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Master's Thesis in Global Sport Management

# **The Relationship Between Dual Career Support, Career Decision-Making Self-Efficacy (CDSE) and Career Development of Student Athletes in Korea**

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# The Relationship Between Dual Career Support, Career Decision-Making Self-Efficacy (CDSE) and Career Development of Student Athletes in Korea

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## **Abstract**

# **The Relationship Between Dual Career Support, Career Decision-Making Self-Efficacy (CDSE) and Career Development of Student Athletes in Korea**

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The current study explains the relationship between the dual career support, career decision-making self-efficacy (CDSE), and career development of student athletes in Korea. The unemployment rate among young adults has increased recently, and it is even more serious for athletes. Although, it is important to develop career in the student period, previous scholarly attention in student athlete has been limited.

Therefore, this study was conducted to fill this gap in literature by examining the relationship between the dual career support, career decision-making self-efficacy (CDSE), and career development of student athletes in Korea. Moreover, the role identity was examined as a moderating variable between the dual career support and CDSE. To test the proposed research model, data was collected through an online questionnaire survey from a total of 206 respondents. For data analysis, Structural Equation Modeling (SEM) was adopted using the statistical program STATA.

Results showed that the perceived level of support has a positive effect on the CDSE of student athletes, and CDSE has a positive effect on career development. More specifically, the perceived level of academic support had no effect on CDSE, but the perceived level of personal and athletic support had positive impact on CDSE. However, the role identity was found to have no effect on the relationship between the degree of support and CDSE.

Findings of this study provides extension to literature examining student athlete dual career support by exploring the potential impacts on career development. Additionally, findings of the current study can provide guidance for sport policy makers in the future to consider various aspects of

student athlete support and make effective support programs or services and may benefit sport organizations in better promoting sports fields.

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**Keywords:** dual career, career decision-making self-efficacy (CDSE), career development, role identity

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# **Chapter 1. Introduction**

## **1.1. Research Background**

In general, elite sports refer to sports games performed by athletes registered with corporations or sports organizations affiliated with the Korea Sports & Olympic Committee. The government-led elite sports promotion policy began in the 1960s when the National Sports Promotion Act was enacted and the ‘Korean National Training Center’ was built (The Ministry of Culture, Sports, and Tourism, 2019). With the introduction of the ‘Sports Specialist System’ in 1972, the policy to foster elite sports centered on the school sports department has been proceeded and become status quo (Park, 2015). As a result, it became a sports powerhouse by entering the top 10 in the Olympic medal rankings and achieving the ‘Grand Slam’ of sports that holds all the mega sports events such as the Winter and Summer Olympics, the World Cup, and the World Championships in Athletics (Choi & Park, 2022). The strong elite sport promotion policy was successful for the purpose of national prestige. However, there was also a negative side. For example, the ‘Sports Specialist System’ forced student athletes who are privileged to enter higher schools only with their athletic performance, to neglect

academics voluntarily or involuntarily (Kim, 2011). The elite sports promotion policy of Korea is criticized as it resulted in the abnormal development of school sports that justifies the deprivation of student athletes' right to learn and led to the life of 'player' rather than 'student' (Lee, 2014).

The unemployment rate among young adults has increased recently. According to the National Statistical office's (NSO) Economic Activity Survey, the number of young adults (15-29) was 425,000 which was 10% of the whole population. The unemployment rate is keep rising as in 2014 (9.0%), 2015 (9.1%), 2016 (9.8%), 2017 (9.8%), 2018 (9.5%), 2019 (8.9%), 2020 (9.0%). The employment situation of athletes, who are mostly young adults, was found to be relatively weaker than that of normal young adults. There are only few cases of moving to the business team after graduating from college, and it is difficult to find a job in the sports field. Recently, various competitions have been canceled and postponed due to the COVID-19, and the employment situation of athletes is getting worse (Chang, 2021).

In terms of life cycle, most players tend to retire relatively early, and as a result, it is reported that they have difficulty in re-socializing after retirement (Wi, Won & Kim, 2018). According to a study by the Presidential Youth Committee on Employment and Career Conditions of Sports, the average age of retired athletes in Korea was 23.8 years old, and 60% of active

sports players in Korea said their career path was the biggest concern after retirement. In addition, according to a survey of retired athletes by the Korea Sports & Olympic Committee (2018, 2019), 33.8% of retired athletes were unemployed, 64% of employed workers were non-regular, and 50% earned less than 2 million won per month. According to Chang (2021), there are two factors why the athletes face challenges transitioning to other job. First, athletes retire earlier than normal people. The majority of retire players are young people in their 20s and 30s and entering the labor market is more difficult than that of normal people since they do not have the ability to enter the labor market, understand the various professional worlds, and have no job search opportunities. Second, in order to increase the employment rate in the labor market, the skills and capabilities required by the labor market is needed. However, athletes lack the capabilities for self-development and employment because of the training and participation in many competitions. In developed countries, the ‘Athlete Career Program’ has been implemented since 2005 to systematically support retired players. Also, various retirement player support and education programs are being implemented in Korea, but the effect is not objectively proven. The government guarantees athletes’ right to live through law Article 14 (Protection and Fostering of Athletes) and Article 22 (Use of Funds) and Article 33 (Korea Sports & Olympic Committee) of the National

Sports Promotion Act for their stable social activities after retirement (Han, Cho, & Lee, 2021). The Korea Sports Promotion Foundation (KSPO) and the Korea Sports & Olympic Committee (KSOC) are operating “Career and Employment Support Projects” for retired athletes (Jeong, 2010). Among them, the KSOC is conducting a practical “Retirement Athlete Employment Support Project” for athletes who have more than three years of experience over the age of 20 to support the career of retired athletes (Korea Sports & Olympic Committee, 2019). Regarding the reality that has not improved despite these efforts, Choi (2016) pointed out that the employment support program for retired athletes in Korea is passive without receiving positive responses from targeted participants who lacked basic academic ability and perception of their careers, due to lack of publicity, career counseling, and job development conditions. She highlighted that as a result, it is difficult for athletes to establish themselves as stable and successful members of society after retirement. Accordingly, the importance of guaranteeing the right to learn of athletes and providing career education raised in Korea. There is a need to develop a system that can provide linked career and employment support for potential retired athletes to retired athletes, and to change the

perception of society as a whole and the sports community to accept the need for it (Kwon, Choi & Pyun, 2020).

Despite the need to pursue career development throughout life (Kang & Kim, 2013) many support measures are concentrated on retired athletes, and interest in student athletes is insufficient. In particular, in terms of career development, college is the time for student athletes to decide their career and get ready for it (Son, 2006). College students are in a turning point seeking to expand their roles as unemployed or professional-level athletes while they decide to retire. Therefore, it is most important to identify student athletes' career behavior in the face of the reality that they are having a lot of difficulties in career selection and decision-making processes for their career after retirement. The government not only support retired athletes but also student athletes. There are many student athlete support services or system existing in Korea, but the program efficiency is ambiguous. Most previous research have raised problems concerning support services or have identified various barriers of student athletes by deriving qualitative results through interviews with stakeholders or analyzing specific cases. However, there has been very limited studies using a quantitative approach. Therefore, this study used the concept of Career Decision-Making Self-Efficacy (CDSE) which is one of the factors of student athletes' career decision as an indicator to

examine the relationship between perceived level of support and the career development. The significance of this study is that it provides some insights to sports organizations or policy makers about the current situation of student athletes and to provide a direction in developing or improving the support services or programs. Quantitative research can collect numerous data and examine the relationships between variables, which can be generalized. The result of this study will be the evidence to help sports organizations or sport policies to change and improve in positive way.

## **1.2. Research Objective**

The main objective of this current study was to investigate the relationship between the student athlete dual career support, CDSE and the career development of student athletes in Korea, mediated by the role identity. In order to achieve this, the aim of this study was to identify the relationship between the perceived level of support of athletes that are currently available in Korea, the level of CDSE that they have, and the situation of career development. Additionally, it examined the role identity of current student athletes as a mediating factor. CDSE was distinguished into five specific measures; self-appraisal, occupational information, goal setting, planning, and problem solving. In short, a proposed research model exploring the



relationship between the perceived level of support, CDSE and career development, moderated by role identity.

## **Chapter 2. Theories and Hypotheses**

### **2.1. Student Athlete**

#### **2.1.1. Concept of Student Athlete**

The term ‘student athlete’ emerged in accordance with the Enforcement Decree of the Education Act (Presidential Decree No. 6377) on November 9, 1972. According to the previous research, most of them define student athletes as an individual who is attending academic courses offered by the school while also participating in a competitive sport. Since the term ‘Student Athlete’ first came out in Korean society, the concept of the word changed throughout time. In 1970~1980, Korea focused on economic development and national strength improvement. The sport field also did its best to foster athletes for the purpose of national development. Student athletes were immersed in sports like professional athletes. They accepted themselves as an ‘athlete’ rather than ‘student’, and also, they focused more on ‘athletic’ rather than ‘education’. Student athletes were one of tools for national development. During this period, there was no discussion other than fostering student athletes as an ‘excellent athlete’. As a result, the concept of student athletes got a modifier, ‘Not studying’. In conclusion, student athletes

can be named as ‘school representatives who do not learn’ in this period. In 1990, it was shortly after the successful completion of the 1986 Asian Games and the 1988 Olympics. The government established a system to foster excellent athletes at each school level and selected ‘Sports Specialists’ to foster competent professional athletes. The purpose of this system was to encourage athletes to focus only on sports by providing financial compensation as well as entering higher schools if they had a certain performance regardless of academic performance (Cho & Lee, 2013). Therefore, the student athletes were specially treated in college entrance systems, called as athletic students or specialized students. From 2000, after Korea faced economic crisis – IMF, the importance of education of students was emphasized. At the same time, there were some incidents occurred among school sports – bullying, assaulting. In response, the Ministry of Education promised to improve the fostering of elite sports by assuring the right to learn and attend normal classes for student athletes. From 2010, the government made specific policies in order to solve the problems of school sports and also to protect student athletes (Lee & Ryu, 2021). The Ministry of Education has made policy efforts every year to ensure student athletes’ right to learn through school sports work plans such as basic direction of school sports or revitalization measures. For example, in 2005, specific

measures such as emphasizing the completion of normal classes, prohibiting a full-time camp, restricting excessive participation in competitions, ensuring human rights of student athletes, and normalizing the operation of school sports teams were proposed (Ministry of Education, 2005). Additionally, there were introduction of weekend league system (2009), the minimum education system for students (2010), e-school system (2015). Regardless of the efforts that the Korean government made, the social attitude which is highly focusing on the results still causing problems. Korean elite sport became win-at-all cost mentality and got over competitive which made student athletes to neglect the academic part. For example, student athletes have been constantly exposed to numerous ills and problems due to class deficits, academic neglect, and poor basic education, without being guaranteed the right to learn, which is the fundamental rights as a student. According to Siedentop's (1980) 'The Ideal Model of School Physical Education', School physical education is a most important foundation of sports. Elite sport can be developed when the school physical education is operated well. However, due to essential problems in Korean school sport system, it causes not only health problems of general students, but also limits the right of student athletes to learn. Therefore, various sports deviations from school sports to elite sports are occurring (Lim & Park, 2019).

