The curriculum construction for the field of physical education is no exception to this principle.

To underscore the concept of integrating sports and medicine and to remain aligned with contemporary developments, it is imperative to foster ongoing innovation and exploration. This can be achieved by realizing the integration of the sports and medicine concept through top-level design. Concerning the

definition of top-level design, researchers have expounded upon it as "Analysis of Top-level Design," elucidating that top-level design involves employing systems theory methodologies to comprehensively plan all facets, levels, and components of a task or project, with a holistic perspective. The overarching aim is to efficiently and effectively concentrate available resources to attain defined objectives (Zheng, 2015). Furthermore, it is essential to underscore that the outcomes of top-level design must be actionable and practicable, specifically in establishing the interrelation between curriculum, sporting activities, and the integration of medicine within sports. The objective orientation in talent development should seamlessly align with the integration of sports and medicine (Walsh, 2017).

Furthermore, in order to actualize the infusion of the integration of sports and medicine concept into specific curriculum content, it becomes imperative to delve deeper into the realm of physical education within the curriculum's execution. This entails a deliberate focus on the development of the physical education syllabus, with the primary aim of fostering students' capacity not solely to impart knowledge but also to apply their knowledge and skills in enhancing both their own physical well-being and that of others. This approach aims to achieve the dual goals of disease prevention and the optimal amalgamation of medicine and sports (Kohl III, Murray, & Salvo, 2019).

Moreover, in terms of curriculum implementation methods, we are committed to resource-sharing efforts to facilitate a more profound understanding of the integration of sports and medicine concept. Given the evolving pedagogical landscape in the modern era (Tondeur et al., 2016), formats such as Massive Open Online Courses (MOOCs) and micro-classes have emerged as viable avenues for resource sharing. In this context, educators can disseminate course materials to students majoring in physical education, encompassing both theoretical and practical modules pertaining to sports medicine integration. This approach not only optimizes students' time for learning but also leverages available resources to enhance their knowledge and skills. Ultimately, this strategy aims to achieve a profound synergy between the field of physical education and the integration of medicine and sports (Lyu, Hou, & Wang, 2022). Furthermore, a study conducted by Li and Luzi (2022) has delved into the pivotal role of curriculum, emphasizing its significance in facilitating the integration of sports with medicine.

2.2 Innovation of Students and Sports Integration

Innovation is elucidated as the process of generating novel potential actions and the creation of fresh assets. Several research studies have characterized innovation as the incorporation of new services, techniques, products, and concepts within an educational institution or business education setting. It is imperative that innovative practices and ideas are centered around physical education (Polatcan, 2022).

Students constitute the primary agents in teaching, the central actors in curriculum execution, and the principal agents of innovation, especially in the context of higher education during the new socialist decade. They possess active cognitive faculties and are open to embracing novel ideas and challenges. This holds true for students pursuing physical education majors, whose inclination towards innovation may be even more pronounced, owing to the distinctive characteristics of their curriculum. Consequently, it becomes a fruitful approach to invigorate the innovative spirit among students specializing in physical education, thereby infusing vitality into the integration of sports and medicine. The particulars are as follows:

By engaging in various forms of social practice, students enrolled in physical education programs can be encouraged to innovate their professional competencies. This may involve their active participation in endeavours such as devising sports games for children (Maksymchuk et al., 2018), designing physical fitness routines for children, organizing community sports events, and contributing to sports-related social welfare initiatives. These activities serve the dual purpose of promoting health awareness among diverse demographic groups and fostering a fresh impetus for the integration of sports and medicine (Bauman et al., 2016). Notably, the research conducted by Wang and Fang (2019) has underscored the positive impact of innovation and the integration of sports and medicine.

Furthermore, by means of innovation and entrepreneurial platforms, students pursuing physical education majors are encouraged to develop micro-courses pertaining to the integration of sports and medicine. Subsequently, they are urged to disseminate these courses through various financial media outlets, such as the TikTok platform, Kuaishou platform, and teaching WeChat groups. This strategic approach positions them as implementers and advocates for the integration of sports and medicine, thereby instilling fresh dynamism into this integration (Xiao et al., 2022).

