

A study of the worries that emerge in the career selection of Japanese student athletes.

YUTA ONO¹, MASANORI KAJI², TATSUKI MORITA³

¹Faculty of Sport Sciences, Waseda University, JAPAN

²Waseda Institute for Sport Sciences, Waseda University, JAPAN

³Graduate School of Sport Sciences, Waseda University, JAPAN

Published online: April 30, 2022

(Accepted for publication April 15, 2022)

DOI:10.7752/jpes.2022.04128

Abstract:

In recent years, support for the career development of athletes has become an urgent issue in Japan. Student athletes have various issues to consider while deciding on their career paths between achieving milestones in their athletic careers and coming to turning points in their lives. Thus, they have some unique concerns. This study seeks to clarify the structure of consciousness of worries in the career selection of student athletes in Japan. Specifically, through the development of the Japanese student athletes' worries in career selection scale, the concerns that emerge in the career selection of student athletes are clarified. This study also aims to clarify the differences in the worries of student athletes based on their admission method and athletic performance. A pilot survey was conducted followed by the main survey with 1,121 student athletes across Japan using a questionnaire. The exploratory factor analysis revealed that the "career selection worries scale for Japanese student athletes" comprised five factors: "worries related to what would happen after making a career decision," "worries around the statement of 'I want to concentrate on athletic activity,'" "worries related to the continuation of athletic activity," "worries around the statement, 'I can only do sports,'" and "worries related to the lack of information." In the analysis of the differences in worries that arise in the career selection of student athletes because of the enrollment methods, it became clear that sports recommendation admission entrants were more likely to have trouble with career selection. In analyzing the differences by athletic performance, it became clear that student athletes with high athletic performance were more likely to encounter "worries related to the continuation of athletic activity." The results show that a history of athletic activity does not necessarily lead to confidence in career development among student athletes. Although many of them connect their athletic experiences to their confidence in career development, it is important to acknowledge those who do not.

Key Words: career development; sports recommendation admissions; athletic activity; athletic performance

Introduction

In recent years, support for the career development of student athletes¹ has attracted attention in Japan. Athletes may encounter various problems when they retire from athletic activities, such as difficulties in transitioning to professional life after retirement and loss of identity (Cabrita et al., 2014; Yoshida, 2012).

The peculiarities of the career development of student athletes in Japanese society can be summarized by the following three points. First, finding a job upon graduation from university tends to mark the end of an athlete's career. Japan has a unique employment system called "simultaneous recruitment of new graduates,"² as a result of which individuals who graduate from university without jobs are likely to be at a significant disadvantage in terms of subsequent employment opportunities (Honda, 2009a). A survey by the Japan Sport Council (2014) identified seeking employment upon graduation from university as one of the turning points in athlete retirement.

The second is the establishment of the system of sports recommendation admissions (SRAs) at universities. SRAs are entrance examinations that are used at the undergraduate college level to select students based on their athletic achievements in high school. The implementation rate of SRAs in entrance examinations in 2021 was 32.4% (Ono, 2021). SRAs can open up a path for athletes to enter universities; however, the lack of basic academic skills and disregard for academic studies among students who enter via SRAs have been considered a challenge (Asahi Shimbun, 2019; Yomiuri Shimbun, 2014).

Third, the athletic achievements of student athletes in their college years have a certain degree of influence on their employment. Student athletes with high athletic achievements are not only able to join (i.e., find employment with) corporate or professional teams, but also receive preferential treatment in some companies and teacher employment and civil service examinations.

Thus, in the career development of student athletes in Japan, a special reality has been established in relation to university entrance examinations and employment. The achievements and experiences gained by

student athletes in athletic activities have positive and negative influences on their status in later social life, beyond the competition scene. Student athletes may be struggling with various thoughts on both their current positions and future journeys in the dual worlds of athletics and society.

The transition from university to society is an important one for many university students, and has been considered a life event that is vulnerable to psychological risks (Branton, 2009; Sung et al., 2013). Support for the so-called career transition of university students who are in a special position as student athletes is also an important issue for the enhancement of higher education in Japan.