### 2.1.2. Student Athlete Support Systems

According to the concept of the ‘Student Athlete’, student athletes need to do hard exercises as an ‘athlete’, but also, they need to attend school courses as a ‘student’. To pursue both aspects in limited time, student athletes’ individual competencies – management, is the key. In regard to the competencies, developing a holistic skill set (i.e., psychosocial skills that help athletes handle dual career and, in general, develop as a person) has been suggested for overcoming the challenges of dual careers (Larsen, Alfermann, Henriksen & Christensen, 2013) and is considered one of the characteristics of successful talent development environments (Henriksen, 2010). In addition, Henriksen (2010) identified eight characteristics of successful talent development environments: training groups with supportive relationships, proximal role models, support of sport goals by a wider environment, support of the development of psychosocial skills, training involving diversification, focus on long-term development, strong and coherent organizational culture, and the integration of efforts from different levels and domains of the athletic talent development environment. As these factors show, not only individual efforts of student athletes but also the environment around them is very important for successful career pathway. Regarding this aspect, the term

‘Dual Career (DC)’ emerged and research on DC environment started to be conducted a lot.

Dual Career (DC) in sport has been defined in the EU Guidelines on Dual Careers of athletes as “the requirement for athletes to successfully initiate, develop, and finalize an elite sporting career as part of a lifelong career, in combination with the pursuit in education and/or work.” Pursuing a DC has a variety of benefits, such as balanced lifestyle, increase well-being, developing life skills, and self-regulation abilities and has expanded social support networks (EU Guidelines on Dual Careers of Athletes, 2012). D.Aquilina (2013) found some mutual benefits of pursuing a dual career through the interviews of student-athletes - ‘The need to focus on more than one aspect of life which relieved the intensity of pressure emanating from both sport and from educational performance helping to put things in perspective’, ‘Belief that skills learned in one area were transferable and valued’, ‘Intellectual stimulation to accompany the physical challenges of training and performance, helping to maintain interest and commitment: more sustainable in the longer-term’, ‘A sense of ‘balance’ in recognizing that there is more to life than sport, social comfort in mixing with peers’, ‘Frustration with the experience of having dedicated time exclusively to elite sport in the past, neglecting education, but with minimal improvement in sporting

performance’, ‘Feeling more secure and hence performing better with the ‘safety net’ of gaining appropriate qualifications, preparing for future life stages and in particular for post-athletic careers’, ‘Consideration to life after sports – Transition into post-athletic career’, ‘Simply performing better in sport in an academic environment which is sport friendly’. According to the interviews from this research, it showed that most of the athletes know that pursuing both athletic and academic is beneficial for them in many ways, even for their transition or post-athletic period. However, there are many challenges that student-athletes face. Most athletes’ time is dedicated to developing their sport career, with very little time left to develop other aspects of their lives outside their sport. Fatigue from training, lack of role experimentation and delayed identity development have significant impact on the relationship between athletic participation and academic performance (D.Aquilina, 2013). David (2005) and Miller & Kerr (2002) argued that when demands of elite sport by far outweigh other aspects in student-athletes’ lives, which may eventually predispose them to potential failure both in academic and sporting terms. In the study on Canadian student-athletes, Miller and Kerr (2002) observed that there was a constant tension between the three identified components: academic, sporting and social. Many national efforts are being

made around the world to help these student athletes solve the difficulties and pursue dual career.

***United States:*** Representatively, there are National Collegiate Athletic Association (NCAA) in United States. The National Collegiate Athletic Association is a member-led organization dedicated to the well-being and lifelong success of college athletes. The purpose of the association is to govern competition in a fair, safe, equitable and sportsmanlike manner, and to integrate intercollegiate athletics into higher education so that the educational experience of the student-athlete is paramount. As the mission statement shows, the NCAA consider not only the competition in sport but also the academic perspective of student athlete important. When the current Korean University Sports Council was established in Korea, the organization's benchmarking was NCAA. It usually focuses on career education for student-athletes. NCAA acknowledges that preparations for student athletes' careers are relatively insufficient compared to those of non-student athletes' groups (Van Raalte, Andrews, Cornelius, Brewer & Petitpas, 2017). Career education conducted by NCAA emphasizes two directions. First, it aims for a theoretically grounded career education program (Taylor & Betz, 1983). Second, it aims for an experience-based career development



program (Tyrance, Harris & Post, 2013). NCAA uses ‘Life Development Intervention’ model which has three types of intervention: Enhancement, Support, Counseling (Petitpas, Danish, McKelvain & Murphy, 1992). NCAA consider that student-athletes are already developing the competencies required for post-career while experiencing as a player, so it conceptualized required competencies as ‘transferable skills’ (Mayocchi & Hanranhan, 2000) and focus on it at ‘enhancement’ phase. Van Raatele, et al (2017) empirically proved the effectiveness of career development workshops using the concept of transferable skills. They verified the effectiveness of NCAA’s career development program using the Transferable Skills Inventory (TSI) and the result showed that the career decision making self- efficacy (Betz, 2001) of the experimental group participating in career education was statistically higher than the average of the comparative group. NCAA not only operates the career development program, it also conducts ‘NCAA after the Game Career Center’. The task of this center is to connect student-athletes and the users who want to find a former student-athletes. Students wishing to find a job can upload their resumes through the site and view job ads posted through the center. In other words, this center provides useful information to student-athletes who want to find a job efficiently (Kwon et al, 2020).

***Europe:*** Initiatives in European higher education supporting student-athletes' pathways only started to emerge in the late 1990s (Aquilina, 2013). Across Europe, discrepancies in dual career policies determine different career paths in student-athletes. To protect their right to combine sport and education, European policymakers have encouraged EU Member States to support student-athletes at local level by providing EU Guidelines on Dual Careers of Athletes and Key action strategies. Within such framework, the European Athlete as Student Network (EAS) has, since 2004, actively supported EU efforts in promoting dual career by providing a platform for a better dialogue between educational bodies (i.e., universities, high schools, sports schools) and sport organizations (i.e., clubs and federations). EAS aims to unify partners involved in high performance sport and education, promote the exchange of dual career best practices, strengthen the link between educational institutions and sports organizations and support and initiate project and research on dual career (Capranica et al., 2015). Elite student-athletes in the United Kingdom typically access support services via regional National Institutes of Sports networks, which facilitate and manage individual relationships with higher-education institutions (Aquilina & Henry, 2010), whereas in the United States student-athlete support is embedded in university athletic departments. Aquilina (2009) conducted "life story" interviews

exploring the navigation of student-athlete pathways and the findings reflect themes were the importance of institutions' academic and athletic reputation, scholarships, comfort/familiarity with the institution, and coaching staff. McKenna and Dunstan-Lewis (2004) highlighted three areas of concern for student-athletes: establishing priorities for "student" and "athlete" roles, relationships with academia, and lack of support and understanding the dynamic of the often-competing roles of "student" and "athlete".

***Australia:*** Cosh and Tully (2014) found that the main challenge faced by student-athletes was the requirement to balance sport and study. They provided recommendations for upskilling student-athletes in areas like time management, self-efficacy, and developing stress-management skills to support this pathway. The study also highlighted the importance of coaching support in pathways for student-athletes (Cosh & Tully, 2015). Australia government sport initiatives provide support services for student-athlete. For example, the Australian Sports Commission implemented the Athlete Career and Education program (ACE) in 1995. ACE was designed to assist athletes with developing skills (e.g., time management) in balancing sporting commitments with vocational pathways (Fraser, Fogarty & Albion, 2010). Additionally, the Personal Excellence initiative, part of the Australian Sports Commission's previous Winning Edge Strategy, replaced the ACE program.

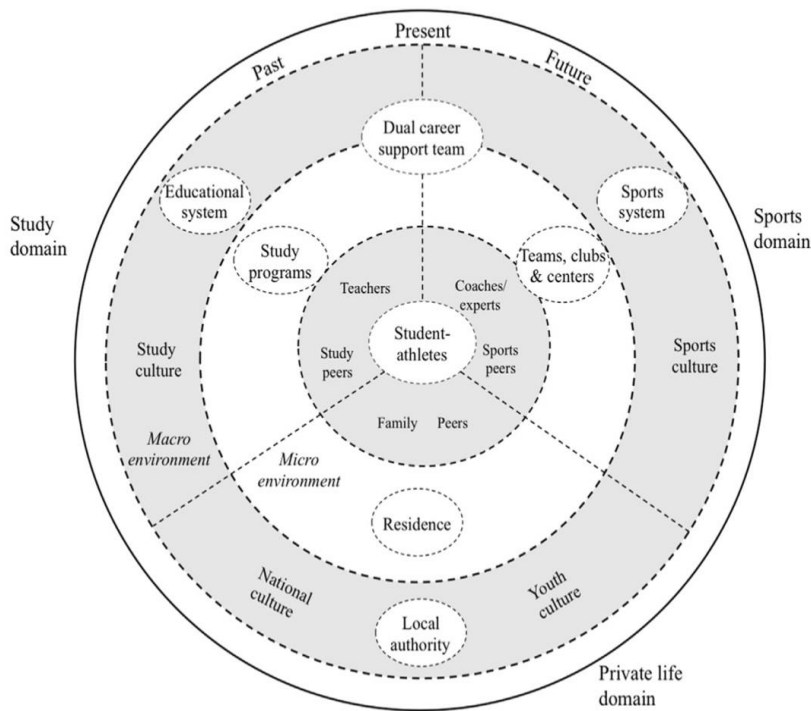
Within the Personal Excellence initiative is the EAFU program, established in 2012, requiring members to follow four specific guidelines – nominated staff contact, flexible study options, course entry, and defining elite athletes – to be an endorsed EAFU (Australian Institute of Sport, 2017).

As a result of implementation of numerous policies and support systems to ensure student-athletes' dual career, DC research was also spread worldwide. Guidotti (2015) identified four DC dimensions – individual, social/organizational. And political. Representatively, Henriksen, Storm, Kuttel, Linner & Stambulova (2020) took insights from the holistic ecological approach (HEA) established in talent development research to explore holistically a Danish athlete-friendly university as a dual career development environment (DCDE). This research covers several interrelated themes, including DC pathways and transitions with relevant demands, resources, barriers, and coping strategies, student-athletes' motivation, identify, health, lifestyle, and wellbeing in relation to DC and retirement, and DC support services and programs with recommendations for their optimization. One point to highlight is that the researchers of this study focused on holistic (a whole person) development perspective through adopting the HEA (Holistic Ecological Approach).

The DCDE working model describes a particular DCDE and clarify roles and functions of the different components and relations within the environment. Student-athletes are at the center of the model and the DCDE working model has micro and macro levels considering three domains in athletes' development – sport, studies, and private life. The micro-level refers to the environment where the student-athletes spend a good deal of their daily life and is characterized by direct communication and interactions. It includes study peers, family, friends, as well as their club environment, study programs. The macro-level refers to social settings, which affect but do not contain the student-athletes. Regarding the three domains, the sports domain covers the part of the athletes' environment that is directly related to sport, the study domain represents components related to their study activities, and the private life domain refers to the other spheres of the student-athletes' lives. It includes sports systems, the educational system and local authority.

**Figure 1**

*The Dual Career Development Environment (DCDE) Working Model*



Also, it involves various cultural contexts such as national culture, sports culture, and study culture.

To illustrate the permeability and interplay of the different components, these are marked by dotted lines as shown in figure 1. The outer layer of the model outlines the past, present, and future of the DCDE, emphasizing its dynamic nature (Henriksen et al, 2020). The DCDE working

model enable us to shift in focus from individual student-athletes to their whole environments which facilitates a richer understanding of the DC athletes' challenges and coping processes in the societies that acknowledge their moral and social obligations to help their athletes prepare for a life after sport (Stambulova & Wylleman, 2019). The domains demonstrated by the DCDE model provides the foundation for majority of support systems and many countries apply the factors in a suitable way for their contexts. Therefore, there are similarities and differences in DCDE across different countries.