Furthermore, fostering student engagement in discussions surrounding sports and health is achieved through instructional demonstrations. Sports hold a significant role in enhancing individuals' well-being and play a vital part in the realization of the Chinese Dream. It is widely acknowledged that physical activity is essential for a healthy life, yet the act of exercising itself can be quite demanding, discouraging many individuals from participation (Gow, 2017). In light of this, various teaching contents, methodologies, and approaches are showcased to prompt student reflection and discourse on

matters concerning sports and health. This process aims to ignite innovation, establish resonance, and ultimately generate solutions to diverse sports and health challenges encountered by distinct demographic groups. The ultimate goal is to instil the confidence to contemplate, act, and innovate, thereby providing an enduring impetus for the integration of sports and medicine (Bauman et al., 2016).

2.3 Teacher's Connotation and Sports Integration

Teachers are regarded as exemplary figures and serve as significant influencers within the educational process. Their pivotal role is particularly evident in the endeavour to enhance student engagement in sports activities. Teachers wield considerable influence in motivating students, with their own active involvement in activities being a source of increased student motivation. Furthermore, physically active teachers contribute significantly to the improvement of students' overall health (Cheung, 2020).

Conversely, when students are involved in sports activities, it is essential to consider both the timing and content of the courses. Striking a judicious balance between sports instruction and psychological aspects within sports education is imperative (Zhu & Li, 2022).

Teachers have been a continuous presence throughout history, playing an indispensable role in the preservation and advancement of human civilization. In the realm of physical education, the perpetuation of various physical education concepts hinges upon physical education instructors, as does the progression and sustenance of the integration of sports and medicine. This is especially pertinent in light of the physical well-being of children in China (Quennerstedt, 2019).

Previous research has underscored that the incidence rates of hyperglycemia, dyslipidemia, fatty liver, and hyperuricemia among primary and secondary school students in Beijing were alarmingly high at 66.6%, 43.2%, 16%, and 39.7%, respectively, surpassing the rates observed in some adult populations. Faced with such compelling data, physical education teachers cannot afford to remain passive; taking proactive measures undoubtedly represents the most effective approach towards advancing the integration of sports and medicine (Han et al., 2023).

Hence, the situation should align with the principles outlined in "The Reality and Necessity of National Scientific Fitness under the Background of Healthy China Construction" (Liu et al., 2017). It is imperative to actively promote the notion of proactive health, elevate the health literacy of the general populace, prioritize sports, and regard fitness as a crucial non-medical intervention for health enhancement. Additionally, there should be a concerted effort to bolster the education of health concepts and fitness science, ultimately enhancing the capabilities of disseminators of sports culture, physical education instructors, and parents in imparting knowledge of health concepts and scientific fitness.

In this context, within the domain of physical education, which serves as a platform for training future physical education instructors, it is essential to commence by comprehending the role of educators. The field of physical education should actively integrate the expertise inherent to physical education instructors while concurrently broadening the soft skills associated with the integration of sports and medicine. In terms of theoretical knowledge, there should be a heightened focus on acquiring proficiency in subjects pertinent to the amalgamation of sports and medicine, such as children's physical fitness, adolescent physical well-being, healthcare, and exercise prescription. Building upon this foundation, this knowledge should be internalized, elevated, and subsequently transformed into a reservoir of pedagogical resources and soft skills that can be readily employed when necessary.

Furthermore, within the realm of practical expertise, it is imperative to emphasize the diversification and real-time adaptation of competencies, thereby expanding the tangible proficiencies pertinent to the integration of sports and medicine. As highlighted in the research conducted by Joyce and Lewindon (2015), educators can assume a pivotal role in injury prevention, thus exerting a positive influence on the integration process.

