

A Discussion Related to the Impact of Incorporating Standardised Individualised Strength Training in the Physical Education Curriculum of Colleges and Universities on the Mental Health of College Students

Zheyu Jin, HAMDAN MOHD ALI *

Faculty of Education & Liberal Studies, City University Malaysia, Kuala Lumpur, CO 06010, Malaysia

* Corresponding author: HAMDAN MOHD ALI

Abstract: This study explores the far-reaching impact of standardised personalised strength training on college students' mental health. With the continuous improvement of the comprehensive quality requirements for college students in modern society, mental health problems have gradually come to the forefront and become an important issue to be solved in the field of higher education. Traditional physical education programmes tend to be designed and implemented in a 'one-size-fits-all' teaching mode, ignoring the significant differences between students in terms of physical condition, athletic ability and interest preferences. This neglect not only limits the overall development of students' physical abilities, but may also adversely affect their mental health. In response to this challenge, standardised and individualised strength training has been developed. The core of this approach is 'personalisation', i.e., a training programme that is tailored to the specific needs of each student. The individualised training programme not only takes into account the student's physical condition and athletic ability, but also respects their preferences. In this way, students are able to train at an intensity and tempo that suits them, thus improving the training effect and reducing the risk of sports injuries.

Keywords: College Physical Education Curriculum; Standardisation; Personalisation; Strength Training; Mental Health.

1. Background and Significance

In the dawn of the 21st century, China is experiencing an unprecedented wave of social transformation and scientific and technological progress, and this epochal change has not only reshaped the economic structure and social form, but also profoundly affected people's lifestyles and values. The timely introduction of the 'Healthy China 2030' programme is like a bright light, illuminating the state's deep concern and long-term planning for national health, especially the physical and mental health of young people as a solid cornerstone for the country's future development. Colleges and universities, as the cradle of cultivating social elites and future leaders, carry the important mission of shaping a healthy body and cultivating a sound personality in the construction and implementation of their physical education and health programmes. College students, as the fresh blood and new force of the society, are in the critical period of physical and mental growth and value formation. Their mental health is not only related to the full exploration of personal potential and comprehensive development, but also an important influence on the future direction of the country and social harmony and stability. Therefore, how to provide scientific, comprehensive and personalised mental and physical health support for college students at this critical stage has become an important issue for university education.

In this context, the inclusion of standardised and personalised strength training in the college physical education curriculum is undoubtedly a bold innovation and profound change to the traditional physical education teaching mode. This initiative not only reflects the respect and concern of colleges and universities for the individual differences of students, but also a vivid practice of

comprehensive care for the physical and mental health of college students. Through scientific assessment of each student's physical ability, interest and development goals, personalised strength training can be tailored to follow the principles of sports science and personal characteristics of the students' training programmes, to ensure that each student in the process of exercise can get the best results and experience. This kind of targeted exercise can not only effectively improve the physical quality of college students, enhance their physical fitness and endurance, but also have a far-reaching positive impact on their mental health, helping them to establish a positive mindset, enhance self-confidence and self-identity, and laying a solid foundation for their future learning and life.

2. Definition and Characteristics of Personalised Strength Training

In today's broad stage of college physical education, personalised strength training, with its unique charm and far-reaching influence, is gradually becoming an important way to improve the physical and mental quality of college students [1]. The so-called personalised strength training is not simply applying the traditional strength training model to every student, but a highly customised training programme based on a deep understanding and precise grasp of the individual differences of students. The core of this training method lies in 'personalisation', which requires coaches or teachers to take into account the unique attributes of each student, including but not limited to age, gender, physical fitness base, health status, sports preferences and personal development goals. Through the comprehensive assessment of these multi-dimensional information, a 'physical portrait' of each student can be drawn, so that a set of scientific and reasonable

strength training programme can be tailored for them. One of the characteristics of personalised strength training is its high degree of specificity. Traditional strength training often adopts a 'one-size-fits-all' approach, ignoring the individual differences between students. In contrast, personalised strength training is like a scalpel, targeting each student's weaknesses and ensuring that every effort is directed at the key points of improvement. This type of training not only significantly improves the effectiveness of training, but also effectively avoids the occurrence of sports injuries, ensuring that students grow steadily in a safe environment [2].

Another notable feature is its flexibility. Personalised strength training is not a fixed pattern, but a dynamic process that is constantly optimised as students' fitness levels improve, health conditions change and personal goals are adjusted. The coach will adjust the training programme according to the student's feedback and training data to ensure that the training content is always in line with the student's actual needs and goals. This flexibility not only ensures the effectiveness of the training, but also allows students to feel the power of autonomy and control in the training process, stimulating their motivation and initiative to participate in training. The ultimate goal of personalised strength training is to enable college students to get a comprehensive improvement in strength, endurance, flexibility and coordination through a scientific and reasonable training plan. Strength is the foundation of the movement, endurance is the guarantee of a long-lasting battle, flexibility determines the smoothness and beauty of the movement, and coordination is the key to the synergy of all parts of the body. The comprehensive enhancement of these four aspects can not only enhance students' physical fitness and athletic performance, but also bring positive impacts on their daily life and learning, such as increasing self-confidence, improving learning efficiency, and improving sleep quality [3].