#### 2.1.3. Support System of Student Athlete in Korea

Elite sports promotion policy of Korea has been a priority in sports policy to achieve the goal of promoting national prestige (Park & Park, 2010). Strong sports policies were implemented to achieve excellent results in international competitions by intensively fostering only a certain number of elite athletes. As a result, there is no room for criticism on the logic that it was possible to establish the status of 'Sports Korea' in a short time (Kim, 2015a).

Kim (2010) described Korean sports system as a pyramid structure. School sports are located on the bottom floor of the pyramid, and it leads to the revitalization of sport for all and play a role in supplying the resources for

athletes required in professional sports. The problem arises from this structure of sport system. Many young athletes choose their goal to become an excellent international athlete, but they must compete with their colleagues in the pyramid structure, which narrows the space to stand as they become more talented. Through this pathway, many young athletes are forced to put their all efforts to sports. Therefore, they put lots of time to train which makes them to have no time on academics. There were some criticisms that the school sports team became a major reason for depriving students of their right to learn, rather than creating and promoting an environment in which students can study and exercise at the same time (Sports Innovation Committee, 2019).

To resolve the problems of academy sports, the motto “Studying Student Athletes” was first presented in 2005. The Ministry of Education has made policy efforts every year to ensure student athletes’ right to learn through school sports work plans such as basic direction of school sports or revitalization measures. For example, in 2005, specific measures such as emphasizing the completion of normal classes, prohibiting a full-time camp, restricting excessive participation in competitions, ensuring human rights of student athletes, and normalizing the operation of school sports teams were proposed (Ministry of Education, 2005). Additionally, there were introduction of weekend league system (2009), the minimum education



system for students (2010), e-school system (2015). However, according to previous studies, those systems that were introduced to ensure student athletes' right to learn showed limitations to solve the problems. For example, the minimum education system showed limitations in inducing student athletes to participate in classes, just as many student athletes still do not meet basic academic achievement standards (Kim, 2018). Therefore, although the government's policy provided a certain environment for student athletes to pursue both academic and sports, it could be said that it failed to induce fundamental changes in the field.

The Korean Sport & Olympic Committee (KSOC) has been promoting the career support project for athletes since 2013, using the National Sports Promotion Fund. The career support project for athletes is a welfare project to improve the quality of life through career support after retirement (Lee, 2022). Since there is an employment problem nationwide, it is a project to provide educational opportunities and support employment to athletes who are unable to prepare for employment at an equal starting point with others (Shin & Kim, 2019). The purpose of the career support project for athletes is largely two, consisting of career awareness improvement and career transformation support. First, career awareness improvement aims to spread career education and dual career awareness, such as the importance of

career development, career exploration, goals and plan establishment for athletes, leaders, and parents. Career transformation support is aimed at supporting athletes career exploration, providing career information, developing competencies, by providing counseling, education, and mentoring necessary for career transformation (Korean Sport & Olympic Committee, 2020a). As the purpose of the program is focused on athletes' welfare, the participation rate of players is also high. Representatively, among career counseling, career competency education, and mentoring projects, the number of registered people for career counseling increased from 252 in 2018, to 498 in 2020, and the counseling cases increased from 5,338 in 2018, to 7,594 in 2020 which means that the registered people increased by 97% and the number of counseling cases increased by 42%. In case of career competency education, the number of educations increased by about 112%, from 41 in 2018, to 87 in 2020. For mentoring projects, increased by about 1,260%, from 15 in 2018, to 204 in 2020. The athletes' satisfaction with the project was also high (Korean Sport & Olympic Committee, 2020b).

Especially for university students, Korean University Sport Federation (KUSF) established certain policies in order to ensure university student athletes' dual career. In other words, it manages inter-college leagues not only to provide the opportunities to play sports but also to ensure student

athletes' right to learn. The "C<sup>0</sup> Rule" has been in effect since 2017, and it is a system that if student athletes get their academic score lower than C<sup>0</sup>, they are not able to participate in U-league. This policy is allowing students to pursue both academic and sport in a balanced manner. Of course, there must have been difficulties because a player who had only been exercising had to pay attention to his or her grades. Therefore, the KUSF is operating "KUSF Academic Management Support Program" for players who have difficulty managing their grades. This program provides academic management support for student athletes (assignments, exams, supplementary classes), supports their school life (class application, attendance management, lecture information), and provides education for individual competency reinforcement (writing, getting used to computer). Specifically, this program made a fundamental model of 'tutoring' which provides guidelines for each university who are willing to adapt this program.

## **2.2. Career Development of Student Athlete**

### **2.2.1. Challenges of Career Development**

Choosing a career is amount the most complex and significant decisions to be made in one's lifetime. Career development refers to an individual's choice, entry, and development in the educational, professional,

and other crucial aspects of life, the ultimate goal of which is fulfilling the individual's career-related aspirations (Kosine & Lewis, 2008). Career decision made by athletes critically affect their career development (Hwang, Yu, & Hung, 2014). However, student athletes often lack positive attitudes toward career preparations, and they face greater stress regarding their career development than the normal students (Burns, Jasinski, Dunn & Fletcher, 2013). Such stress not only inhibits the athletes' future career decision making and planning but also undermines their intention to participate in sports training (Huang, Chou & Hung, 2014). Therefore, identify the key factors influencing athletes' career development and accordingly, providing guidance is crucial to establishing a comprehensive and competitive sports talent training program (Chan, 2020). There are many supporting services or educational system around the world, but this process can be difficult for some student, and result in career indecision (Denault et al., 2018). Career indecision is the difficulties encountered by individuals while making career-related decisions (Gati, Krausz, & Osipow, 1996). Therefore, indecision can push individuals into avoiding vocational choices or making wrong vocational choices (Gianakos, 1999). Career indecision is the primary reason for not pursuing postsecondary education (Malatest & Associates Ltd, 2008) and can lead to delays in youths' entry into labor market (Quebec Ministry of

Educaiton, 2007). Research using the Career Decision Scale and the Vocational Decision-Making Difficulty Scale has suggested that career indecision is influenced by lack of confidence in decision-making skills, lack of a clear sense of personal identity, external barriers to preferred choices, and a lack of immediacy of the need to make a decision (Holland & Holland, 1977). Although instruments such as Career Decision Scale have been very useful in the generation and assessment of a range of possible components of indecision, there were voices suggesting the need for clearer specification and examination of specific causal factors and for the development of assessment methods having meaningful and direct implications for both the design and evaluation of intervention strategies. One potentially valuable approach to the refinement of the component of lack of structure and confidence, particularly in terms of applications to intervention strategies, involves the concept of self-efficacy expectations (Taylor & Betz, 1983).

### 2.2.2. Role Identity

A role identity is defined as the character and role an individual devises for him or herself as an occupant of a particular social position, or the imaginative view of oneself as being and acting as an occupant of that position (McCall & Simmons, 1978). Many previous research found that the student

identity and athletic identity influences a lot on student athletes' career path. Additionally, the experiences of college athletes have been investigated from numerous perspectives using numerous research techniques. For example, one significant area of research has examined college athletes' career maturity and career decision-making abilities (Finch, 2007). Other research has found that college athletes are at a greater risk than other students on campus to be unable to avoid identity foreclosure (Good, Brewer, Pepitas, Van Raalte, & Mahar, 1993). Identity foreclosure occurs when one role becomes predominant at the expense of all other roles, and thereby limits personal exploration of alternative ideas and experiences (Marcia, 1966). Many researchers have suggested that college athletes are at greater risk for the identity foreclosure, and this in turn leaves them ill-prepared for career decision-making and preparation (Nelson, 1983; Pepitas & Champagne, 1988).

Due to two roles that student-athletes have, Researchers have suggested that college athletes have lower levels of career maturity than do their colleagues on campus (Blann, 1985; Kennedy & Dimick, 1987). As previously mentioned, student-athletes face lots of challenges since there are many conflicting factors between these two roles, as an athlete and a student. One particular area of research investigating how individuals balance various

life roles (Settles, Sellers, & Damas, 2002), has been role conflict (Finch, 2007). Role conflict occurs when “the demands of a particular role make it difficult for the individual to perform or meet the demands of another role” (Settles, Sellers, & Damas, 2002). Accordingly, many research had been conducted on student identity and athlete identity of student-athletes. Athlete identity refers to the degree to which an individual identifies with the athlete role to the exclusion of other social and occupational roles (Brewer, 1991). Student identity is the degree to which an individual identifies with the academic role of a college student (Shields, 1995). Murphy, Pepitas, and Brewer (1996) investigated that a strong identification with athletic identity resulted in delayed career development for college athletes. Also, Finch (2007) examined the relationships among the psychological constructs of athlete and student identity and the career decision-making self-efficacy levels of NCAA athletes at three Division I school in the central United States. The result indicated that student identity of the college athletes was a significant predictor of career decision-making self-efficacy. Additionally, Brown & Hartley (1998) found that there was no relationship between athlete identity and career self-efficacy.

### 2.2.3. Career Decision-Making Self-Efficacy (CDSE)

Self-efficacy theory may be viewed as one approach to the more general study of the applicability of social learning or social cognitive theory to vocational behavior. Bandura (1977) defines self-efficacy expectations as ‘a person’s beliefs concerning his/her ability to successfully perform a given task or behavior. Low self-efficacy expectations regarding a behavior or behavioral domain lead to avoidance of those behaviors, whereas stronger self-efficacy expectations should lead to approach behavior. There is strong evidence that self-efficacy is highly indicative of a student’s self-regulatory abilities (Wang & Wu, 2008). Due to these factors, self-efficacy should be considered when students are facing various difficulties (Wiggins, Grafsgaard, Boyer, Wiebe & Lester, 2017). Applications of the concept of self-efficacy expectation to the component of lack of confidence in career indecision involves redefining the latter as constituting primarily low expectations of self-efficacy with respect to the specific tasks and behaviors required in making career decisions. Although self-efficacy theory has now been applied to numerous specific domains of career behavior (e.g., mathematics, job tasks, multiple role management, career exploratory behavior), one of the most popular applications, gauging from the amount of research, is the study of Career Decision-Making Self-Efficacy (Betz, Klein & Taylor, 1996).



