

THE CONNECTION BETWEEN ACADEMIC AND ATHLETIC PERFORMANCE AMONG ELITE UNIVERSITY STUDENT ATHLETES

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Abstract: Athletes in higher education are not only expected to produce high level performance but to find the balance between the preparation for post-athletic life and the requirements of the university. The objective of this study is to explore the connections between academic performance and level of sport. Also, to elaborate on the role of relevant policy regulations and institutional support that help elite athletes meet academic requirements. Data collection was conducted by means of online questionnaires involving athletes receiving sport scholarships at the University of Debrecen (N=159). The data from questionnaires were processed by using SPSS 18. Version software. For data analyse four groups were extracted based on level of sport performance and involvement: international elite, division I, division II, division III. The results indicate that the academic performance on the two international elite of sport did not differ from the average, and that these athletes did not experience any difficulties earning course credits at the university while being engaged in doing sport. In most cases, elite athletes did not apply for the various kind of support instruments, thus, they are able to balance athletic preparation and academic requirements without supportive modifications of university policies. The results also shed light on the fact that the academic performance does not only depend on the level of sport and the chosen major at the university, but it is also influenced by the time devoted to study and training, and the sport type (individual or team sport). There are differences observed between athletes participating in individual or team sport concerning the general average of grades, the effectiveness of earning credits, the number of weekly training, as well as the time devoted to training in preparatory and competitive periods. According to the results, the various amount of time devoted to study or sport does not necessarily result in academic performance decline. In addition, results support that athletes do keep academic studies rather important and they are aware that university years are considered to be a significant period in preparation for post-athletic life.

Keywords: athletic performance, academic effectiveness, elite student athlete (JEL code: Z20)

1. INTRODUCTION

As the result of the social and economic development of the past few decades, career planning and the so-called individual career path development have become more and more significant, with life-long learning playing a key role (Koncz, 2013). Career planning and career path development take the characteristics of various life cycle stages into consideration, thus, help individuals to complete their studies, enter the labour market and then manage an adaptive career development. Individual career pathes are divided in terms of age into different stages (Belcourt “et al”, 1996, Dessler-Turner, 1992, Pintér, 2002, Sullivan, 1999, Dalton, 1989). Five stages are distinguished by Belcourt et al. (1996) and Dessler and Turner (1992) seven stages by Pintér (2002). All stages have their own characteristics. Even if approaches are different, they do agree that there should be a preparatory stage named “preparation for work” before entering the job market; this is followed by the “early-, mid- and late stages” of a career path. Transitions between stages signal certain stations where progress-aimed decision making is demanded, which takes

abilities, skills, motivation and ambition into account and is aimed at progression (Koncz, 2002).

The preparatory stage is essential for establishing a prospective career, in which the time period at the end of the high school years, influenced by future plans and visions, plays a critical role. In the seven stages approach of Pintér (2002), a period between age of 16 and 18 and age of 18 and 24 is defined as fundamental periods in career decisions, preparation for a career path. Hence, these two periods spent in educational institutions are formulate a critical base for post-athletic life preparation as well (Koncz, 2013). Based on previous research considerations and findings on post-athletic careers, it can be concluded that there is a continuous progress of change alongside with life cycles lasting up to the transition to retirement from sport.

As far as elite athletes’ careers are concerned, there are two different career paths distinguished. One is the athletic career, which involves sport specific objectives and ambitions. The other is the occupational career that is being developed parallel to the athletic career in order to consciously prepare for the

post-athletic stage. Hence, athletes will have the chance for a normative or predictable transition following the termination of their athletic career (Alfermann-Stambulova, 2007, Stambulova „et al.”, 2009). One of the basic conditions, though, is an atmosphere from which athletes could benefit - including the educational institution, sport association, connecting social groups or individuals, such as coach, family and peers (Kun-Szretykó, 2011). Due to the special characteristics of high-level sport and especially the relative short length of an athletic career, it is career planning and career management that play a particularly important role in sport. The length of an athletic career is hardly predictable, if one is fortunate enough, it might last until the age of 30-35.