In recent years, the following three types of research have been conducted mainly in Europe and the US. The first is a series of studies on the dual career³ (DC) competencies of student athletes. DCs prevail in Europe and the US, and balanced DC competency reduces the difficulty of athletes' career transitions (e.g., Defruyt et al., 2019). Differences in DC competency based on attributes and the environment are also being considered: the high DC competency of female student athletes (De Brandt et al., 2018), the association between the smooth balancing of academic and athletic activities and high DC competency (Linnér et al., 2019), and others. The second is the study of factors that influence the quality of the career transition of student athletes. For example, student athletes with a high athletic identity are more likely to experience maladjustment in their retirement (e.g., Menke & Germany, 2019; Tyrance et al., 2013). Stress caused by athletic activity reduces self-efficacy in career transition (Raalte & Postenher, 2019). The third is the development of educational programs for the purpose of career support for student athletes. In these studies, workshops and educational programs for student athletes were developed, and their effectiveness was verified through questionnaire and interview surveys (e.g., Murdock et al., 2016; Raalte et al., 2017; Ryan et al. 2017). An educational program for practitioners who provide career support has also been developed (Hong & Coffee, 2018).

Studies have used multifaceted approaches to examine the career transitions of student athletes. These studies have been conducted not only in the US, which has the NCAA, but also in various countries like Spain, Germany, and South Africa, indicating a high level of interest. The main problem with these studies is that they emphasize the need for career support and provision of educational programs for student athletes, which highlights concerns around the career transition of student athletes.

However, in previous studies, the negative cognitive and behavioral aspects of such career transitions are conceived of very vaguely. Emphasis has been placed on measuring the state of mental health through stress and identity, and it is therefore not clear how student athletes themselves perceive various actual conditions associated with their career transitions. This is also the case in Japan, and as far as we can see, the understanding of the actual conditions associated with the career transitions of student athletes is insufficient.

In the field of educational psychology, several studies have been conducted on the career transition problems of college students, with particular emphasis on career selection. The inability to choose a career path is conceptualized as "vocational indecision," which encompasses career choices and broader meanings such as the selection and determination of future directions and goals (Salomone, 1982; Shimoyama, 1986). Although vocational indecision has been considered to occur generally in the developmental process, guidance alone is unlikely to lead to a career decision, and specific support is now considered necessary.

One of the factors that leads to vocational indecision is the existence of distress in career selection. For example, Leon and Chervinko (1996) found a positive correlation between distress over career choice and vocational indecision. Honda (2009b) found that Japanese university students have two major problems in career selection, namely, those related to the ambiguity of one's own internal standards and adjustment with one's own external circumstances. These problems inhibit smooth career selection. The concerns that emerge in the career selection of university students can lead to vocational indecision. It is necessary for student athletes to take measures to eliminate the worries associated with career selection. They have various issues to consider while deciding on their career paths between milestones in their athletic careers and turning points in their lives, and they have some unique concerns. Therefore, this study aims to clarify the structure of the consciousness of worries in the career selection of student athletes in Japan. Specifically, through the development of the Japanese student athletes' worries in career selection scale, the worries that occur in the career selection of student athletes are clarified. This study also clarifies the differences in the worries among student athletes based on their admission method and athletic performance.

Material & methods

Pilot study

First, a pilot study (survey) was conducted to collect and refine the descriptions of "student athletes' problems in career selection." It was conducted at three private universities in the Tokyo metropolitan area of Japan in April 2020. A total of 314 third- and fourth-year university students (177 men and 137 women) belonging to varsity teams were included. The survey was carried out during practice times for the various varsity teams in which the subjects were enrolled.

The first question was "Have you decided on a particular direction you want to take after graduation?" Respondents were asked to choose either "1. I have decided" or "2. I have not decided." Next, the 205 students who answered that they were undecided in response to question 1 were asked to respond to the following item: "Please tell us why you cannot decide the direction of your career and what you feel troubled about in making

decisions concerning your career.” This item was open ended, and the respondents were allowed to write down their thoughts freely. The participants answered the questionnaires anonymously, and it was clearly indicated that the anonymity of the participants’ answers was guaranteed. We obtained consent from the participants and explicitly stated that all questions were voluntary and that none of them were required to answer any question that they could not or did not wish to answer.

After the pilot study, we excluded open-ended answers that were unrelated to the question and extracted statements at the clause level. We collected 410 statements on the troubles that student athletes encountered in the course of career selection. Two researchers and two graduate students specializing in sport pedagogy categorized these statements based on the similarity of the content. The categorizations were discussed until everyone agreed. The following five constructs subsumed by “worries that arise in the career selection of student athletes” were found: worries concerning the statement “I want to concentrate on athletic activity,” worries related to what would happen after making a career decision, worries related to the continuation of athletic activity, worries concerning the statement “I can only do sports,” and worries related to the lack of information. We tried to clarify the respondents’ statements, for example, by aggregating those with similar content. Next, we verified the validity of the content by presenting 16 graduate students and university teachers specialized in sport pedagogy with a list of 20 items pertaining to “worries that arise in the career selection of student athletes” and asked them to categorize the items according to the aforementioned five constructs. We determined validity according to the rate of agreement and deleted items that had a rate of less than 80 percent. Following this, we selected 20 items to measure worries that arise in the career selection of student athletes. This pilot survey was conducted with the approval of the Ethics Committee of the university to which the first author belonged.