Career Decision-Making Self-Efficacy (CDSE), or a person's confidence in making career decisions, is an important factor in the career development process (Burns et al., 2013). Taylor and Betz (1983) adapted 'self-efficacy' theory on career indecision and defined career decision-making self-efficacy as the level of confidence a person has about his/her ability to complete tasks in making career decisions. Houle and Kluck (2015) report that athletes with high career self-efficacy demonstrate clear orientation and maturity in career development and actively plan and explore their careers (Demulier, Le Scanff & Stephan, 2013), thus facilitating their career transitions and life adaptation. Many previous research reported that people with high CDSE can make more efforts and continue tasks for a longer time, approach more analytically to solve problems, and imagine more successful performance scenes than negative thoughts about performance (Bandura, 1986; George, 1994; Fitzsimmons et al., 1991). Career decision-making self-efficacy can be said to raise positive expectations for one's future, and it can be said to be an essential mechanism for students in the period of deciding their career path (Lee, 2006). If the level of CDSE is high, one can consider a wide range of jobs and if it is low, career decision-making tasks and behaviors are avoided, and career decision is limited (Jeong, 2002; Jo & Moon, 2006). Betz et al. (1996) classified sub-factors of CDSE as self-

appraisal, gathering of occupational information, goal selection, making plans for the future, and problem solving. Gathering of occupational information means confidence to find a job suitable for one's aptitude and explore specific conditions accordingly. Making plans for the future means the belief that one can establish and practice plans for one's career. Self-appraisal means the confidence that an individual can evaluate his or her competencies and find a job accordingly. Goal selection means the confidence that he or she can make the right decisions based on confidence with career. Finally, Problem solving implies the belief that career-related difficulties can be solved by themselves (Betz et al., 1996; Baek, 2018). Student athletes with low levels of CDSE are more likely to avoid career decision-making tasks such as choosing a major, learning about their own skills and interests, and seeking out relevant career information. As a result, they are unprepared to make quality career decisions and are more likely to change their career goals when faced with challenges. According to Taylor and Betz (1983) research, self-efficacy expectations with regard to career decision-making were, on the average, relatively strong, levels of self-efficacy were significantly predictive of levels of career indecision; students reporting less confidence in their ability to complete decision-making tasks were more undecided than those reporting higher levels of confidence. Huang et al (2014) show that athletes' self-confidence

is negatively associated with their perceived career obstacles. These findings therefore suggest a moderately strong relationship between career decision-making self-efficacy and career development.

#### 2.2.4. Importance of Student-Athlete Support on CDSE

Regarding career development, athletes are more likely than non-athletes to face problems with career maturity, the clarity of educational plans, and adjustment to college (Watson & Kissinger, 2007). It is essential for students to develop career decision making skills during the high school years (Krass et al, 1999). Taylor and Betz (1983) found that student athletes with low levels of CDSE are more likely to avoid career decision-making tasks such as choosing a major, learning about their own skills and interests, and seeking out relevant career information. Fouad, Cotter & Kantamneni (2009) said that CDSE is malleable and can be increased by workshops specifically developed to help students with career decision-making difficulties. Past learning experiences are a major antecedent because self-efficacy itself is a subjective assessment made by individuals as a result of previous learning experiences (Bandura, 1977). Providing career guidance activities as part of the school counseling program is a way to help students learn career decision-making skills and to address CDSE (Krass et al, 1999). Solberg's (1998)

model supports the idea that CDSE is malleable and distinguishes CDSE from more stable traits such as personality and global self-efficacy. Solberg's model identifies three antecedents of CDSE: agency, family functioning, and self-identity. Similarly, Paulsen and Betz (2004) found that confidence in social and academic areas (e.g., leadership, science, technology) accounted for nearly 50% of the variance in students' CDSE. Studies examining these support services typically focus on the type of services offered and attendance behavior (Burns et al., 2013). It is also possible to examine the effectiveness of these types of services through users' subjective evaluations of the process. Although reaction measures do not evaluate new skill development, the motivational aspects associated with reactions are critical to successful training programs (Kirkpatrick, 1994). Student athletes who were more satisfied with their school's academic support services typically had higher levels of CDSE (Burns et al., 2013). This result was consistent with many other studies examining participation in workshops created to aid students with career development problems (Fouad et al., 2009).

Other than the school's academic support, previous research found that personal supports from coaches, family, and friends are also important for student athletes' CDSE. The result of one research examining the effect of social support or coaches perceived by high school Taekwondo student

athletes on their CDSE, was found that. There was a partially significant positive relationship (Min, 2013). Min (2013) highlighted that student athletes are having difficult to realize and create their own career without the coach's interest and support, so what students need in reality is the support and awareness for them to have a wider perspective in an increasingly competitive field. Regarding the family's support, Jeon (2020) found that the more college student felt that their parents have a supportive attitude toward their career path, the more confident they are about their career decision-making ability. She stated that the result suggest that parents need to focus on improving their children's career decision-making self-efficacy.

#### 2.2.5. Career Development

Career development is a lifelong process in which career values are developed, a sense of occupational identity is formed, and job opportunities are learned (Tolbert, 1980). It includes individual's forming a career pattern, his/her decision taking style, life roles integration, expressing his/her values and self-concepts upon life role (Herr, Cramer, & Niles, 2004). Career development is one important concept that itself incorporates many ideas and perspectives (Finch, 2007). The knowledge, attitudes, and skills of an individual's career begin to develop at an early age and continues through a

series of stages until the end of life (Jung, 2008). Even though people go through the same stages, the career appears differently according to individual characteristics, individual differences, abilities, efforts, environmental characteristics, and cultural backgrounds (Lee, 2007). From an individual's lifelong perspective, college students are at the stage of exploring their career by considering their abilities, interests, values, and employment opportunities among career development stages (Super, 1972). Each stage has a corresponding developmental task, and college students are influenced by many factors while learning through various opportunities and exploring their careers (Super, 1990). Brown and Brooks (1996) found that career development is related to family and social environment. Among the subconcepts of career development, it is important to finally choose a career based on understanding oneself, information on the career field, and one's career values (Kang, 2017), and to believe that one has the ability to make decisions. In other words, the ability to recognize, select, determine, and prepare for a career can be seen as a major ability included in the concept of career development (Hong, 2019). The reason why much research conducted regarding the career development is because the better the career development, the higher the possibility of ultimately getting a job suitable for oneself (Kang, 2017). Sakurako (2004) viewed career development as a concept of career

choice and performance ability, career confidence, and optimism about future jobs and life. He also investigated the relationship between career development and career disability perception for Japanese female university students and argued that the more they perceive career disability, the less optimistic they are about their future jobs and lives. In other words, the lack of optimism about future jobs and life can lead to negative psychological symptoms, which are anger and depression. Vocational confidence, which is a sub-factor of career development, was also found lower for college students who perceived career barriers (Lee, Kim, Cheon, & Choi, 2008). Career barriers consist of two – internal barriers with psychological characteristics and external barriers given in the environment as factors that hinder the progress of career or career planning (Swanson & Daniels, 1995). Career barriers can lead to various difficulties and uncertainties in individual career decisions, which can reduce confidence in career decision and complicate the career planning process (Green-Blank, 1988). Therefore, it has been thought that career barriers can interfere with individual proper career development (Gottfredson, 1981). Accordingly, Jung & Lee (2007) found that college students' career disability perception does not directly affect career development, it indirectly affects career development only through career decision-making self-efficacy. Hong (2019) investigated the effect of college

student athletes' CDSE on career development and found that goal selection and future planning factors among the sub-factors of CDSE had a positive effect on career development. In addition, it was found that the future job optimism of career development had a significant effect only on the goal selection factor of CDSE. Also, Jung (2008) found that the student athletes who have higher CDSE showed high level of career development. Therefore, much previous research support that CDSE has an impact on career development.

In case of student athletes, they generally experience a transition in their career exploration; they tend to reassess reality, realize their ideas, and establish preliminary career directions (Chan, 2020). Therefore, career decisions made by athletes in college critically affect their career development (Huang, You, & Hung, 2014). However, college athletes often lack positive attitudes toward career preparations, and they rarely learn or explore other professional fields (Lally & Kerr, 2005). Consequently, compared with other university students, they face greater stress regarding their career development (Burns et al., 2013). Such stress not only inhibits the athletes' future career decision making and planning but also undermines their intention to participate in sports training (Huang et al., 2014). Therefore,



it is important to identify the factors influencing athletes' career development and provide guidance accordingly (Chan, 2020).

## **2.3. Conceptual Model and Hypotheses**

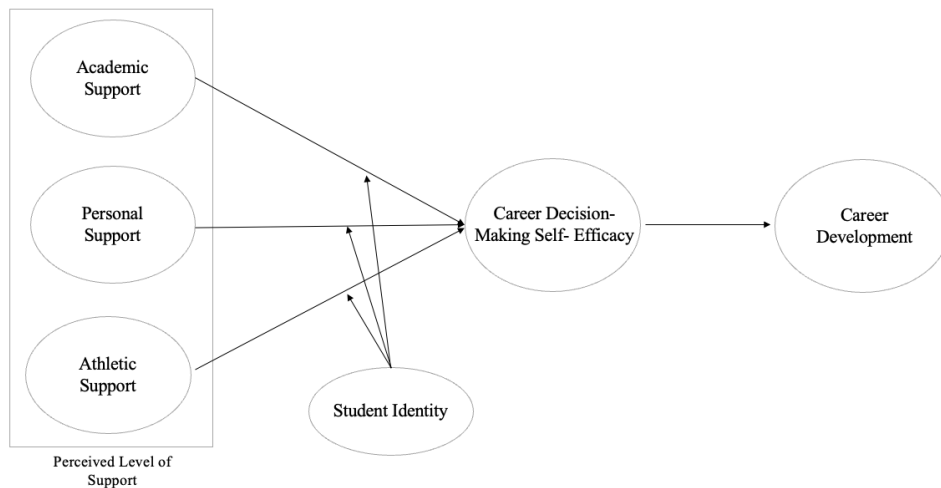
### **2.3.1. Conceptual Model**

Based on extant literature review and empirical evidence discussed specifically in the literature review section, a research model is proposed. The research model depicts the relationship between the perceived level of support, CDSE and career development, moderated by role identity.

Specifically, the perceived level of support of student athletes will affect the career development through CDSE, and the relationship will be moderated by the role identity – student identity, athlete identity. The perceived level of support will have 3 domains of the DCDE working model, which is – sport, study, and private life.

**Figure 2**

*Research Model*



### 2.3.2 Hypotheses

To test and justify the proposed research model, research hypotheses are formulated based on the preceding theoretical background and empirical evidence discussed in the literature review section. The following research hypothesis postulate a causal model explicating the relationship between the perceived level of support, CDSE and career development, moderated by role identity. Thus, for this study, the following hypotheses are proposed:

**H1:** The perceived level of academic support will have positive effect on Career Decision-Making Self-Efficacy (CDSE).

**H2:** The perceived level of personal support will have positive effect on Career Decision-Making Self-Efficacy (CDSE).

**H3:** The perceived level of personal support will have positive effect on Career Decision-Making Self-Efficacy (CDSE).

**H4:** Career Decision-Making Self-Efficacy (CDSE) will have positive effect on Career Development.

**H5:** The impact of perceived level of academic support on Career Decision-Making Self-Efficacy (CDSE) will be stronger when student identity is high rather than low.

**H6:** The impact of perceived level of personal support on Career Decision-Making Self-Efficacy (CDSE) will be stronger when student identity is high rather than low.

**H7:** The impact of perceived level of athletic support on Career Decision-Making Self-Efficacy (CDSE) will be stronger when student identity is high rather than low.

## **Chapter 3. Method**

This section explains the methods used to test the proposed research model and hypotheses. The objective of the study was to examine the relationship between the perceived level of support and the level of CDSE of student athletes in Korea. To achieve this objective, the following methodological steps were used.

### **3.1. Participants and Data Collection**

The target population for this study was athletes aged between 17 to 25 years old who are attending academic courses provided by secondary schools and universities in Korea. Type of sport was not restricted as the primary objective of this study is to develop initial understanding of the population.

Data collection was obtained using purposive sampling through an online survey. Purposive sampling, also known as selective sampling, is a form of non-probability sampling in which researchers rely on their own judgement when choosing members of the population to participate in their surveys. The criteria for selecting participants were first selected as student

athletes who have played sports more than 5 years and attending academic courses provided by the secondary school or university in Korea. Second, student athletes who agreed to the objective and the procedure of the study and to participate in the research. All survey questions were translated in Korean. Data was collected in a self-report manner through the URL link of Google docs (Google document tool).