Considering contemporary talent identification systems, the beginning of the athletic career usually overlaps with the beginning of elementary school studies. From that point on, young athletes are required to produce athletic and academic performance parallel; balancing the requirements of sport and school is less challenging at a younger age. However, with age, athletes become more mature and it becomes more and more important to parallel produce a high level athletic performance and maintain studies with preparation for post-athletic life and occupation. The athletic career, high level performance and ever growing results expect athletes to devote every minute and all of their sources to sport which, therefore, progressively becomes a profession (Conzelmann-Nagel, 2003). In addition, it is essential for athletes to build their own life and be aware of the significance created around further studies and professional experience (Kozsla “et al.”, 2014). The simultaneous realization of higher education studies and high level athletic activity involve a great deal of responsibility for athletes. Improvement and progress in sport depend not only on athletes but various external factors, whereas in higher education – as institutions tend to give much space for students to meet the academic requirements – students are responsible for their academic success. Depending on the discipline and level of sport, the amount of time devoted to studies by athletes might differ, though, academic performance can not be well-predicted because of individual differences of athletes.

An educational progress is defined in terms of the requirements completed. In higher education, one of the possible alternatives measuring academic effectiveness is the general average of grades this a dependent variable outlines academic performance together with other variables explaining academic effectiveness¹, according to Di Maggio (1982).

As an athletic career is defined in terms of athletic performance and results, regular performance evaluation is highly emphasized. Athletic results can be measured by successful participation in Olympic Games, European- or World championships, national championships or competitions. In addition, results compared to personal best of athletes is another indicator. These define the measures of realizing pre-set

objectives of athletes.

The connection between successful athletic performance and academic effectiveness was already examined in the '60's. Based on the findings, the positive influence of athletic activity on academic performance was concluded. However, another part of the study suggests risks in sport due to possible aggression, excessive alcohol and drug consumption (Pusztai, 2009 on Broh, 2002).

Compared to previous research that concluded different results on different levels of sport, this particular research examine student athletes only in the field of regular, club based and performance oriented competition sport. The objective of the study is to explore connections between academic performance and level of sport based on the results of an online questionnaires. Furthermore, the influence of institutional policies and regulations as well as of supportive instruments is examined in terms of elite athletes' academic effectiveness. With respect to the relevant literature it is assumed that the athletic performance and the level of sport has an influence on academic effectiveness.

2. LITERATURE REVIEW

International research usually focuses on academic performance with a complex approach – studying results, teacher-student relationship, and the role of institutional regulations and support in academic performance (Lannert, 2004). The academic result is considered to be an indicator of effectiveness. Students' academic effectiveness in higher education was measured, which was considered to be an indicator of institutional performance as well (Pusztai, 2010). Academic effectiveness measure by Pusztai (2007) with the following five indicators: future plans after university/ college, extracurricular activities, relation to high culture, altruist work attitude and the intention of taking up a job, respectively.

Research conducted in the United States has examined the field and level of work where athletes find employment after the termination of their athletic career, taking the actual requirements of the labour market into consideration. As the results indicated, the most important factors are the adequate qualification and the level of education. Therefore, it is a significant issue for athletes to properly meet the academic requirements while developing their athletic careers. In connection with this particular topic, many research has been conducted. Espwall (2004) examined the relationship of study and sport in terms of time utilization, and found that the amount of time devoted to sport is around 15-25 hours a week next to school activity which takes 25-35 hours a week. It was also found that the number of hours devoted to sport and study significantly raise during university years (Espwall, 2004). According to David (2005), examining the particular amount of time devoted to study and sport in higher education, student athletes normally devote 30 hours to their studies per week, whereas around 20-30 hours go to sport. These findings prove that adequate time management and commitment are necessary as well as institutional support instruments so that athletes could manage their dual tasks (David, 2005).

¹ Variables explaining academic effectiveness: family background variables, type of place of residence, factors characterising the institution, characteristics of educational organisations, attributes of class dynamic (Saha, 1997).

McKenna and Dunstan-Lewis (2004) carried out a research at an English university examining athletes' relation to their studies and their dual priorities. Based on the findings it can be concluded that athletes strive to be successful in both academic and athletic fields (McKenna - Dunstan-Lewis, 2004). Aquilina (2013) reported similar results as it was found that athletes could reach high academic and athletic performance for which an effective time utilization and balance of priorities were essential (Aquilina, 2013).