Main survey

The survey was conducted from January to March 2021 among student athletes from national and private universities in Japan. A total of 1,121 (540 men and 581 women) participants from 26 universities were included in the survey. Of these, 1,106 valid responses (530 men and 576 women) were included in the analysis, excluding those with omissions and/or errors. Given the spread of COVID-19, the survey was conducted online using Google Forms. We used SPSS (version 27.0) and Amos (version 27.0) for statistical analysis. We obtained consent from the participants and explicitly stated that all questions were voluntary and that no student was required to answer any question that he or she could not or did not want to answer. First, the cover sheet asked the students to respond to questions related to the starting age of the sport they are currently involved in, how they entered university, and their athletic achievements at university.

Next, we asked, “Have you decided on a particular direction you want to take after graduation?” and the respondents had to answer yes or no.⁴ The definition of “deciding upon a direction,” used in this study was “a state in which one has a clear vision of one’s future, such as how one wants to live or what one wants to do after graduation, rather than a state in which one has a specific place of employment or higher education in mind.” The 616 student athletes (274 men and 342 women) that responded no to the above question were asked to respond to items measuring worries that arise in the career selection of student athletes using a four-point scale that ranged from “quite true” (4 points) to “not true at all” (1 point).

To test the construct validity of the scale, we focused on the correlation between “worries that arise in the career selection of student athletes” and “self-efficacy of career selection.” Self-efficacy is defined as “a belief in the behavior required to achieve a certain outcome” (Bandura, 1977). It is related to future outlook because it signifies one’s degree of confidence in performing future actions (Tomiya, 1997). Low self-efficacy in career selection is related to vocational and career indecision (e.g., Lam & Santos, 2018; Creed et al., 2006; Urakami, 1996) and is an important determinant in college students’ career selection. Therefore, as a hypothesis for construct validity, it was predicted that each factor of the “student athlete’s career selection worries scale” would show a negative correlation with “self-efficacy.”

The “career selection factor” was extracted from the “self-efficacy scale of career selection” by Adachi (2001) and used (10 items). This scale has a certain degree of reliability and validity and has been used in many studies of university students in Japan. We asked the participants to answer the questions using a four-point scale that ranged from “quite confident” (4 points) to “not confident at all” (1 point). This survey received approval of the Ethics Committee of the university to which the first author belonged.

Results

Exploratory factor analysis

First, an item analysis was conducted on 20 items to measure the worries that arose in the course of the career selection of the student athletes. To examine the bias in the items, items with mean values of less than 1.5 or more than 3.5 with extremely small standard deviations and normal distributions of frequency where 70% of them were clustered in a specific frequency were examined. No bias was found. The correlation coefficients between the items were calculated, and no high value exceeding .70 was found.

Next, we conducted exploratory factor analysis (EFA, maximum-likelihood method with Promax rotation) on the 20 items (Table 1). We named the five factors extracted from the items’ characteristics. The first factor included items such as “I am worried about going out into the world,” and was named “worries related to

what would happen after making a career decision” because it indicated worries about social life after making a career decision. The second factor included items such as “I am worried that I cannot think about anything other than athletic activity,” indicating that they were troubled by the fact that they wanted to prioritize athletic activities over career selection, and was thus named “worries around the statement ‘I want to concentrate on athletic activity.’” The third factor included items such as “I am worried about when I should end my athletic activity,” and was named “worries related to the continuation of athletic activity,” because it indicated worries around continuing athletic activities. The fourth factor included items such as “I am worried that I do not have skills that are of use in regular society” and because it indicated worries related to the respondents’ feelings that they only had experience in athletic activities, it was named “worries around the statement ‘I can only do sports.’” The fifth factor included items such as “I am worried that I am encountering trouble getting information on career selection” and was named “worries related to the lack of information.” Next, in order to examine the internal consistency of the scale, Cronbach’s α coefficients were calculated as reliability coefficients for the five factors mentioned above. The results showed that the Cronbach’s α coefficients for factors 1 to 5 were .95, .92, .94, .93, and .90, respectively. All the factors’ α coefficients were above .90, confirming that there was sufficient internal consistency. The scale was named “career selection worries scale for Japanese student athletes” (career selection worries scale).