### 3.2. Item Development

Survey questionnaire items were regarding the perceived level of support, Athletic Identity, Student Identity, CDSE, and Career Development.

**Table 1**

*Summary of Item Development*

Variable	Source	Number of Items
Perceived Level of Support	Modified and adapted from (Freeman et al., 2011)	9
Athletic Identity	Modified and adapted from (Brewer, VanRaalte, & Linder, 1993)	5
Student Identity	Modified and adapted from (Shield, 1995)	3
Career Decision-Making Self- Efficacy (CDSE)	Modified and adapted from (Betz, Klein, & Taylor, 1996)	5
Career Development	Modified and adapted from (Sakurako, 2004)	3

***Perceived Level of Support:*** This study modified and adapted the Perceived Available Support in Sport Questionnaire (PASS-Q) by Freeman, Coffee & Rees to measure the student-athletes' perceived level of support. The PASS-Q consisted of 16 items across four factors: emotional support, esteem support, informational support, and tangible support. Based on the extant literature review, regarding on the Dual Career Development Environment working model, the items were developed within 3 domains – Sports, Study, and Private domain. Therefore, the variables were *the athletic support, the academic support, and the personal support*. In this study, it derived 3 factors of PASS-Q: esteem support, informational support, and tangible support. Therefore, each variable had 3 questions. In total, 9 questions were used to measure the perceived level of support systems or services. The items were measured via 7 - point scale ranging from 1 = strongly disagree to 7 = strongly agree.

**Table 2***Measurement Items of Perceived Level of Support*

Variable	Questions
Perceived Level of Academic Support	1. My teachers / school peers boost my sense of competence 2. My teachers / school peers give me tactical advice 3. My teachers / school peers help with task to leave me free to concentrate
Perceived Level of Personal Support	1. My family / peers boost my sense of competence 2. My family / peers give me tactical advice 3. My family / peers help with task to leave me free to concentrate
Perceived Level of Athletic Support	1. My coaches / sport peers boost my sense of competence 2. My coaches / sport peers give me tactical advice 3. My coaches / sport peers help with task to leave me free to concentrate

***Athletic Identity:*** Athletic identity was measured with Brewer, VanRaalte, & Linder's (1993) 10-item Athletic Identity Measurement Scale (AIMS). From this scale, this study used 5 questions for the survey. Participants' answers were ranged from 1 = strongly disagree to 7 = strongly agree. The scale was designed to investigate individual's strength and exclusivity of identification to the athlete identity role (Brewer et al., 1993). The AIMS has been shown to have strong internal consistency, with Cronbach's alpha coefficients reported from .81 to .93, as well as appropriate validity evidence (Brewer, VanRaalte, & Linder, 1993).



**Table 3***Measurement Items of Athletic Identity*

Variable	Questions
Athletic Identity	<ol style="list-style-type: none"><li>1. Sport is an important part of my life</li><li>2. Other people see me as an athlete</li><li>3. Many of my life goals are related to sports</li><li>4. I consider myself to be an athlete</li><li>5. Most of the time I spend thinking about the sport</li></ol>

***Student Identity:*** Student identity was measured with Shield's (1995) 15-item Student Identity Scale (SIS). In this study, it derived 3 questions from the scale. Participants' answers were ranged from 1 = strongly agree to 7 = strongly disagree. Since the scale range is different from other items, the responses for the student identity scale were reverse coded before the analysis procedure. The scale was reported to have a Cronbach's alpha of .70.

**Table 4***Measurement Items of Student Identity*

Variable	Questions
Student Identity	<ol style="list-style-type: none"><li>1. School is a definite goal in my life, which I intend to pursue at all costs</li><li>2. I believe that there is a value in learning for its own sake</li><li>3. Being a student is helping me learn more about myself</li></ol>

***Career Decision-Making Self-Efficacy:*** The original CDSE scale contained 50 items, a shorter version that could be easily used in counseling assessment and as a pre-post measure for the evaluation of career interventions was desirable. Accordingly, a 25-item form was developed (Betz, Klein, & Taylor, 1996). The short form was developed by eliminating 5 of the 10 items from each of the five CDMSE subscales. The items retained were those satisfying criteria of (a) substantive generality (versus content specificity or narrowness), (b) item-won scale correlation equal to or greater than .50, (c) loading on the only appropriate factor in the Taylor and Popma (1990) factor analysis, and (d) recommendation for retention based on Gati, Osipow and Fassa's (1994) split-scale analysis of the subscale structure. Therefore, the study used Betz, Klein, and Taylor's (1996) 25-item short form of the CDSE scale.

The scale consists of 5 subscales (Self-appraisal, gathering of occupational information, goal selection, making plans for the future, and problem solving) and each category had 1 question for this study. Participants rated their confidence on common career decision-making tasks on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree. The higher score participants obtained, the higher their CSDE would be. Betz et al. reported and internal consistency estimate of .94.

**Table 5***Measurement Items of Career Decision-Making Self-Efficacy*

Variable	Questions
Career Decision-Making Self-Efficacy	<ol style="list-style-type: none"><li>1. I can define the type of lifestyle you would like to live</li><li>2. I'm confident to find information about graduate or professional schools</li><li>3. I'm confident to choose a major (field of study) or career that will fit my interests</li><li>4. I can make a plan of my goals for the next 5 years</li><li>5. I can persistently work at my major (scholastic) or career goal even when I get frustrated</li></ol>

**Career Development:** Career Development was measured with Sakurako's (2004) 28-item Career Development Questionnaire (CDQ). The questionnaire originally has 3 sub-variances which is career choice and performance ability, career confidence, and optimism about future jobs and life. In this study, it used the modified questionnaire for Korean college students and derived 3 questions from the questionnaire (Lee et al., 2008). Participants' answers were ranged from 1 = strongly disagree to 7 = strongly agree. The internal consistency of the scale was reported as .80 to .92.

**Table 6**

*Measurement Items of Career Development*

Variable	Questions
Career Development	<ol style="list-style-type: none"><li>1. Having an interesting and stimulating occupation is one of my important life goals.</li><li>2. I intend to work outside the home for a long period of time in the future</li><li>3. I am optimistic about my future friendships</li></ol>

### **3.3. Data Analysis Procedure**

To carry out the objective of the study and to test the proposed research model and hypotheses, the statistical program STATA was employed to analyze the collected data. Data analysis followed four main statistical analyses in a systematic procedure. The purpose and description of each analysis is explained in order.

#### **3.3.1. Descriptive Statistical Analysis**

Descriptive statistics summarized the general characteristics of a given data set. Descriptive analysis allows for better understanding of each measured variables and also highlights potential relationships among the variables. In this current study, descriptive statistical analysis was conducted

to find means, standard deviations, skewness, and kurtosis of each measured variables.

### 3.3.2. Reliability Analysis

The reliability of the instrument refers to the stability and consistency of the instrument developed (Creswell, 2010). Reliability analysis assess the reliability of the survey questionnaire and tests whether the survey items used were coherent and accurately measured the variables of interest. The reliability level of the instrument is represented by Cronbach's Alpha (Creswell, 2010). The value of alpha ranges from 0 to 1, and the value which is closer to 1 interpreted as high reliability. Nunnally and Bernstein (1994) recommended that the value above 0.6 is considered high reliability and acceptable index, while values below 0.5 are often considered unacceptable. Cronbach's Alpha values in the range of 0.60 – 0.80 are considered moderated, but acceptable, while value ranges of 0.8 and up to 1.00 is considered very good (Daud, Khidzir, Ismail, & Abdullah, 2018). Therefore, to measure the internal consistency of the survey responses and test scale reliability based on the average inter-item correlation, Cronbach's Alpha was used in this study.

### 3.3.3. Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is a statistical technique used to test the reliability and validity of the factor structure of a set of observed variables. Confirmatory Factor Analysis allows to test the hypothesis that a relationship between observed variables and their underlying latent construct exists. Specifically, convergent and discriminant validity tests are used to assess construct validity of the measurement model (Joreskog, 1966). Composite Reliability (CR) and Average Variance Extracted (AVE) are two methods that can be used to evaluate the convergent validity, which measures the internal consistency for each variable and how well each variable is explained by its indicators. According to Hair, Black, Babin & Anderson (2009), reliability is obtained when CR values are greater than 0.7 and AVE values greater than 0.5 are considered acceptable. Additionally, discriminant validity measures whether constructs that theoretically should not be related to each other are, in fact, not found to be highly correlated to each other. Discriminant validity is considered achieved when the square root of the AVE value is greater than the correlations between each variable (Fornell & Larcker, 1981).

#### 3.3.4. Structural Equation Modelling Analysis

Structural Equation Modeling (SEM) is a set of multivariate statistical techniques that is used to measure and analyze the relationships of observed and latent variables. Similar but more powerful than regression analyses, it examines linear causal relationships among variables, while simultaneously accounting for measurement error (Beran & Violato, 2010). In this study, SEM was used to show the causal relationship among the multiple variables in the research model, and eventually test the proposed hypotheses. First, goodness of fit of structural model was evaluated, then individual paths within the structural model were assessed to determine how strongly the variables are related to one another.

## **Chapter 4. Results**

### **4.1. Demographic Data of Participants**

Data was collected through November, 2022. Of the 206 respondents, 112 were high school students (54.4%) and 94 were college students (54.6%). All respondents were aged between 17 to 25 years old. Among respondents, 19 student athletes (9.22%) have played sports less than 5 years. Therefore, 19 responses were rejected and total 187 responses were used for analysis.

For athletic identity, all respondents tended to have high levels of athletic identity with the means score over 6.24 ( $SD \pm 0.94$ ). It was assumed that there will be no significant difference between the low group and high group, therefore, the athletic identity was not included for analysis procedure.

### **4.2. Descriptive Statistics**

Descriptive statistics by questionnaire items were acquired including 3 items of academic support, 3 items of personal support, 3 items of athletic support, 5 items of athletic identity, 3 items of student identity, 5 items of career decision-making self-efficacy, 2 items of career development. All items were measured using a 7-point Likert scale. The results of means and



standard deviations indicated that, for the variable perceived level of support, respondents tended to perceive relatively high level of personal, and athletic support with the means scores over 5.39 ( $SD \pm 1.35$ ), and 5.38 ( $SD \pm 1.44$ ). For the variable academic support, the means scored 4.73 ( $SD \pm 1.54$ ), which is relatively lower than other support. For student identity, the mean score was 4.73 ( $SD \pm 1.27$ ) which is relatively lower than athletic identity 6.24 ( $SD \pm 0.94$ ). For career decision-making self-efficacy and career development, mean scores were 5.48 ( $SD \pm 1.18$ ) and 5.59 ( $SD \pm 1.16$ ).

In addition, the normality of each variable was examined by skewness and kurtosis analysis. For both skewness and kurtosis, the recommended absolute value is less than 2 (George & Mallery, 2010). All values of each construct proved to be less than the recommended value, thus measurement items used in the study suffice data normality. Detailed information on descriptive statistics of measurement items is demonstrated in table 7.