On international level and also in Hungary, the involvement of educational institutions was articulated in order to support successful academic performance and graduation of elite student athletes' in higher education (EU Commission, 2011). Therefore, the University of Debrecen took steps to help student athletes balance academic studies and high level athletic performance. In the *Studies and Exams Code* (2009) institutional policies and regulations as well as support instruments (individual schedule for class attendance and exams, mentor programmes) are defined (Lenténé-Puskás, 2012). This provides athletes with basic conditions and support for post-athletic life preparation while they still could focus on their athletic career.

3. MATERIAL AND METHOD

As preparation for the online survey, a focus group interview was conducted among national athletes according to a pre-set research protocol targeting the major areas covered in the envisioned questionnaire. As a result, several valuable pieces of information, thoughts and ideas came up that were integrated into the final version of the survey questionnaire. Before finalizing the questionnaire, pilot tests were conducted with 10 athletes.

The questionnaires were sent out to student-athletes applied and received sport scholarships in the second semester of the academic year 2013/14. The subject group involves European champions, World champions, Universiade winners, Olympic ranked athletes and national players. The final version of the questionnaires was sent out via Evasys survey automation software to 207 students. The survey applied a holistic approach; by the time Evasys closed down, a total of 159 completed questionnaires had been sent back which equals an answer rate of 76%. Out of the 159 respondents 114 were male and 45 were female. For assessment of year distribution it was necessary to count BSC training years together with their undivided degree program equivalents. Based on this precondition, 40 respondents as first-year students, 34 respondents as second-year students, 50 respondents as third-year students, 20 respondents as fourth-year students and 15 respondents as fifth-year students were registered. The distribution according to level of sport was the following: the number of athletes on the international elite of sport was 55, in division II was 61, in division III was 16, on regional level was 24 and there were 3 respondents who did not answer to this particular question. The majority of respondents were team sport athletes (N=114), 45 athletes were in individual sport. The distribution of athletes on different faculties justified another merge in the

case of public health faculties (ÁOK – Faculty of Medicine, EK - Faculty of Health, FOK- Faculty of Dentistry, GYTK – Faculty of Pharmacy, NK – Faculty of Public Health). It is the Faculty of Applied Economics and Rural Development from which the most athletes responded (N=60).

The survey consisted of five major areas of questions, which included both open and closed questions. The first group of questions related to personal data and university studies. The second group of questions focused on sport, discipline and level of sport. The third and fourth group intended to explore the institutional policies and regulations, and the relationship of the university and the athletes; the final set of questions covered the academic career and post-athletic future plans.

The analysis of academic effectiveness was conducted by pre-set indicators of general average of grades, selected and earned course credits as well as time devoted to study (in term-time and in exam period). In connection with the level of sport, the number of training a week, the number of training a day, the duration of daily training, and the number of competitions and games in preparatory and competitive periods were examined. The group of athletes doing sport on the international elite was determined as reference group of the analysis. In order to define the connection between selected - and - earned credits, and the level of sport, independent component analysis was conducted. The findings were also analysed with respect to support instruments provided by the *Studies and Exams Code* of the University of Debrecen. The data were processed by using SPSS version 18. software.

4. RESULTS AND EVALUATION

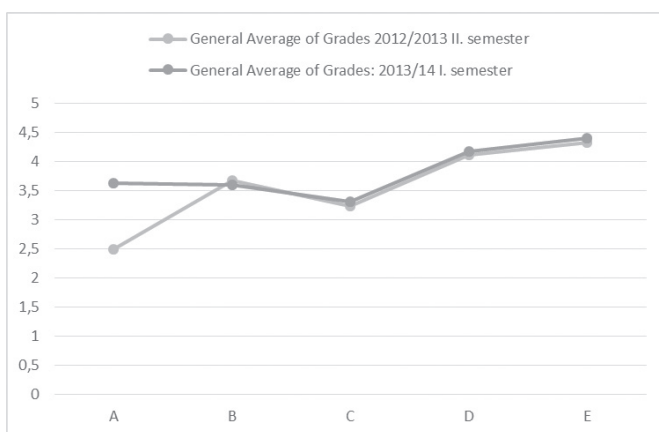
4.1 Connections between Academic Performance and Level of Sport

The general average of grades of athletes was calculated based on the scale of five. The 159 athletes involved in the research had a general average of 3.60 in respect to second semester of the academic year 2012/13, whereas the general average in the first semester of the academic year 2013/14 was 3.66.