Table 1. “Career selection worries scale for Japanese student athletes” Promax rotation and factor correlation

Items	I	II	III	IV	V	
I Worries related to what would happen after making a career decision. ($\alpha = .95$)						
I am worried about going out into the world	.99	.00	.04	.02	.00	
I worry about the pressure of entering the workforce	.92	.04	.09	-.08	-.01	
I worry about whether I'll ever be able to live a stable life	.89	-.09	-.01	.05	.02	
I am worried by my precarious social outlook	.87	-.07	.02	.00	.06	
I am worried about whether or not I'll be able to keep a job	.81	.10	-.01	-.21	-.02	
II Worries around the statement ‘I want to concentrate on athletic activity.’ ($\alpha = .92$)						
I am worried that I cannot think about anything other than athletic activity	-.09	.99	.33	-.16	.16	
I am worried that I cannot find the motivation to work	-.04	.94	.07	-.11	-.04	
I am worried that I don't have enough time to think about my career path	-.05	.83	-.06	-.01	-.04	
I am worried that I do not have clear goals and dreams	.14	.78	-.26	.21	-.11	
I am worried that I am having a hard time figuring out what I want to do	.06	.69	-.22	.20	.03	
III Worries related to the continuation of athletic activity. ($\alpha = .94$)						
I am worried about when I should end my athletic activity	-.07	-.11	.98	-.08	.06	
I am worried about whether or not I should continue with my athletic activities	.00	.11	.89	.03	-.05	
I am worried about my identity as an athlete wavering	.21	-.03	.84	.18	-.03	
I am worried that I cannot imagine myself not competing	.02	.02	.79	.14	-.11	
IV Worries around the statement ‘I can only do sports.’ ($\alpha = .93$)						
I am worried that I do not have skills that are of use in regular society	.02	.02	.03	.92	-.03	
I am worried about my poor academic performance	-.13	-.05	.06	.85	.04	
I am worried that I do not have any appealing aspects other than my competitive experience	-.13	.05	.18	.78	.03	
V Worries related to the lack of information. ($\alpha = .90$)						
I am worried that I am not able to get the information I need toward my career selection	.01	-.04	-.02	.07	.98	
I am worried that I do not know how to choose a career path	.12	.04	-.14	.11	.81	
I am worried that I do not understand the world outside of sports	-.06	.03	.00	-.13	.77	
	I	—	-.39	-.02	-.51	.41
	II		—	-.29	.25	.15
Factor correlation	III			—	.36	-.52
	IV				—	-.32
	V					—

Confirmatory factor analysis

To test the invariance of the factor structure of the scale, a confirmatory factor analysis (CFA) was conducted using the same data based on the results of the EFA. The career selection worries scale was analyzed using a model that assumed that each item was influenced by five latent factors and that there was covariance among all of them.

The goodness-of-fit indices of the model were GFI=.90, AGFI=.87, CFI=.90, and RMSEA=.06, indicating generally good goodness-of-fit. These results confirmed the factor invariance of the scale.

Verifying the validity of the constructs

Correlation analysis was conducted between the “career selection worries scale” and the “self-efficacy scale of career selection” to verify the construct validity of the scales (Table 2). A significant negative correlation ($r = -.20$ to $-.47$) was found between both scales. It can be interpreted that student athletes who have problems with career selection have lower self-efficacy in career selection. Thus, the hypothesis for construct validity was supported because the results were as predicted

Table 2. Verifying the validity of the constructs: Correlation analysis between the “career selection worries scale for student athletes” and the “self-efficacy scale of career selection”

	Worries related to what would happen after making a career decision.	Worries around the statement ‘I want to concentrate on athletic activity.’	Worries related to the continuation of athletic activity.	Worries around the statement ‘I can only do sports.’	Worries related to the lack of information.
Self-efficacy of career selection	-.39**	-.44**	-.20*	-.47**	-.28*

** $p < .01$, * $p < .05$

Differences in worries that arise in the career selection of student athletes owing to enrollment methods

SRAs have been systematized in many Japanese universities, and many student athletes are enrolled through them. However, there are a few problems in the academic performance of students enrolled through SRAs, and these problems are thought to have negative effects on career development. Therefore, it is assumed that there is a difference in the problems that occur in career selection based on the admission method of student athletes. We conducted a one-factor analysis of variance for the three groups of entrance methods: “General Entrance Examination/Center Test-based Entrance Examination,” “SRAs,” and “Others”⁵ (Table 3). Significant differences were observed for “worries related to what happens after making a career decision” ($F(2, 616)=7.36$, $p<.01$), “worries around the statement ‘I want to concentrate on athletic activity’” ($F(2, 616)=24.78$, $p<.001$), “worries related to the continuation of athletic activity” ($F(2, 616)=24.78$, $p<.001$), “worries around the statement ‘I can only do sports’” ($F(2, 616)=7.66$, $p<.01$), and “worries related to the lack of information” ($F(2, 616)=5.61$, $p<.01$). The results of multiple comparisons showed that the scores of SRAs were significantly higher than those of General Entrance Examination/Center Test-based Entrance Examination and Others in all factors ($p<.001$).