Beyond imparting the concept of sports and medicine integration within the physical education teaching framework, physical education educators should also instil this integration through practical applications, a task demanding a strong knowledge base and exceptional skills (Demchenko et al., 2021). However, it's noteworthy that the presentation of sports skills is evolving in line with the changing times. Therefore, educators in this modern era must stay updated to ensure that sports technology remains aligned with contemporary developments, meets the interests of primary and secondary school students, and takes into account their physical and mental development characteristics. This necessitates that educators not only teach but also engage in ongoing learning via curriculum resources, ensuring the acquisition of proficient skills in sports and medicine integration. Furthermore, this approach aims to bridge the gap between theories and practice (Lambert & Biddulph, 2015). In the process of integration, it not only equips educators to teach effectively but also empowers students to comprehend the importance of health, embrace a proactive approach to well-being, and expand their professional knowledge and skills, thereby fostering the integration of competencies.

2.4 Social Need & Characteristic Skill Establishment and Sports Integration

In the realm of literature, the concept of social need pertains to a specific requirement that individuals acquire through their diverse life experiences as part of their developmental journey. This type of human need encompasses a yearning for acceptance, affiliation, affection, and love. As inherently social beings, humans possess an innate desire to connect, assist, and share various facets of their lives within a group context. Within the framework of Maslow's Theory, scholars identify "self-actualization need," "respect need," and "social needs" as integral components of human social needs. Additionally, scholars categorize "social presence" and "emotional belonging" as specific manifestations of social needs that exert a positive influence on student satisfaction. It is worth noting that social needs wield significant influence over student behaviour (Zhigang et al., 2022).

As societal productivity advances, the demand for talent evolves in tandem, reflecting a necessity of social progress. Within the context of social development, the presence of physical education programs in colleges and universities aligns with the spirit of the times, representing a requisite choice (Maksymchuk et al., 2018). In light of the prevailing trend towards the integration of sports and medicine, the demand for sports professionals extends beyond mere rhetoric; it constitutes an active cognitive and practical response. Concurrently, the emergence of sports skills studios, boasting various credentials, has proliferated in society. Research literature indicates the establishment of numerous sports-oriented studios within primary and secondary schools, predominantly spearheaded by renowned educators, with a focus on teaching and research initiatives. However, institutions offering physical education majors at the university level possess the capacity to establish specialized studios tailored to their domain. Such studios can serve as an enhanced platform for fostering the integration of sports and medicine while facilitating educational goals (Okely et al., 2017). It is noteworthy that sports skills studios exhibit not only the customary attributes of maker spaces, including openness, sharing, collaboration, and innovation but also possess distinct characteristics, notably student leadership, collaborative practice, diverse project engagement, and alignment with the curriculum.

Through student leadership, students can cultivate their sense of service and contribute tangible support to the integration of medical science and sports activities. This support takes the form of applied skills and knowledge in the realm of medicine and sports integration. Collaborative practice facilitates increased engagement with external stakeholders, fostering the assimilation of fresh knowledge and ideas. This, in turn, provides practical backing for the simultaneous progress of medicine and sports integration alongside sports and medicine (Alismail & McGuire, 2015). The operation of various studios with curriculum-related projects serves as a foundational platform for advancing the integration of medicine and sports. Within this platform, students can leverage their individual interests and passions to their full advantage while concurrently sharing their enthusiasm and expertise with those who aspire to attain and maintain good health. This approach aims to propel a qualitative leap in the teaching of medicine and sports within higher education institutions, specifically in the field of physical education (Wang & Li, 2022). It signifies a shift from the mere implantation of ideas to a proactive platform for action, thus making a significant contribution to the comprehensive and multifaceted development of medicine and sports integration within physical education programs at colleges and universities. In this context, the roles of psychological and social needs emerge as pivotal influencers on the integration (Hodge & Gucciardi, 2015).