The change of academic performance of athletes enrolled in different years is shown in Figure 1. illustrating the differences between academic performances of athletes by semester. BA first-year students showed lower average (2.50) than the athlete group average (3.60) in the second semester of the academic year 2012/13, however, their results (3.63) in the first semester of the year 2013/14 do not show significant differences compared to the group average (3.66). Concerning the results of sophomore students no significant differences can be registered between the two examined semesters. Though, the results of third-year students in both semesters (3.23 and 3.31 respectively) are under the defined group average. This indicates an apparent downward trend of academic performance compared to first- and second-year students. The average grade of I-III years of BSC students (3.12) was, however, not as good as the average grade of I-II MSC students (4.22) in the 2012/13 spring semester. In regards to the autumn semester the BSC

result athletes (3.50) remained below the MSc students (4.28). Based on this observation it can be concluded that the results recorded during master studies compared to bachelor studies show an upward tendency among athletes. In addition, the effectiveness of earning course credits (99% and 97%) also rises during the last part of studies (especially in year IV-V and during MSc studies), which might be related to the particular efforts made to graduation. The findings that support other previous research (Conzelmann-Nagel, 2003) show that younger athletes do more sacrifices for sport, however, they feel less challenge to balance athletic and academic requirements. It is presumed that by age athletes become more mature, therefore, their competencies in creating balance between athletic and academic fields grow, also the preparation for post-athletic life and graduation become more and more important.

Figure 1: General Average of Grades -Year



Source: own resource data

A: BSc I + undivided program year I; B: BSc II + undivided program year II; C: BSc III + undivided program year III; D: MSc I + undivided program year IV; E: MSc II + undivided program year V

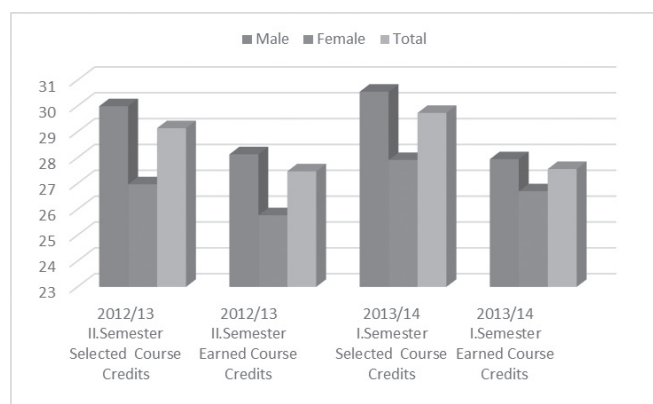
As elite athletes do not only attend sport related majors and there are different requirements on different faculties, it worth examining athletes' performances with respect to faculties as well. The findings show significant differences between athletes' results by faculties. It is the Faculty of Humanities and Arts where athletes showed the best academic performance in the two semesters with a grade average of 4.38 and 4.33 (compared to the group average of 3.60 and 3.66), respectively. On the contrary, it is the Faculty of Engineering that shows the weakest performance showed with a grade average of 2.83 and 3.13 in the two semesters, respectively. There is another interesting finding about athletes' performance on public health faculties – these athletes showed the second best results in both semesters. Their grade average of grades was 3.94 in the second semester of the academic year 2012/13 and 4.22 in the first semester of the academic year 2013/14.

After further elaboration on sport related factors, the athletic performance of athletes doing individual or team sport showed some differences. Individual athletes recorded better performance academically than athletes in team sports in both

semesters. They selected more course credits and earned these with more efficiency. Therefore, the examination of athletes' general average on different levels of sport is necessary. In the second semester of the academic year 2012/13, the grade average of the group identified on the international elite of sport – also used as reference group - was the same as the group average (3.60), whereas in the first semester of the academic year 2013/14 the athletes' result was 3.69. This result is better than the athlete group average (3.66). Compared to the average result of all the athletes, this group does not show significant differences. The examination of athletes' competing in second divisions similar results, the general average of grades was 3.59 and 3.62 in the two semesters, respectively. Consequently, athletes' performance on the two international elite of sport do not differ from the group average. On the contrary, there are significant differences on the following two levels. Athletes in division III showed lower academic performance compared to the group average; in the spring semester, their general average of grades was 3.21 and in the autumn semester 3.53. Concerning athletes on the regional level, their result of 4.06 in the second semester of the academic year 2012/13 was better than the group average, the result of the other semester was 3.87. As for the level of sport, athletes appear to record better results in the autumn semester that is the first semester of the academic year 2013/14.