Table 3. Differences in the worries that arise in the career selection of student athletes owing to enrollment methods

	(A)	(B)	(C)	F Value	Multiple comparisons
	General Entrance Examination /Center Test (N=256)	SRAs (N=278)	Others (N=81)		
	M SD	M SD	M SD		
Worries related to what would happen after making a career decision.	2.24 .89	2.73 1.24	2.32 1.20	7.36 **	B > A, C
Worries around the statement ‘I want to concentrate on athletic activity.’	2.14 .77	2.70 .91	2.30 .85	24.78 ***	B > A, C
Worries related to the continuation of athletic activity.	2.17 1.08	2.67 .98	1.92 1.06	24.16 ***	B > A, C
Worries around the statement ‘I can only do sports.’	1.93 1.05	2.47 1.14	2.08 .81	7.66 **	B > A, C
Worries related to the lack of information.	2.17 .87	2.42 .96	2.17 .83	5.61 **	B > A, C

** $p < .01$, *** $p < .001$

Differences in problems in career selection caused by the athletic performance of student athletes

Athletes with high athletic achievements in Japan can be employed by corporate-affiliated teams or join professional teams in particular sports such as baseball, soccer, and rugby. There are various preferential measures for employment. Therefore, it is assumed that the athletic performance of student athletes also has some influence on their career selection after graduation. To clarify the differences in career selection caused by the athletic performance of student athletes, we conducted a one-factor analysis of variance by dividing athletic performance into four groups: “international level,” “top national level,” “national level,” and “other” (Table 4). Significant main effects were found for “worries related to the continuation of athletic activity” ($F(3, 616)=10.42, p<.001$) and “worries related to the lack of information” ($F(3, 616)=5.22, p<.01$). The results of multiple comparisons showed that the scores of “international level” and “top national level” were significantly higher than those of “national level” and “other” for “worries related to the continuation of athletic activity” ($p<.001$). For “worries related to the lack of information” ($F(3, 1106)=3.93, p<.01$), the scores of “international level” were significantly higher than those of “national level” and “other” ($p<.01$).

Table 4. Differences in career selection problems caused by the athletic performance of student-athletes

	(A)	(B)	(C)	(D)	F Value	Multiple comparisons
	International level (N=58)	Top national level (N=212)	National level (N=192)	Other (N=154)		
	M SD	M SD	M SD	M SD		
Worries related to what would happen after making a career decision.	2.61	2.57	2.37	2.59	1.51	
	1.26	1.26	1.18	1.07		
Worries around the statement ‘I want to concentrate on athletic activity.’	2.26	2.22	2.31	2.29	2.15	
	.90	.85	.82	.87		
Worries related to the continuation of athletic activity.	2.74	2.64	2.12	1.96	10.42 ***	A, B > C, D
	1.02	1.03	1.13	.96		
Worries around the statement ‘I can only do sports.’	2.12	2.21	2.18	1.95	1.96	
	1.07	1.12	1.10	.95		
Worries related to the lack of information.	2.52	2.24	2.16	2.16	5.22 **	A > C, D
	.92	.97	.84	.84		

** $p <.01$, *** $p <.001$

Discussion

The factor structure of the career selection worries scale for student athletes

The CFA showed that the factor structure was relatively stable. The first step was to examine the factor structure of student athletes. First, we summarized the three factors that are considered characteristic of student athletes. The first is “worries around the statement ‘I want to concentrate on athletic activity.’” This factor indicates that the students wanted to concentrate only on athletic activities and did not have enough time for career selection. On the other hand, if we consider the fact that they did not know what they wanted to do in the future or what their goals were other than athletic activities, we can understand the difficulty of constructing their identity outside of being an athlete. Studies have pointed out that student athletes with high athletic identity tend to experience a loss of identity when they retire from competition (Menke & Germany, 2019; Park et al., 2012). It will be necessary to conduct a more detailed study using this as a starting point. The second factor refers to worries related to the continuation of athletic activity. The process of seeking employment following graduation from university often marks the end of an athlete’s career (Japan Sport Council, 2014). Therefore, it is easy to imagine that student athletes are worried about the choice between continuing and not continuing their athletic activities. For student athletes who have continued their athletic activities for a long time, this is a simple but serious problem. The third factor refers to worries around the statement “I can only do sports.” In Japan, student athletes who continue athletic activities until university often continue to play for a long time. As many as 58.6% of the subjects in this study started their athletic activities in the third grade at elementary school or earlier. As they are busy with athletic activities during their college years, it is inferred that they do not have many opportunities to devote time to part-time jobs or community service activities, which many general students experience. Therefore, student athletes have few opportunities to gain life experiences other than through athletic activities and view the fact that they have experienced only athletic activities in their lives negatively.