**Table 7***Descriptive Statistics of Measurement Items*

	<b>Min.</b>	<b>Max.</b>	<b>Mean</b>	<b>SD</b>	<b>Skewness</b>	<b>Kurtosis</b>
<b>Academic Support</b>	1	7	4.73	1.54	0.0677	0.1403
<b>Personal Support</b>	1	7	5.39	1.35	0.0001	0.5464
<b>Athletic Support</b>	1	7	5.38	1.44	0.0000	0.0265
<b>Athletic Identity</b>	2.2	7	6.24	0.94	0.0000	0.0000
<b>Student Identity</b>	1	7	4.73	1.27	0.0157	0.5701
<b>CDSE</b>	1	7	5.48	1.18	0.0002	0.0879
<b>Career Development</b>	2.33	7	5.31	1.04	0.6157	0.0796

To test the reliability of the measurement items used in the study, the Cronbach's  $\alpha$  coefficient was adopted. Nunnally and Bernstein (1994) recommended 0.6 as the standard level of internal consistency and all values were above the recommended value. For career development, one of the items "I am optimistic about my future friendships" found to be lowering the Cronbach's  $\alpha$  coefficient of the measurement items, therefore, it was excluded from the study. That is, one of the limitations of the study, as the career development had less than 3 items. Values in this study ranged from 0.619 being the lowest for career development and 0.935 being the highest

for athletic support. Detailed information on reliability test of measurement items is demonstrated in table 8.

**Table 8**

*Reliability test of Measurement Items*

	No. of Items	Cronbach's $\alpha$
<b>Academic Support</b>	3	0.897
<b>Personal Support</b>	3	0.852
<b>Athletic Support</b>	3	0.935
<b>Athletic Identity</b>	5	0.903
<b>Student Identity</b>	3	0.689
<b>CDSE</b>	5	0.909
<b>Career Development</b>	2	0.619

#### **4.3. Confirmatory Factor Analysis (CFA)**

Confirmatory Factor Analysis (CFA) was conducted to assess the measurement model, with statistical tests carried out to determine model fit. Absolute fit indices include  $\chi^2/df$ , TLI, CFI, SRMR, and RMSEA (Hu and Bentler, 1999).  $\chi^2$  has the disadvantage that the discrepancy between the model and the data can be excessively estimated because it reacts very sensitively to the sample size. Therefore, it is necessary to look at the

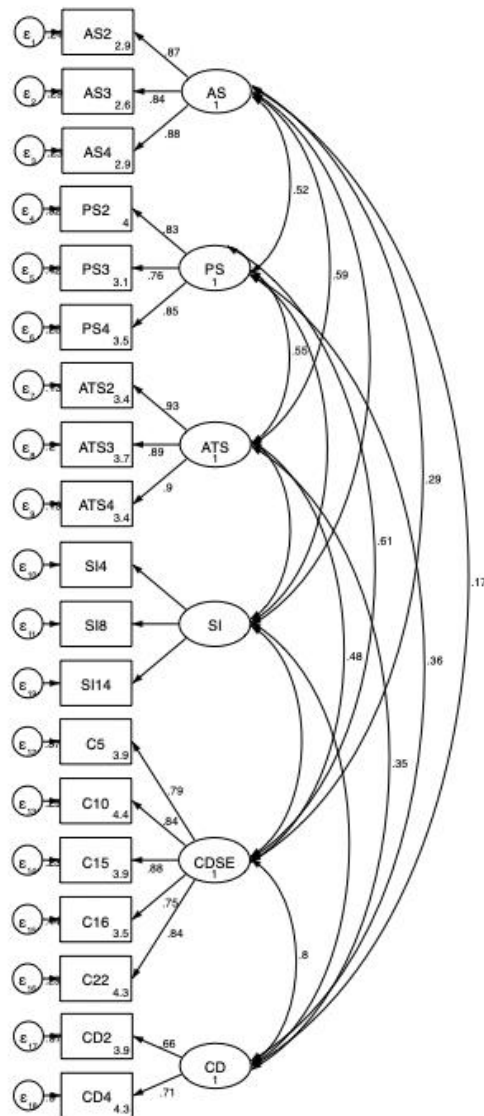
goodness-of-fit index other than  $\chi^2$ , and  $\chi^2/df$  is the value obtained by dividing  $\chi^2$  by degree of freedom, and the inadequacy of the model is evaluated by compensating for the shortcoming of  $\chi^2$  (Lee et al., 2008). In general, the recommended value for  $\chi^2/df$  is 3.0 or less; for CFI and TLI 0.9 or higher, and a recommended good-fit for SRMR and RMSEA are values less than 0.1 and 0.08 respectively (Byrne, 2011; Hair et al., 2009, McIver & Carmines, 1981). For career development, one of the items was excluded because it had low level of factor loading and hindered the model fit. Therefore, career development had 2 items, which is one of the limitations of the study. As the results of CFA shows, the model fit for this study is confirmed, which means that the proposed model was appropriate for analysis. Detailed information on goodness of fit indices for the measurement model is demonstrated in table 9.

**Table 9***Goodness of Fit Indices for Measurement Model*

<b>Indices</b>	<b>Recommended Criteria</b>	<b>Observed Values</b>
Chi-Square/df ( $\chi^2/df$ )	$\leq 3.0$	1.02
Comparative Fit Index (CFI)	$> 0.90$	0.975
Tucker-Lewis Index (TLI)	$> 0.90$	0.969
Root Mean Square Error of Approximation (RMSEA)	$< 0.1$	0.046
Standardized Root Mean Square Residual (SRMR)	$< 0.08$	0.042

**Figure 3**

*CFA of Measurement Model*



In order to determine liability of the model, reliability and validity test were carried out. Reliability was estimated using composite reliability with results showing that all variables, except student identity and career development, were above the recommended 0.7 level (Hair et al., 2009). Convergent validity was achieved as the average extracted variances (AVE) values were above the 0.5 level, except student identity and career development (Fornell & Larcker, 1981). CFA confirmed that AVE values and factor loadings for academic support, personal support, athletic support, career decision-making self-efficacy showed greater values than the recommended 0.5 (Hair et al., 2009) demonstrating those constructs in the measurement model displayed adequate convergent validity. For student identity and career development, two constructs showed lower values than the recommended 0.5 (Hair et al., 2009).

As Fornell and Larcker (1981) proposed, the square root of AVE was calculated to establish discriminant validity, and tested to confirm the value for each variable was higher than any correlation coefficient with every other variable in the model. Confirmation of discriminant validity demonstrates that all measured constructs in the model are significantly different. Results confirming discriminant validity is outlined in table 10.

**Table 10***Discriminant Validity Test of Constructs*

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Academic Support</b>	<b>0.863</b>					
<b>Personal Support</b>	0.4573	<b>0.813</b>				
<b>Athletic Support</b>	0.5288	0.4857	<b>0.909</b>			
<b>Student Identity</b>	0.2041	0.217	0.2547	<b>0.655</b>		
<b>CDSE</b>	0.2671	0.5401	0.437	0.397	<b>0.822</b>	
<b>Career Development</b>	0.1108	0.2592	0.2654	0.3601	0.6196	<b>0.673</b>



**Table 11***Reliability and Validity Test of Constructs*

<b>Latent Variables</b>	<b>Indicator Variables</b>	<b>Factor Loading &gt;0.5</b>	<b>Composite Reliability &gt;0.7</b>	<b>Ave. var. Extracted &gt;0.5</b>
<b>Academic Support</b>	AS2	0.871	<b>0.897</b>	<b>0.745</b>
	AS3	0.843		
	AS4	0.876		
<b>Personal Support</b>	PS2	0.825	<b>0.854</b>	<b>0.662</b>
	PS3	0.764		
	PS4	0.850		
<b>Athletic Support</b>	ATS2	0.932	<b>0.935</b>	<b>0.827</b>
	ATS3	0.895		
	ATS4	0.902		
<b>Student Identity</b>	SI4	0.635	<b>0.691</b>	<b>0.430</b>
	SI8	0.587		
	SI14	0.737		
<b>CDSE</b>	C5	0.792	<b>0.912</b>	<b>0.676</b>
	C10	0.845		
	C15	0.876		
	C16	0.748		
	C22	0.844		
<b>Career Development</b>	CD2	0.626	<b>0.623</b>	<b>0.453</b>
	CD4	0.718		

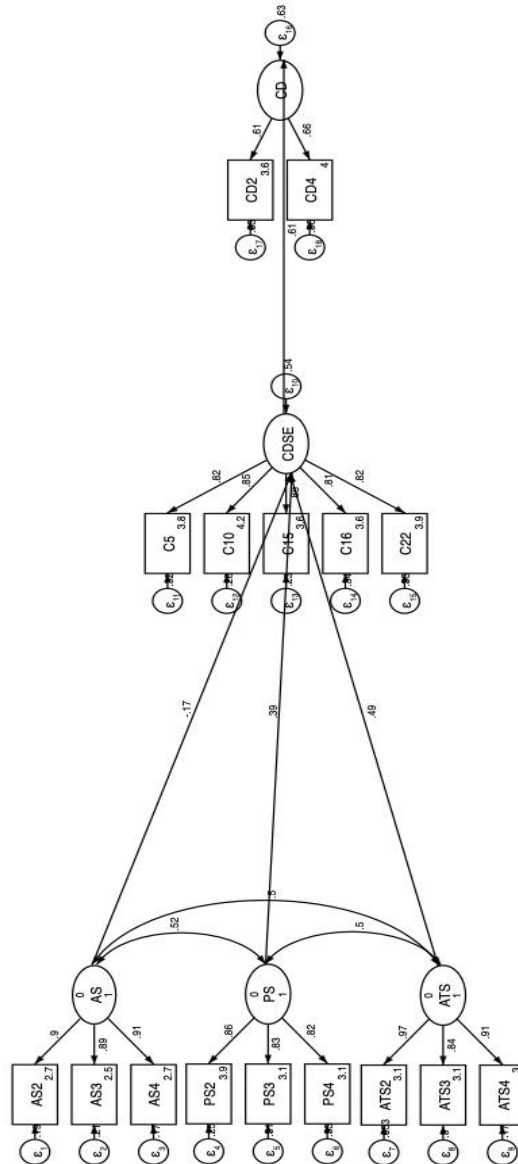
As the result of CFA analysis shows, the items of student identity and career development had relatively low composite reliability and convergent validity. For student identity, the composite reliability was 0.691, and AVE was 0.43, which is slightly fall short of the recommended value. For career development, the composite reliability was 0.623, and AVE was 0.453, which fall short of the recommended value. According to Hair et al. (2016), if AVE is greater than 0.4 and composite reliability is higher than 0.6, the convergent validity of the construct is still acceptable (Fornell & Larcker, 1981; Lam, 2012). Therefore, this current study assumed that the measurement items for student identity and career development had acceptable convergent validity and included in the analysis.

#### **4.4. Structural Equation Model Analysis (SEM)**

Structural Equation Modeling (SEM) was adopted to measure the structural model and identify the interrelationships among perceived level of support, career decision-making self-efficacy, career development. Results of SEM are shown in figure 4.

**Figure 4**

*Results of SEM*



**Table 12***Goodness of Fit Indices for Research Model*

<b>Indices</b>	<b>Recommended Criteria</b>	<b>Observed Values</b>
Chi-Square/df ( $\chi^2/df$ )	$\leq 3.0$	0.8
Comparative Fit Index (CFI)	$> 0.90$	0.974
Tucker-Lewis Index (TLI)	$> 0.90$	0.968
Root Mean Square Error of Approximation (RMSEA)	$< 0.1$	0.054
Standardized Root Mean Square Residual (SRMR)	$< 0.08$	0.044

Overall goodness of fit for the structural model was examined to ensure data adequately fit the proposed model. Results showed that  $\chi^2/df$  was 0.87 which was within the suggested value of less than or equal to 3 (McIver & Carmines, 1981). CFI was 0.974 and TLI 0.968 which was within the suggested value of more than 0.90. RMSEA was 0.054 while SRMR showed 0.044 which all indicated good model fit (Byrne, 2011; Hair et al., 2009; McIver & Carmines, 1981). As a result, a further detailed evaluation of the structural model could be carried out, identifying the degree of magnitude and significance for each path coefficient within the model.