In summary, personalised strength training has become an indispensable and important part of the sports curriculum in colleges and universities with its high relevance, flexibility and comprehensive enhancement effect. It is not only a respect and concern for students' individual differences, but also a concrete embodiment of comprehensive care for their physical and mental health. In the days to come, we have reason to believe that personalised strength training will play a more important role in college physical education, contributing to the cultivation of more healthy, confident and energetic social elites.

3. The Impact on the Mental Health of College Students

College life, as an important stage of individual growth and development, carries multiple missions such as knowledge accumulation, ability enhancement and personality shaping. However, this period is also accompanied by unprecedented pressures and challenges, including heavy academic tasks, fierce competition for employment, and complex interpersonal networks, which together constitute important external factors affecting the mental health of college students. Against this background, it is particularly important to explore effective ways of psychological adjustment and stress release. Personalised strength training, with its unique charm and scientific training methods, has gradually become a popular means of mental health promotion among college students. The purpose of this paper is to analyse the impact of

personalized strength training on the psychological health of college students, with a view to providing valuable references for the theory and practice in related fields.

3.1. Easing Psychological Pressure and Negative Emotions

In the hall of higher education, university life is famous for its richness and challenge, however, the accompanying multiple stressors are like invisible shackles, silently binding the body and mind of college students [4]. Academic pursuit, employment pressure, interpersonal relationships and self-identity confusion and other factors are intertwined to form this complex stress network. These pressures not only lead to the tension and exhaustion of physical functions, but also erode the mental health of college students at a deeper level, prompting anxiety, depression and other negative emotions to grow quietly. These negative emotions are like a haze that obscures the sunny path of college students in their pursuit of knowledge and growth, which not only reduces their learning efficiency and affects their quality of life, but also may have a far-reaching negative impact on their long-term development. Therefore, it is particularly important to explore effective psychological adjustment strategies.

Personalised strength training, as a kind of scientific, targeted and interesting exercise method, has become a 'spiritual antidote' for college students to relieve psychological pressure and release negative emotions with its unique physical and mental interaction mechanism. Under the guidance of scientific training programmes, college students through high-intensity physical activity can not only effectively consume excess energy in the body, relieve the body's state of tension, but also in the process of exercise to experience the harmony of the body and mind. Especially important is that exercise can activate the brain's reward system, prompting the release of endorphins, dopamine and other 'happy hormones'. These neurotransmitters show excellent effects in regulating emotions and relieving anxiety and depression. They act as a lubricant for the mind, enhancing the sense of pleasure and happiness of college students, reducing the level of stress reaction, and giving college students an unprecedented ease and freedom in their psychology, which lays a solid psychological foundation for their all-round development.

3.2. Enhance Self-confidence and Self-efficacy

In the broad stage of university career, self-confidence and self-efficacy, as the key psychological resources, are of inestimable value for individuals to cope with the challenges of life and achieve self-transcendence. Personalised strength training, with its unique challenges and intrinsic sense of achievement, becomes a powerful catalyst for shaping and strengthening this psychological resource. During the training process, college students are guided to constantly challenge themselves and climb to the top. Each successful lifting of heavier loads and each precise and accurate completion of technical movements is a courageous exploration of the boundaries of self-competence and a positive leap. These subtle but significant progresses, like continuous positive reinforcement signals, build up a strong positive feedback system, and like a lighthouse of the mind, illuminate the way forward in the midst of confusion and challenges. It not only allows college students to intuitively feel the unlimited possibilities of their own potential, but also plants a firm seed of faith deep inside their hearts - believing that they are

capable of overcoming any difficulties and obstacles[5].

In addition, personalised strength training also attaches great importance to the principle of goal orientation, encouraging college students to set short-term and long-term goals according to their own actual situation. This process encourages individuals to refine their grand visions into palpable milestones, so that they can gradually experience the joy of growth and a sense of achievement in practice. Every time a goal is achieved, it is a powerful proof of self-competence, and this cumulative sense of achievement and satisfaction is like a solid foundation, further solidifying college students' self-confidence and self-efficacy. In the long run, this deep accumulation of psychological resources will provide students with strong psychological support in their future life and study, and help them face the unknown with courage and move towards success with confidence.

3.3. Improve Interpersonal Relationship and Social Skills

Interpersonal relationship and social skills are important manifestations of college students' social adaptability. Personalised strength training, with its unique form of teamwork, has become a 'bridge' to improve interpersonal relationships and social skills. During the training process, many programmes such as group weightlifting and cooperative aerobics require close cooperation and mutual support among team members. This teamwork atmosphere not only enhances the cohesion and sense of belonging among college students, but also provides them with the opportunity to meet like-minded friends. In the common goals and challenges, college students can establish a deep friendship and trust. At the same time, the process of teamwork is also a process of social skills improvement. Students need to learn social skills such as listening, communicating, coordinating and compromising, which are also crucial in the future workplace and life. Through personalised strength training, college students' interpersonal network can be broadened, social skills can be significantly improved, and the sense of loneliness and social fear can be naturally alleviated [6].