On the basis of above literature, we hypothesized that

H1: Social needs have positive effect on sports integration and medicine

H2: Teachers connotation has positive effect on sports integration and medicine

H3: Innovation of student has positive effect on sports integration and medicine

H4: Curriculum has positive effect on sports integration and medicine

3. Methodology

This study utilized a quantitative approach to explore the relationship between three independent variables and a single dependent variable. The independent variables examined were social needs, connotation, innovation, and curriculum, while the dependent variable was the integration of sports and education. To collect responses, a questionnaire was developed based on existing research and structured using a 5-point Likert scale, following established practices from previous literature reviews. Subsequently, this survey was distributed among 300 students enrolled in Chinese higher education institutions. A total of 207 completed questionnaires were received, of which 193 met the criteria for inclusion in the analysis, while the remaining responses were excluded due to incompleteness or inadequate completion. The collected data underwent further analysis using Smart PLS.

4. Results

In this study, we employed PLS 3.3.9 to assess the hypotheses and relationships proposed. Prior to the analysis in PLS, we

conducted an initial examination of the data using SPSS to identify any missing values. Fortunately, no missing values were detected, allowing us to proceed with the evaluation of the data using PLS, which encompasses both a measurement and structural model. The reflective measurement model provides insights into the nature of the data, and if it fulfills the necessary criteria, the data is deemed suitable for further analysis (Hair Jr et al., 2017).

In the realm of academic literature, convergent validity has been defined as the extent of shared variance among the variables under investigation. Given the reflective nature of this research, the primary objective is to satisfy the fundamental prerequisites. Three essential criteria must be met for the scrutiny of the measurement model, namely, discriminant validity, convergent validity (based on AVE, outer loading, and reliability), and internal consistency (Ab Hamid, Sami, & Sidek, 2017).

To evaluate the validity, the data undergoes testing for AVE and factor loading. According to Byrne (2016), factor loading values should exceed 0.60, while Fornell and Larcker (1981) proposed that AVE values should surpass 0.50. Tables 1 and 2 illustrate that these criteria have been met. Furthermore, Hair Jr et al. (2014) stipulate that CR and Cronbach Alpha values should reach a minimum of 0.70. This benchmark is indeed achieved, as both Cronbach Alpha and AVE values exceed 0.70.

This prompts the examination of discriminant validity, for which this study has employed the Fornell and Larcker criteria. According to this criterion, discriminant validity is considered satisfactory if the values along the diagonal of the matrix exceed those in the remaining cells. Table 3 provides evidence that this criterion has also been met.

Table 1

Factor Loading

	CD	INT	SI	SN	TC
CD1	**0.843**				
CD2	**0.772**				
CD3	**0.830**				
CD4	**0.832**				
INT1		**0.824**			
INT2		**0.816**			
INT3		**0.822**			
INT4		**0.798**			
SI1			**0.867**		
SI2			**0.826**		
SI3			**0.835**		
SN1				**0.794**	
SN2				**0.801**	
SN3				**0.794**	
SN4				**0.791**	
TC1					**0.831**
TC2					**0.802**
TC3					**0.752**
TC4					**0.719**

Note: CD= curriculum development, SI= student innovation, TC= teacher connotation, SN= social need, INT = integration

Table 2

Reliability

	Alpha	CR	AVE
CD	**0.838**	**0.891**	**0.672**
INT	**0.832**	**0.888**	**0.664**
SI	**0.796**	**0.880**	**0.711**
SN	**0.806**	**0.873**	**0.632**
TC	**0.782**	**0.859**	**0.604**

Note: CD= curriculum development, SI= student innovation, TC= teacher connotation, SN= social need, INT = integration

Table 3

Discriminant Validity

	CD	INT	SI	SN	TC
CD	0.820				
INT	0.583	0.815			
SI	0.419	0.648	0.843		
SN	0.504	0.715	0.453	0.795	
TC	0.577	0.624	0.447	0.555	0.777