In contrast, “worries related to what happens after making a career decision” and “worries related to the lack of information” are not unique to student athletes but occur among students in general. Honda (2009b)

examined students at a national university in Japan where “worries about the uncertainty of a future situation” and “worries about the lack of career information” were extracted. For university students in general and not just student athletes, the transition from university to society is a life event that involves risks. The uncertainties of the post-COVID-19 society are synergistic, and it is natural to feel uneasy about what they can do after employment. Today, we live in an information society where the Internet and various social networking platforms are flourishing. However, this also means that there are many issues (e.g., how to identify reliable information) owing to information overload.

From the five factors on the career selection worries scale, we were able to extract those that reflected the actual state of student athletes in addition to factors that were widely related to general students. The three factors pertaining to “worries around the statement ‘I want to concentrate on athletic activity,’” “worries related to the continuation of athletic activity,” and “worries around the statement ‘I can only do sports’” strongly reflect the career choices and individual circumstances that student athletes have accumulated to date.

Differences by admission method

SRA entrants are more likely to encounter trouble in career selection. We consider the following three points with a focus on SRA entrants.

The first is the impact of SRA entrants’ sense of mission in relation to their “worries around the statement ‘I want to concentrate on athletic activity’”; SRA entrants are admitted to universities because of their athletic achievements, and many universities require them to achieve results athletically as well (Ono et al., 2017). On the other hand, universities that have SRAs also expect SRA entrants to serve as advertisements. Taking all this into account, it is likely that SRA entrants may feel forced to focus on athletic activities first, and therefore, securing sufficient time and effort to consider career selection becomes secondary.

Second, in relation to “worries around the statement ‘I want to concentrate on athletic activity,’” “worries around the statement ‘I can only do sports,’” and “worries related to what happens after making a career decision,” is the effect of the number of years of athletic activity of SRA entrants. As many as 58.6% of the respondents in this study began their athletic careers when they were in the third grade or earlier, whereas 74% of the SRA entrant respondents started in the third grade or earlier. It is difficult for SRA entrants to decide to retire, because they have continued their athletic activities for a long time. At the same time, the fact that they have been involved in athletic activities since their early elementary school years suggests that they have had few opportunities to gain life experiences other than in athletic activities. Therefore, that they have been involved in athletic activities for a long time may cause them to become aware of the fact that they only know the world of athletic activities, which in turn may cause them to feel anxious about their social life after employment.

Third, related to the “worries around the lack of information” is the impact of the low outlook of SRA entrants: many SRA entrants think that they can get a job because until they entered university, they had been able to determine their career paths based on their athletic achievements. Many athletes think that they will be able to get jobs, and their skills in collecting information on their career paths are low (Ono, 2019). Therefore, the results of this study are also considered to reflect these points.

Differences by athletic performance

In the analysis of differences by athletic performance, no noteworthy differences between factors were identified compared to the analysis of differences by admission method. In the analysis of “worries around continuing athletic activity,” which is considered particularly relevant to the future of student athletes, it became clear that student athletes with higher athletic performance were more likely to have worries about career selection. Student athletes who participate in international or national competitions have many opportunities to continue their athletic activities after graduation. However, while continuing athletic activities, the status of athletes belonging to business or professional teams is often unstable, except for a select few. Thus, this will likely be a time when the determination of one’s limit as an athlete is questioned. Conflicts are likely to arise between the challenge to one’s own potential and the decision to retire. Student athletes at the level of international competition are more likely to suffer from “the problem of ‘lack of information’” than those with low athletic performance. Those who participate in international competitions are busy with athletic activities and do not have enough time to collect information to support their career selection. Such student athletes with outstanding athletic achievements receive offers from sponsors who support them not only in finding employment but also in continuing their athletic activities. Therefore, it may be easy for them to be passive rather than to access information on their own.

Conclusions

We clarified the structure of the worries that arise in the career selection of student athletes and the differences in the worries according to their method of admission and athletic performance. The findings point to existence of the “axis of conflict” in the worries presented. The most symbolic factor is “worries around the statement ‘I want to concentrate on athletic activity,’” but from the perspectives of “athletic vs. other types of activity,” “athletic vs. other experiences,” and “sports vs. the outside world,” a dichotomy of “athletics/society” emerged. Athletes’ anxiety and lack of confidence in transitioning from the world in which they have lived to a

different world (mainly employment) are expressed as their worries. This is similar to the single-track model of first career-second career and is different from the double-track model posited in other countries.