From the point of gender distribution, it can be seen that female athletes showed better results in both semesters, a general average of above 4.0. The study also intends to examine the completion of predetermined credit numbers defined in the *Studies and Exams Code*. There was a difference between selected and earned course credits when female and male athletes were separately examined. Male athletes selected more credits than female athletes, in both semesters. However, the success rate of earning selected credits turned the other way round. Male athletes' success rate was 93.80% and 91.47% in the two semesters, whereas female athletes were more effective with 95.55% and 95.66%, respectively. It can be concluded that even though female athletes select less credits, their success rate of earning these credits is higher (Figure 2).

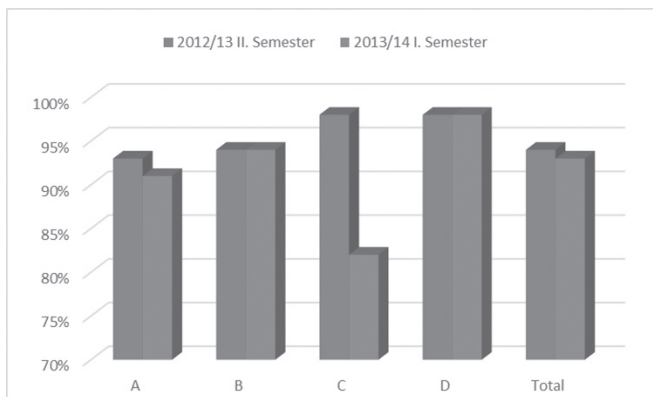
Figure 2: Selected and Earned Course Credits - Sex



Source: own research data

The demonstration of selected and earned course credits in terms of level of sport can be seen in Figure 3. As the results show, athletes on the international elite of sport showed a success rate of 93% and 91% in the two semesters concerning earned course credits. Division II athletes' result was 100% in both semesters. These two groups on the international elites (I-II division) appear to have no particular difficulties with parallel doing sport and earning credits at the university. Athletes in division III reached 98% in the second semester of the academic year 2012/13, however, their result in the first semester of the academic year 2013/14 (82%) was far below the group average (94%). On the contrary, athletes on regional level showed a result of 100%. The connection between selected and earned course credits in both semesters, and the level of sport was examined with help of chi-square test (on significance level of 95%). As the p-value was in both cases higher than 0.05, both variables are independent from each other, which means that the selected and earned course credits, and the level of sport do not show any connections in this sample.

Figure 3: Selected and Earned Course Credits - Level of Sport



Source: own research data

A: International elite; B: division II; C: division III; D: regional competitive

4.2 Connection between Academic Performance and Time Devoted to Academic Activity

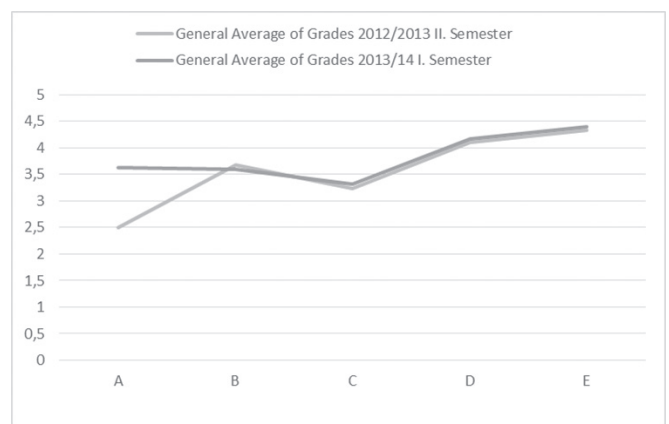
Academic performance is also influenced by the daily and weekly number of training, the time of training and the temporal factor defined by the number of competitions/games which correlates with elite athletes' academic activity on different levels of sport.