The results show that among the three variables representing perceived level of support (i.e., academic support, personal support, and athletic support), two variables showed positive significance on career

decision-making self-efficacy. Personal support indicated strongest positive influence on career decision-making self-efficacy (0.5308\*\*\*), with athletic support also showing a positive significance (0.2795\*\*). However, the relationship between academic support and career decision-making self-efficacy did not show any statistical significance. Also, in terms of the relationship between the career decision-making self-efficacy and career development, the path was significant indicating a strong positive relationship for career development (0.806\*\*\*). Detailed information of path coefficient and whether results supported the proposed hypotheses can be found in table 14.

**Table 13**

*Summary of Path Coefficients for Structural Model*

		<b>Path</b>	<b>Coef.</b>	<b>S.E.</b>	<b>P</b>	<b>Hypothesis</b>
<b>CDSE</b>	←	Academic Support	-0.1596	0.09	0.076	<b>Not Supported</b>
	←	Personal Support	0.5308	0.0835	***	<b>Supported</b>
	←	Athletic Support	0.2795	0.0887	**	<b>Supported</b>
<b>Career Development</b>	←	CDSE	0.806	0.0595	***	<b>Supported</b>

\*p<.05, \*\*p<.01, \*\*\*p<.001

In addition, a further analysis was conducted to check consistency of the overall structural model and to rigorously examine the relationship between perceived level of support (i.e., academic support, personal support, athletic support), career decision-making self-efficacy, and career development. That is, to verify that the results of the interrelationships among the variables remain significant once control variables were taken into account.

The internal consistency of the measurement items was measured to assess athlete identity and student identity of the respondents. The Cronbach's  $\alpha$  was each 0.903 and 0.689, confirming the reliability of the athletic identity measurement identity, but the measurement items of student identity was relatively weak. In case of athlete identity, it was excluded from the analysis of the control variable as it was considered that all respondents showed relatively strong athletic identity as the average score showed 6.24. For student identity, 60 of the 187 respondents used in the analysis were classified as a group with low level of student identity and 127 as a group with high level of student identity.

In order to analyze the moderating effect according to the degree of student identity,  $\chi^2$  difference test was conducted (Anderson & Gerbing,

1988) to verify whether there was a difference in the path coefficient value indicating the relationship between student-athlete support and CDSE according to the degree of student identity. In general, it is judged that it is a significant result if reduction of  $\chi^2$  value is greater than 3.84 when the degree of freedom is 1 at the significance level of .05. The analysis result was found to be insignificant, which means that there were no differences in terms of the impact on career decision-making self-efficacy between two groups.

**Table 14**

*Chi-square difference verification results of moderating variables*

		<b>Path</b>	<b>Chi2</b>	<b>P</b>	<b>Hypothesis</b>
<b>CDSE</b>	←	Academic Support	0.014	0.9058	<b>Not Supported</b>
	←	Personal Support	1.052	0.3051	<b>Not Supported</b>
	←	Athletic Support	2.162	0.1415	<b>Not Supported</b>
<b>Career Development</b>	←	CDSE	2.160	0.1417	<b>Not Supported</b>

\*p<.05, \*\*p<.01, \*\*\*p<.001

## **Chapter 5. Discussion**

An extant amount of literature supports that choosing a career is an important decision to be made in one's lifetime. However, the student athletes are facing lots of challenges on their career development and often lack positive attitudes toward career preparations (Burns et al., 2013). There are lots of support available in Korea, but the effectiveness of the support is ambiguous as the problem of employment rate shows. Therefore, this study examined the relationship between the perceived level of support, career decision-making self-efficacy and career development. Some findings were consistent with the theoretical predictions demonstrated throughout the study, but some results showed very interesting fact which can provide some implications to sports organizations or policy makers.

### **5.1. Perceived Level of Support and CDSE**

While there are many supporting programs for student athletes in Korea (Lee, 2022; Lim & Park, 2019; Choi & Park, 2021), the effectiveness of the support is ambiguous as the problem of athlete's unemployment rate shows. As the dual career development environment (DCDE) working model



shows (Henriksen et al, 2020), this study considered the support in Korea as 3 domain - sport, studies, and private life. Based on the theoretical background, CDSE is malleable and can be increased by workshops specifically developed to help students with career decision making difficulties (Fouad et al., 2009). Providing career guidance activities can be helpful for students to learn career decision-making skills and to address CDSE (Krass et al, 1999). Therefore, this study assessed the relationship between the perceived level of support and CDSE.

As the research model shows, it was hypothesized that the perceived level of support will have positive impact for CDSE. That is, the more student-athletes perceive support, the more they improve their CDSE. Perceived level of support was distinguished into three different types (i.e., academic support, personal support, athletic support) and was predicted to have positive impact on CDSE. Findings partially support the hypotheses. Among three different types of support, personal support showed the greatest statistical significance, indicating a strong positive relationship on CDSE. This result aligns with the previous research that the more college student feel that their parents have a supportive attitude toward their career path, the more confident they are about their career decision-making ability (Jeon, 2020). Also, athletic support showed positive impact on CDSE. The result aligns

with the research that the social support from coaches perceived by high school Taekwondo student athletes has significant positive relationship (Min, 2013). This result can also be assumed that since the average value of athletic identity of respondents were high, they were more satisfied with receiving athletic support, and it seems to have affected CDSE because they may be planning their career path related to sports. Therefore, H1-2 and H1-3 was confirmed.

Interestingly, one of the domains, academic support, was not supported in the study, which is opposite from the previous research that student athletes who were more satisfied with their school's academic support services typically had higher levels of CDSE (Burns et al., 2012). While extant literature on student athlete, highlights the problems of school academic programs and support, the result can be interpreted as rather than improving supports regarding student athletes' academics such as the grades, it will be more effective if the support program is more concentrated on student athletes' personal factors and sports. Therefore, H1-1 was not confirmed. A reason for this can be that items measuring academic support were more concentrated on personal support from school peers and teachers, not the program or support for their academic, such as the grades. As previous research shows, many student-athletes satisfied and improved on their career

decision-making self-efficacy through academic support programs provided by school, not the personal support from the school or teachers. However, one research suggested that student athlete who obtained lots of benefits from academic support services tend to have low CDSE and found that CDSE is affected by athletes with internal locus of control (Burns, Jansinski, Dunn & Fletcher, 2013). This indicates that there are other factors affecting the relationship between the academic support and CDSE, so it needs further examination.

In terms of role identity, the result show that there was no influence of role identity on the relationship between the perceived level of support and career decision-making self-efficacy. It opposes the previous research showed that the student identity of student athletes was a significant predictor of career decision-making self-efficacy. A reason for this can be that the items measuring student identity had low level of construct validity as the item's AVE and composite reliability shows which means the questionnaire couldn't measure student athletes' student identity accurately. Therefore, H3 was not confirmed.

## **5.2. CDSE and Career Development**

In regard to the relationship between the career decision-making self-efficacy (CDSE) and career development, results indicated that the CDSE of student athletes has positive impact on career development.

Based on the results of the study, it can be assumed that the student athlete having high CDSE has a positive effect on establishing identity or direction for career. This result aligns with the previous research as it showed that the career disability perception indirectly affects career development only through career decision-making self-efficacy (Jung & Lee, 2007). Also, the result supports the previous research found that goal selection and future planning factors among the sub-factors of CDSE had a positive effect on career development (Hong, 2019). Student athletes are facing lots of challenges on their career development and often lack positive attitudes toward career preparations (Burns et al., 2013). This can lead the student athletes to have career indecision which can push individuals into avoiding vocational choices or making wrong vocational choices (Gianakos, 1999). As the result of this current study shows, by improving CDSE of student athlete can lead them to have positive attitude on their future performance, which will help them to set goals, planning for their career path and improve their level of career development. In other words, career decision-making self-

efficacy is important for student athletes to have positive attitude on their career development. Therefore, H2 was confirmed.

### **5.3. Theoretical and Managerial Implication**

Theoretically, this study provides extension to literature examining student athlete dual career support by exploring the potential impacts on career development. SEM was conducted to identify the relationship between the perceived level of support, career decision-making self-efficacy, and career development. By adopting such an approach, a novel understanding of the outcomes and causal relationships associated with dual career support was achieved.

In addition, previous research in student athlete dual career support have tended to concentrate on athletes' individual psychological factors, such as career barrier or career disability perception (Jung & Lee, 2007; Jung, 2008; Lee et al., 2008), or qualitatively examining challenges or disabilities that student athletes have (Lim & Park, 2019; Kang & Kang, 1999). Also, the research regarding the student athlete support have tended to concentrate just on the academic support (Myung & Choi, 2019; Choi & Park, 2020). However, as the DCDE working model shows, there are various perspective of dual career development environment. Thus, this study adopted a more

holistic approach by examining 3 perspectives of support (i.e., academic support, personal support, athletic support). As a result, student athlete support that was conventionally given little scholarly attention, were also examined providing researcher a more comprehensive understanding of the student athlete support.

In terms of managerial implications, the current study provides evidence-based results to indicate that student athlete dual career support has potential influence on student athletes' career development. This is particularly significant in terms of sport policy as in the past, sport policy makers have mostly focused on retired athletes, or just the academic part. Consequently, the majority of sports policy design and implementation have been concentrated on academic support (Myung & Choi, 2019; Choi & Park, 2020), or the guidance for retired athletes (Lee, 2022) who are having trouble on deciding their career. Thus, findings from this study can provide guidance for sport policy makers in the future to consider various aspects of student athlete support and make effective support programs or services in order to solve the problems existing nowadays.

Also, results from this study may benefit sport organizations in better promoting sports fields. As the career path after retirement is ambiguous, there are many situations in which athletes who give up halfway due to

negative perceptions of their future, or student athletes who started playing sports when they were young, quit due to their own concern or parental opposition. However, if sports organizations effectively present and implement student athlete support programs according to the results of the current study, provide many jobs, or produce many successful examples of athletes' career transitions, more talented athlete will be introduced in professional field and help expand the sports field.

#### **5.4. Limitation and Future Research**

This current study derived valuable insights and findings, but it also has limitations and therefore cautious interpretation of the results are required. The study's weaknesses are acknowledged and specified, with directions for future studies also discussed.

First, the sample of the research was relatively small. Adequate sample size that various research suggested for structural equation modeling analysis was ranged from 100 to 400 (Boomsma, 1982; Hong, 2000). Besides, other research regarding student athletes' CDSE or career development mostly had sample size over than 300 (Lee et al., 2008; Jung, 2008). The sample size of this current study can be assumed that there are weaknesses in explaining the overall characteristics of this population. Thus, to increase

reliability of results, future studies should collect more samples to identify the actual situation of student athlete support in Korea.