Careers unique to student athletes, which have long been considered positively in Japanese society, are perceived by some student athletes as “I did nothing but play sports = lack of experience and ability,” and this leads to worries related to career selection. Therefore, the results of this study suggest that a history of athletic activity does not necessarily lead to confidence in career development among student athletes. Although there are many athletes who connect their athletic experiences to their confidence in career development, it is important to acknowledge the existence of student athletes who do not do so. As it became clear that SRA entrants are more likely to have trouble with career selection, it appears that they need priority support even after entering university. It is important for SRA entrants to deepen their understanding of the value of their careers and teach them realistically about the difficulties of social life after graduating from university. Through such attempts, it may be possible to lead to the construction of concrete career support. Finally, investigating the status of student athletes who are not worried about career selection is an issue for future research. In this study, 44% of the student athletes answered that they had a certain career path after graduating from university. Elucidating the actual situation of such student athletes is also an important area for research. Therefore, we would like to clarify the reality of student athletes who are not troubled by career selection from various perspectives, while paying close attention to their career decision-making strategies and self-efficacy.

Notes

1) In this study, student athletes are athletes who belong to the varsity team of their university and athletes who do not belong to a varsity team of a university but play competitively (i.e., professional athletes and athletes whose varsity teams are not established in the university).

2) “Simultaneous recruitment of new graduates” is a recruitment method in which companies hire a class of new graduates who are scheduled to graduate from high school, vocational school, or university as full-time employees at the same time every year.

3) A dual career in sports is defined as follows: “To successfully initiate, develop, and finalize an elite sporting career as part of a lifelong career, in combination with the pursuit of education and/or work as well as other domains, which are of importance at different stages of life” (European Commission, 2012, p. 6). It demonstrates the need for a double route approach in preparing and supporting the career development of student athletes outside of the competition that takes place during their active period.

4) The details of the responses were “Yes” for 490 (44%) and “No” for 616 (56%).

5) In Japan, “General Entrance Examination/Center Test-based Entrance Examination” are those in which pass/fail is determined solely by an academic test. Outside of SRAs, other entrance methods include “Recommendation Entrance Examinations” and “Designated School Recommendation Entrance Examinations” (entrance examinations with which only students from designated high schools set by universities can apply).

Conflicts of interest

There are no conflict of interest to declare.

References

- Adachi, T. (2001). Career development by university students: Social cognitive career theory. *The Japanese Journal of Educational Psychology*, 49(3), 326–336.
- Asahi Shimbun. (2019). ‘Academic neglect’ that began to be asked. (2019, March 9). p. 15.
- Bandura, A. (1977). Self-efficacy toward a unifying theory of behavioral change. *Psychological Review*, 84, 191–215.
- Branton, S. C. (2009). Exploring the relationship between intrapersonal intelligence and university students’ career confusion: implications for counseling, academic success, and school-to-career transition. *Journal of Employment Counseling*, 46(2), 52–61.
- Cabrita, T. M., Rosado, A. B., Leite, T. O., Serpa, S. O., & Sousa, P. M. (2014). The relationship between athletic identity and career decisions in athletes. *Journal of Applied Sport Psychology*, 26, 471–481.
- Creed, P. A., Patton, W., & Prideaux, L. A. (2006). Causal relationship between career indecision and career decision-making self-efficacy: A longitudinal cross-lagged analysis. *Journal of Career Development*, 33, 47–65.
- De brandt, K., Wylleman, P., Torregrossa, M., Schipper-Van, V. N., Minelli, D., Defruyt, S., & De Knop, P. (2018). Exploring the factor structure of the Dual Career Competency Questionnaire for athletes in European pupil- and student-athletes. *International Journal of Sport and Exercise Psychology*. <https://doi.org/10.1080/1612197X.2018.1511619>
- Defruyt, S., Wylleman, P., Torregrossa, M., Schipper-van Veldhoven, N., Debois, N., Eripic, S. C., & De brandt, K. (2019). The development and initial validation of the dual career competency questionnaire for support providers (DCCQ-SP). *International Journal of Sport and Exercise Psychology*. <https://doi.org/10.1080/1612197X.2019.1581827>