The examination of average daily training time with respect to different years show different results concerning both preparatory and competitive periods. First-year athletes train an average of 3.20 hours a day in the preparatory period, but train an average of only 2.00 hours a day in the competitive period. In the case of third-year athletes, however, the amount of time devoted to academic activity is significantly higher than for first-year athletes; it takes 4.24 hours a day in the preparatory period and 2.88 hours a day in the competitive

period. This might be explained by athletes' essential adaptation to "university life" in the first academic year; therefore, the amount of time devoted to academic and athletic activities permanently changes.

As for master studies, athletes are presumed to devote less time to athletic activities and focus more on their academic studies - this presupposition is supported by the upward tendency of academic performances. Those athletes, who get closer and closer to the end of their athletic careers, often tend to take up a job to gain useful professional experience and prepare for their post-athletic occupation. This is reflected by the change of time devoted to training. In the case of first-year MSC athletes, time devoted to athletic activity a day (1.75 hours) is significantly below the average (3.19 hours) in the preparatory period, and does not raise in the competitive period either (1.70 hours). This latter value, however, shows significant difference compared to the average (2.30 hours). In the case of second-year MSC athletes, the amount of time devoted to sport in the preparatory period is similar, though, the daily training time in the competitive period (1.27 hours) significantly differs from the average (2.30 hours). So, the amount of time devoted to daily athletic activity is higher in the preparatory period than in the competitive period (Figure 4).

Figure 4: Average Daily Training Time - Year



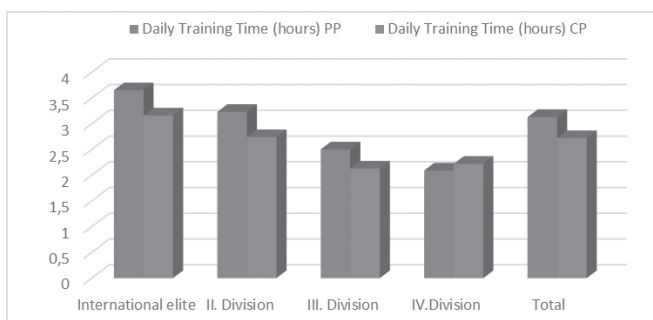
Source: own research data

A: BSc I + undivided programme year I; B: BSc II + Undivided Programme year II; C: BSc III + undivided programme year III; D: MSc I + undivided programme year IV; E: MSc II + undivided programme year V.

Based on the examination of daily training time on different level of sport it can be concluded that the average time of daily training in the preparatory period for athletes on the international elite of sport is 3.65 hours a day, in the competitive period it is 3.16 hours daily. In the case of lower levels of sport, the values examined show a definite downward tendency. In the preparatory period, division II athletes' daily training time takes 3.23 hours, in the competitive period, however, this value is only 2.74 hours a day which shows a significant difference. Compared to the training time of athletes on the international elite (3.65 hours), athletes on regional level have only 2.09 hours training a day in the preparatory period that also differs significantly.

Similar difference can be observed concerning the competitive period (3.16 hours and 2.22 hours). The results indicate some connections between the level of sport and the time devoted to training a day. The amount of training time decreases together with the levels of sport, thus a downward tendency can be seen in the preparatory and competitive periods as well (Figure 5).

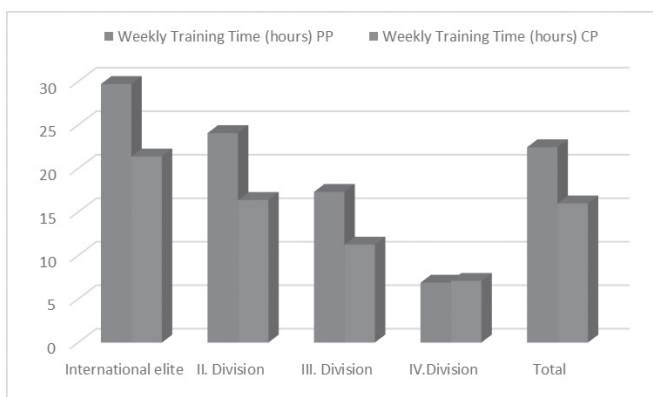
Figure 5: Level of Sport – Daily Training Time (hours)