Note: CD= curriculum development, SI= student innovation, TC= teacher connotation, SN= social need, INT = integration

Subsequently, this study proceeded to assess the structural model in order to evaluate the proposed hypotheses. The bootstrapping procedure was employed to obtain T-values and Beta values, facilitating the determination of whether the hypotheses could be accepted or rejected. The findings, as presented in Table 4, clearly indicate that curriculum exerts a positive influence on integration. Furthermore, there is a significant relationship between social needs and integration. Similarly, the results demonstrate a positive association between innovation and integration. Lastly, the teacher's connotation also exerts a significant impact on integration. Consequently, hypotheses H1, H2, H3, and H4 receive support in this study.

Upon the conclusion of the analysis, an examination of the R-squared value was conducted. Statistical findings reveal that integration is influenced by the variables proposed in the study to a significant extent, accounting for 69% of the variance, as depicted in Table 5.

Table 4

Direct Relationships

	Beta	SD	T value	P Values
CD -> INT	0.145	0.076	1.906	**0.029**
SI -> INT	0.330	0.073	4.545	**0.000**
SN -> INT	0.396	0.087	4.550	**0.000**
TC -> INT	0.173	0.071	2.444	**0.007**

Note: CD= curriculum development, SI= student innovation, TC= teacher connotation, SN= social need, INT = integration