- European commission. (2012). EU guidelines on dual careers of athletes: Recommended policy actions in support of dual careers in high-performance sport. https://ec.europa.eu/assets/eac/sport/library/documents/dual-career-guidelines-final_en.pdf#search=European+commission+dual+career
- Honda, Y. (2009a). *Occupational significance of education: Connecting youth, school and society*. Chikuma Shobo.
- Honda, Y. (2009b). Worries and beliefs of university students regarding career decisions. *The Japanese Journal of Adolescent Psychology*, 20, 87–100.
- Hong, H. J., & Coffee, P. (2018). A psycho-educational curriculum for sport career transition practitioners: development and evaluation. *European Sport Management Quarterly*, 18(3), 1–20.
- Japan Sport Council. (2014). Research on dual careers. https://www.jpnsport.go.jp/Portals/0/sport-career/PDF/dualcareer_report_jsc_2013.pdf
- Lam, M., & Santos, A. (2018). The impact of a college career intervention program on career decision self-efficacy, career indecision, and decision-making difficulties. *Journal of Career Assessment*, 26(3), 425–444.
- Leon, F, T, L., & Chervinko, S. (1996). Construct validity of career indecision: Negative personality traits as predictors of career indecision. *Journal of Career Assessment*, 4(3), 315–329 .
- Linnér, L., Stambulova, N. B., Lindahl, K., & Wylleman, P. (2019). Swedish university student-athletes' dual career scenarios and competences. *International Journal of Sport and Exercise Psychology*, 1–16.
- Menke, D. J., & Germany, M, L. (2019). Reconstructing athletic identity: college athletes and sport retirement. *Journal of Loss and Trauma*, 24(1), 17–30.
- Murdock, J, L., Strear, M, M., Jenkins-Guarnieri, M, A., & Henderson, A, C. (2016). Collegiate athletes and career identity. *Sport, Education and Society*, 21(3), 396–410.
- Ono, Y. (2019). What is the cross that students have to bear in the sports recommendation admissions? <https://diamond.jp/articles/-/191272>.
- Ono, Y. (2021). To consider the social implication of “sports recommendation admissions.” *Journal of Health, Physical Education and Recreation*, 71(2), 78–82.
- Ono, Y., Kaji, M., Tomozoe, H., & Yoshinaga, T. (2017). A study of the formation process of sports recommendation admissions to universities in Japan. *Japan Journal of Physical Education, Health and Sport Sciences*, 62(2), 599–620.
- Park, S., Lavallee, D., & Tod, D. (2012). Athletes' career transition out of sport. *International Review of Sport and Exercise Psychology*, 6, 22–53.
- Raalte, L, J., Andrews, S, R., Cornelius, A, E., Brewer, W., & Petitpas, A, J. (2017). Student-athlete career self-efficacy: workshop development and evaluation. *Journal of Clinical Sport Psychology*, 11(1), 1–13.
- Raalte, L, J., & Postenher, K, A. (2019). Examining social support, self-efficacy, stress, and performance, in U.S. Division I collegiate student athletes' academic and athletic lives. *Journal for the Study of Sports and Athletes in Education*, 13(2), 75–96.
- Ryan, C., Thorpe, H., & Pope, C. (2017). The policy and practice of implementing a student athlete support network: a case study. *International Journal of Sport Policy and Politics*, 9(3), 415–430.
- Salomone, P. R. (1982). Difficult cases in career counseling: II the indecisive client. *Personnel & Guidance Journal*. 60(8), 496–500.
- Shimoyama, H. (1986). A study on the vocational indecision of undergraduates. *The Japanese Journal of Educational Psychology*, 34(1), 20–30.
- Sung , Y., Tuner, S, L., & Kaewchinda, M. (2013). Career development skills, outcomes, and hope among college students. *Journal of Career Development*, 40(2), 127–145.
- Tyrance, S, C., Haris, H, L., & Post, P. (2013). Predicting positive career planning attitudes among NCAA division I college student-athletes. *Journal of Clinical Sport Psychology*, 7(1), 22–40.
- Tomiyasu, H. (1997). Relationship between career decision-making self-efficacy and time perspective in undergraduates. *The Japanese Journal of Educational Psychology The Japanese Journal of Educational Psychology* 45(3), 329–336.
- Urakami, M. (1996). Development of self-growth motivation in the career exploration: Among women's junior college students. *The Japanese Journal of Educational Psychology*, 44(4), 400–409.
- Yomiuri Shimbun. (2014). University sports: Bunbu ryodo. (2014, April 13). p. 29.
- Yoshida, T. (2012). A sociological study of the process that athletes overcome the challenges and difficulties over retirement: The life history of a former J-League soccer player who accomplished a career transition to wheelchair basketball. *Japan Journal of Physical Education, Health and Sport Sciences*, 57(2), 577–594.