Second, the measurement items of some variables are weak or ambiguous. Composite reliability and convergent validity value for student identity and career development were relatively low then other variables. Additionally, one of the items of career development was excluded because it was hindering the internal consistency and the model fit. A minimum of three items per scale is usually recommended as this number will reliably yield convergent solutions in confirmatory factor analysis (Marsh, Hau, Balla & Grayson, 1998). However, career development had less than 3 items which was one of the limitations of the study. For career decision-making self-efficacy, as the previous research examined the CDSE by dividing it into 5 sub-factors (i.e., self-appraisal, gathering of occupational information, goal selection, making plans for the future, and problem solving), and found that each sub-factors had different impact on career development (Hong, 2019). However, this study didn't examine CDSE as 5 sub-factors, which is one of the limitations. Also, the items of perceived level of support were more related to personal, individual support, as the items were consisted of coaches, teachers, friends, family support, which can be assumed that the items couldn't measure the macro level of support. The micro level of support is



also important as in the DCDE working model shows (Henriksen et al., 2020). Therefore, future research should consider more macro level of student athletes' support and examine CDSE in 5 sub-factors to give better insights for sports organizations and policy makers. Other recommendation can be making questionnaire through interviews as a primary collection with Korean student athlete, to make the items more accurately explain the context of Korea.

Third, data collection was conducted as self-administered manner and through online survey. Therefore, it is hard to assume that all respondents have read and answered the question properly from the beginning to the end of the response. However, as the number of samples was small, it was difficult to remove the responses that did not answer properly, and this may have affected the analysis results. For future research, it is recommended to figure out the way to make respondents to understand the question properly and answer it sincerely.

Lastly, as the primary objective of the study was to develop an initial understanding of the theoretical predictions and examine the causal relationships among the proposed variables, the sample was collected from the general population, not restricted by the type of sports. However, there might be differences existing in future goals, plans, or confidence of student

athletes depending on the unpopular or popular sports, or how advanced the professional stage is. According to Hong (2019), he found that popular sports student athletes had higher CDSE than unpopular sports. Regarding the career development, he found that one of the factors, career confidence, showed difference between the types of sports. A reason for this can be that student athlete who are playing popular sports can seek a career path, such as a career as a professional team after graduation or in related industries with higher social interest than other sports, so it suggests that most career-related factors show positive results (Hong, 2019). Therefore, it is necessary for future research to subdivide the type of sports to find out the relationship of the student athlete support, CDSE, and career development.

## **Chapter 6. Conclusion**

The current study examined the potential impact of student athlete dual career support on career decision-making self-efficacy and ultimately on career development. Although, athletes support for their career is an important factor, previous scholarly attention or the policies has been limited, especially in the context of retired athletes.

Therefore, this study was conducted to bridge this gap in literature by examining the relationship among the student athlete dual career support (i.e., academic support, personal support, and athletic support), career decision-making self-efficacy (CDSE), and career development. Additionally, as previous literature in student athlete have tended to focus on one type of support – academic support, this study aimed to examine other perspectives of student athlete support. Based on extant theoretical background and empirical analysis using SEM, findings of the study indicate significant conclusions that contribute to the athlete career development or transition literature. The overall results of the study are as follows.

First, student athlete dual career support was distinguished into three different types: academic support, personal support, athletic support. Results

indicated that both personal and athletic support showed a positive relationship to CDSE of student athlete, with personal support demonstrating the strongest correlation. This indicates that student athletes who perceived high levels of personal and athletic support, are likely to have high career decision-making self-efficacy, which means they have positive attitude or confidence on their future. Inconsistent to prediction, however, results of academic support for career decision-making self-efficacy showed no statistical significance, which opposes previous research (Burns et al., 2013).

Second, results showed the relationship between career decision-making self-efficacy (CDSE) and career development to be significant. In other words, having high level of CDSE, can have positive effect on setting the identity or direction of career. Student athletes who have high level of CDSE, will be more likely to put effort on developing their career path and have positive attitude. Such findings are consistent with previous studies assessing the impact of CDSE on career development of athletes (Jung, 2007; Jung, 2008).

In conclusion, this current study provides empirical evidence to support the positive impact of student athlete dual career support. Previously, there has been lack of research that examining student athlete support other than academic support. Also, existing literature tend to focus more on

individual psychological barriers or challenges of student athlete to pursue both sports and academics which hinders them to develop their career. Thus, this study provides the groundwork for future studies in understanding various perspectives of student athlete support which can help them to have positive attitudes and developing their future career. Scholarly attention examining student athlete have been limited, therefore, future empirical research is warranted for better theoretical understanding.

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## Appendix

### 설문지

#### 학생선수 지원과 직업결정 자기 효능감, 직업발달

안녕하세요. 서울대학교 스포츠 매니지먼트 석사과정 박채린입니다.

귀한 시간 내어 설문에 응해주셔서 감사합니다.

본 설문조사는 학생선수 지원의 만족도와 직업결정 자기 효능감 및  
직업발달 조사를 위해 실시하는 설문입니다.

응답해주신 모든 내용은 연구목적으로만 사용될 것이며, 응답자의 신원  
및 응답내용은 다른 어떤 용도로도 사용되지 않을 것입니다.

설문 문항에 대한 정답은 없으며, 각 조사 항목에 성의껏 응답해주시기  
바랍니다.

바쁘신 가운데 설문에 참여해주신 점 다시 한번 감사드립니다.

1. ① 고등학생 ② 대학생

2. 나이

① 17 세 ~ 25 세 ② 26 세 ~

3. 운동 경력

① 5 년 미만 (~5 년) ② 5 년 이상 (5 년~)

설문 내용	전혀 그렇지 않다				매우 그렇다	
	①	②	③	④	⑤	⑥
나의 학교/선생님 (는)은 나의 역량감을 높여준다	① ㉞	②	③	④	⑤	⑥
나의 학교/선생님 (는)은 전술적 충고를 해준다	① ㉞	②	③	④	⑤	⑥
나의 학교/선생님 (는)은 내가 집중할 수 있도록 나에게 주어진 과제를 도와준다	① ㉞	②	③	④	⑤	⑥
나의 가족/친구 (은)는 나의 역량감을 높여준다	① ㉞	②	③	④	⑤	⑥
나의 가족/친구 (은)는 전술적 충고를 해준다	① ㉞	②	③	④	⑤	⑥
나의 가족/친구 (은)는 내가 집중할 수 있도록 나에게 주어진 과제를 도와준다	① ㉞	②	③	④	⑤	⑥
나의 팀/코치 (은)는 나의 역량감을 높여준다	① ㉞	②	③	④	⑤	⑥
나의 팀/코치 (은)는 전술적 충고를 해준다	①	②	③	④	⑤	⑥



	⑦					
나의 팀/코치 (은)는 내가 집중할 수 있도록 나에게 주어진 과제를 도와준다	①	②	③	④	⑤	⑥
→ 학생선수 지원 만족도	⑦					

→ 스포츠 정체성

설문 내용	전혀 그렇지 않다				매우 그렇다	
	①	②	③	④	⑤	⑥
스포츠는 나의 인생에 중요한 부분이다	⑦					
다른 사람들은 나를 운동선수라고 여긴다	①	②	③	④	⑤	⑥
	⑦					
나의 인생 목표들 중 대부분은 스포츠와 관련되어 있다	①	②	③	④	⑤	⑥
	⑦					
나는 내 자신을 운동선수라고 생각한다	①	②	③	④	⑤	⑥
	⑦					
나는 스포츠 / 운동에 대해 생각하는데 많은 시간을 쏟는다	①	②	③	④	⑤	⑥
	⑦					

→ 학생 정체성

설문 내용	매우 그렇다			전혀 그렇지 않다		
	①	②	③	④	⑤	⑥
학교는 나에게 어떤 일이 있어도 추구하는 내 인생의 확실한 목표이다	⑦					
나는 배움 그 자체에 가치가 있다고 생각한다	①	②	③	④	⑤	⑥
	⑦					

학생 신분인 것이 내 자신에 대해서 더 많이 알 수 있도록 도와준다고 생각한다.	①	②	③	④	⑤	⑥
	⑦					

→ 직업 자기 결정 효능감

설문 내용	전혀 그렇지 않다					매우 그렇다	
내가 살고자 하는 생활방식이 어떤 것인지 정의할 수 있다.	①	②	③	④	⑤	⑥	⑦
나의 흥미에 적합한 전공이나 직업을 선택할 자신이 있다.	①	②	③	④	⑤	⑥	⑦
나의 흥미에 맞는 전공이나 직업을 선택할 자신이 있다.	①	②	③	④	⑤	⑥	⑦
목표 성취를 위해 향후 5년간의 계획을 세울 수 있다.	①	②	③	④	⑤	⑥	⑦
나는 지치더라도 나의 전공이나 직업 목표를 위해 꾸준히 일할 수 있다.	①	②	③	④	⑤	⑥	⑦

설문 내용	전혀 그렇지 않다					매우 그렇다	
흥미로운 직업을 갖는 것은 나의 중요한 인생 목표 중 하나이다	①	②	③	④	⑤	⑥	
	⑦						

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나는 내가 원하는 직업을 가지고 성공할 수 있을 것이다	①	②	③	④	⑤	⑥
	⑦					

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→ 직업 발달

국문초록

# 한국 학생선수 진로 지원과 진로결정 효능감, 진로발달의 관계

박 채 린

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본 연구는 한국 학생 운동선수의 이중 진로지원, 진로결정 자기효능감 (CDSE) 및 진로 발달과의 관계를 설명하고 있다. 최근 청년들의 실업률이 증가하고 있고, 이 문제는 운동선수들에게 더욱 심각하게 나타나고 있다. 학생 시기에 진로 개발을 하는 것이 중요하지만, 학생 운동선수에 대한 이전의 학문적 관심이 부족한 실정이다.

따라서, 본 연구의 목적은 우리나라 학생선수의 이중 진로지원, 진로결정 자기효능감 (CDSE) 및 진로발달과의 관계를 규명하는 데 있다. 역할 정체성 또한 이중 진로지원과 진로결정

자기효능감 (CDSE) 의 관계에서 조절변수로 분석되었다. 이를 검증하기 위해 본 연구에서는 온라인 설문조사를 실시하였으며, 총 206 명의 응답자로부터 데이터를 수집하였다. 데이터 분석은 통계프로그램 STATA 를 이용하였고 관계분석을 위해 구조방정식분석 (SEM)을 실시하였다. 본 연구의 결과는 다음과 같다.

학생 운동선수가 인지한 진로 지원 수준은 진로결정 자기효능감 (CDSE)에 긍정적인 영향을 미치고, 진로결정 자기효능감 (CDSE)는 진로 발달에 긍정적인 영향을 미치는 것으로 나타났다. 보다 구체적으로, 인지된 학업 지원 수준은 진로결정 자기효능감 (CDSE)에 영향을 미치지 않았지만 인지된 개인 및 운동 지원 수준은 진로결정 자기효능감 (CDSE)에 긍정적인 영향을 미치는 것으로 나타났다. 그러나 역할 정체성은 지원 정도와 진로결정 자기효능감 (CDSE)의 관계에 영향을 미치지 않는 것으로 나타났다.

본 연구의 결과는 진로 발달에 미치는 잠재적 영향을 탐구함으로써 학생 운동선수의 이중 진로 지원을 검토해 보았다.

또한, 본 연구의 결과는 향후 스포츠 정책 결정권자들이 학생 운동선수 지원의 다양한 측면을 고려하고 효과적인 지원 프로그램을 만들 수 있는 지침을 제공하였으며 스포츠 단체들에게는 스포츠를 잘 홍보할 수 있도록 도움을 줄 수 있다.

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주용어: 이중 진로 지원, 진로결정 자기효능감 (CDSE), 진로 발달, 역할 정체성

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