Table 5

R Square

	R Square
INT	0.690

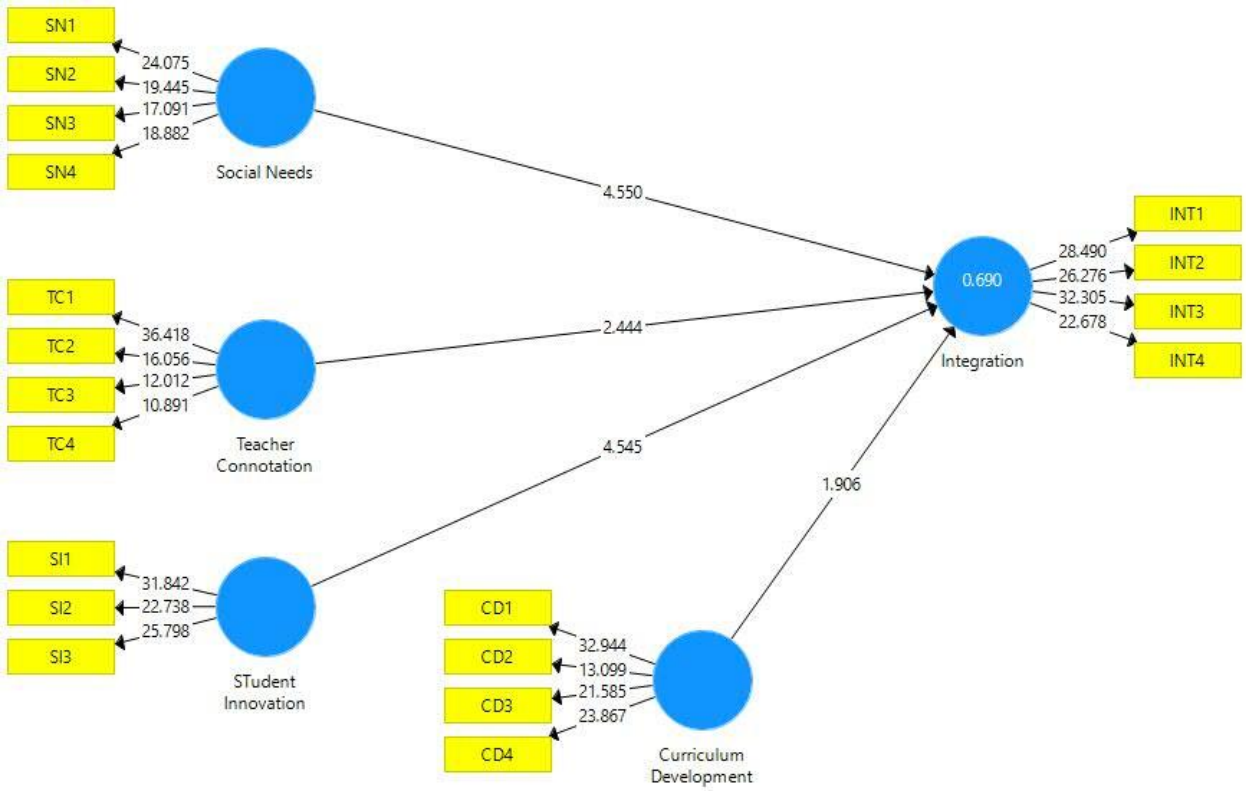

Figure 1: Structural Model

Note: CD= curriculum development, SI= student innovation, TC= teacher connotation, SN= social need, INT = integration

5. Discussion, Conclusion and Limitations

Physical education holds considerable significance within all societies due to its emphasis on health and the arts. Its primary focus centres on outdoor recreation and enhancing human physical fitness through a variety of physical activities encompassed within the domain of sports. Educational institutions increasingly prioritize the concept of physical education. Hence, this study scrutinized the influence of curriculum, social needs, teacher connotation, and student innovation on the integration of medicine and sports.

The study's findings underscore the substantial impact of teacher connotation on the integration of sports and medicine. Teachers, being role models for students, significantly influence the latter's engagement in physical activities. These results are congruent with those reported by Joyce and Lewindon (2015) in their study, which yielded similar findings. Furthermore, the study demonstrates that social connectivity and needs play a pivotal role in fostering integration. Students are inclined to conform to social requirements, as elucidated by Hodge and Gucciardi (2015). Statistical findings also lend support to the proposition that students' innovation capabilities are instrumental in their participation in sports. This implies that emerging sports technologies wield considerable influence over students' decision-making processes, aligning with the research conducted by Wang and Fang (2019). Finally, the results suggest that curriculum content serves as a compelling motivator, compelling students to actively partake in sports activities. When the curriculum incorporates sports-related content, students exhibit a heightened propensity to engage in these physical pursuits, as corroborated by the findings of Li and Luzi (2022).

The integration of medicine and sports is of paramount importance not only for the realization of a healthy China but also as a response to the prevailing demands of our times and the universal human aspiration for well-being. Within higher education institutions, physical education majors bear the profound responsibility of nurturing the physical fitness of young individuals. Faced with this exceptional opportunity, it is incumbent upon physical education programs in higher education institutions to take proactive measures.

Initiating with curriculum development, these programs should underscore the theoretical underpinnings of physical education while also placing significant emphasis on practical application. Furthermore, they should accentuate the concept of integrating medicine and sports. An effective approach involves stimulating innovation among students majoring in physical education, thereby harnessing the innate vigour of youth to foster the integration of medicine and sports.

Starting with the pedagogical approach of educators, these programs should seamlessly integrate the knowledge base of physical education instructors and broaden their proficiency in the integration of medicine and sports. Addressing societal needs necessitates the establishment of specialized skill studios within physical education majors, which can serve as robust platforms for advancing the integration of medicine and sports.

Ultimately, the objective is to realize widespread integration across diverse domains and foster a novel and distinctive form of medicine and sports integration that is emblematic of the contemporary era. These endeavours collectively contribute to the evolving landscape of physical education majors in colleges and universities, aligning with the spirit of the new era.

In terms of limitations, it's important to note that this study relied on cross-sectional data for analysis. Future research endeavours could benefit from adopting a longitudinal research design, offering a more comprehensive perspective over time. Additionally, the study employed Partial Least Squares (PLS) as the analytical tool. Subsequent studies might consider utilizing AMOS or other similar analytical tools to explore similar datasets.

The outcomes of these investigations could hold significant implications for policymakers, guiding efforts to enhance the integration of medicine and sports within higher education institutions.

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