3.4. Cultivate the Quality of Perseverance and the Ability to Cope with Setbacks

The quality of perseverance and the ability to cope with setbacks are important psychological qualities for college students to face future challenges. Personalised strength training, with its tough training environment and various challenging tasks, has become a 'whetstone' for cultivating these qualities and abilities. During the training process, students will encounter various challenges and difficulties such as fatigue, injuries and failures. However, it is these seemingly difficult experiences that forge their quality of perseverance and ability to cope with setbacks. Through perseverance and hard work, college students learn how to find hope in adversity, learn from failure and regain confidence in setbacks. This quality and ability are like the light in adversity, which illuminates their way forward and makes them more determined and calm in the future journey of life.

3.5. Improve Attention and Concentration

In the era of information explosion, the scarcity of attention is becoming more and more prominent. For college students, good attention and concentration is the key to efficient study and life. Personalised strength training, with its unique

training method, provides a 'training ground' for college students to improve their attention and concentration. During the training process, students need to maintain a high level of concentration and focus to complete a variety of complex movements and tasks. Whether it is precise movement control, breathing regulation or weight perception, they need to be fully concentrated[7]. This kind of high-intensity attention training not only improves the performance level of college students in training, but also subconsciously improves their attention and concentration in daily life and study. The improvement of this ability will enable college students to process information and solve problems more efficiently, so that they can achieve more excellent results in their studies and careers.

In summary, the incorporation of standardised and personalised strength training in college physical education programmes has a multifaceted and far-reaching impact on the mental health of college students. It is not only a good medicine to relieve anxiety and depression, a catalyst to enhance self-confidence and self-efficacy, but also a powerful driver to improve interpersonal relationships and social skills, cultivate the quality of perseverance, and improve attention and concentration. In the future, with the further updating of educational concepts and the continuous optimisation of physical education courses, personalised strength training will certainly play a more important role in the teaching of physical education in colleges and universities, and contribute more to the overall development and healthy growth of college students.

4. Implementation Strategies and Recommendations

4.1. In-depth Understanding of Student Needs and Individual Differences

The first task of developing a personalised strength training plan is to fully understand the physical condition, fitness level, interests and psychological needs of each college student. Colleges and universities can collect student information through physical fitness tests, questionnaires, interviews and exchanges, and establish detailed student health records. On this basis, the analysis of individual differences in students, for the subsequent development of targeted training plans to provide a scientific basis.

4.2. Clear Training Objectives and Content

According to the students' health records and the requirements of the course, define the general goal and the phased goal of personalised strength training. The overall goal can be set to improve the strength, endurance, flexibility, coordination and other aspects of the physical quality of college students, while paying attention to the improvement of mental health. The milestones, on the other hand, should be specific and quantifiable, such as increasing the strength of specific muscle groups and improving cardiorespiratory fitness in a certain stage. The training content should be designed around the goal, including but not limited to free weight training, equipment training, self-weight training, functional training, etc., to ensure the diversity and comprehensiveness of the training content [8].

4.3. Set the Appropriate Training Intensity and Frequency

Training intensity and frequency are the key factors

affecting the training effect. Colleges and universities should set personalised training intensity and frequency according to students' physical condition, training experience and recovery ability. For beginners, the principle of gradual progress should be adopted to gradually increase the difficulty of training; for students with a certain foundation, more challenging training programmes can be designed. At the same time, reasonable arrangement of training and rest time ratio, to ensure that students have enough recovery time, to avoid over-training caused by physical and mental fatigue.

4.4. Flexible Adjustment and Continuous Optimisation

Personalised strength training programmes are not set in stone, but should be flexibly adjusted according to students' training progress, physical response and psychological changes. Colleges and universities should establish a regular evaluation mechanism to collect data on students' training effects through testing and feedback, so as to identify problems and adjust the training programme in time. In addition, students are encouraged to actively participate in the development and adjustment process of the training programme to enhance their subjectivity and participation.

5. Conclusion

In summary, the inclusion of standardised and personalised strength training in the physical education curriculum of universities in Jilin Province, China, has a significant and far-reaching impact on the mental health of college students. Through scientific and reasonable training plans and personalised guidance services, it can not only improve the physical fitness and athletic ability of college students, but also effectively alleviate their anxiety and depression, enhance their self-confidence and self-efficacy, improve their interpersonal relationships and social skills, cultivate the

quality of perseverance, and improve their attention and concentration. Therefore, colleges and universities should attach great importance to the application and promotion of personalised strength training in physical education courses in order to provide a strong guarantee for the overall healthy development of college students.

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