Source: own research data

The amount of time devoted to training a week was also examined. According to the results, elite athletes on the international elite devote 29.71 hours in the preparatory period and 21.38 hours in the competitive period for training a week. After further analysis, it turned out that the amount of weekly training time in the case of division II athletes differs from the reference group (international elite) and thus takes 24.07 hours a week. In the competitive period, this value takes only 16.38 hours a week which also differs from the reference group. Regional competitive athletes train 17.31 hours in the preparatory period and 11.25 hours in the competitive period a week. Concerning athletes on the regional level, the weekly amount of training time is 6.88 hours and 7.08 hours in the two periods, respectively. Based on the findings it can be concluded that there is a rather significant difference between the training time of athletes on the international elite, and regional competitive athletes or athletes on regional level (Figure 6). Therefore, one of the factors that might influence academic performance mentioned above is the fact that the amount of training time is less on lower levels of sport.

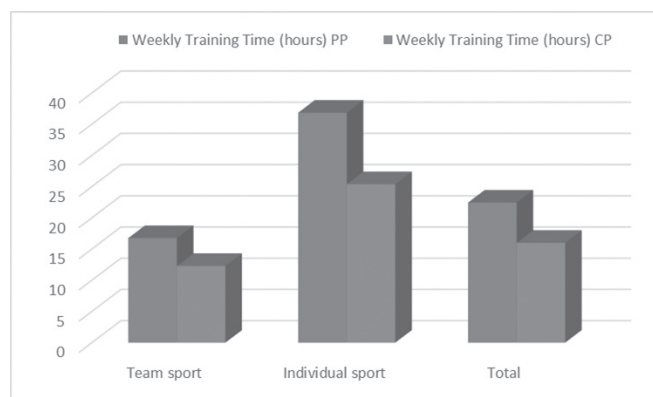
Figure 6: Level of Sport – Weekly Training Time (hours)



Source: own research data

The discipline or type of sport is also important when daily and weekly training time is examined. According to the results, individual athletes on the international elite of sport do have more training a week (9.39 occasions and 7.93 occasions) in both the preparatory and competitive periods than athletes who do team sport. These athletes have an average of 4.81 training in the preparatory period and 4.15 training in the competitive period a week. One reason for this difference might be the fixed schedule of team sport training, another might come from the characteristics of team sports that athletes must train together, in addition, there might be a connection to the fact that team sports have more demand on equipment and installations. Concerning individual athletes, the daily/weekly training is more flexible. In the case of division II and regional level, the results do not show any differences in terms of training numbers in neither of the periods. On the contrary, regional competitive athletes, who do team sport, have significantly more training (6.33 training a week) than individual athletes (4.50 training a week) that is also typical for the competitive period. After further elaboration, it turned out that individual athletes on the international elite of sport devote an average of 4.43 hours a day to training, which is 3.61 hours a day in the competition period. In team sports the average amount of training time is less a day (2.85 hours and 2.70 hours). In other words, the amount of daily training time is higher for division I- and division II athletes than for athletes who do team sport (Figure 7).

Figure 7: Type of Sport- Weekly Training Time (hours)



Source: own research data

The amount of time devoted to athletic activity also depends on the number of competitions and games. In the competitive period, international elite individual athletes participate in an average of 12 competitions. According to further results, on lower levels of sport the number of competitions surprisingly increases which shows an upward tendency in this case. What team sports concerns, the average number of competitions is 21 on international elite, and 25 and 26 in the division II and regional competitive, respectively. This regular participation in championships needs a great deal of time sacrificed on athletes' side.

One of the most important factors influencing academic effectiveness is time devoted to study. As the results showed, the majority of athletes typically does not study every day

during term-time, they mostly prepare for exams. In the exam period, the amount of time devoted to study is typically higher – athletes study every day, most athletes on different levels of sport devote more than 4 hours a day for study.

The examination of time devoted to study concerning male and female athletes - in term-time, the results were similar among international elite athletes. Typically, they do not study every day but for exams. As for division II athletes, the result showed that male athletes study rather for exams, whereas 21% of female athletes study 1-2 hours a day. Regarding athletes on regional level, the majority of male athletes study on a daily basis. However, in the exam period, there is no significant difference between male and female athletes in terms of study time – all athletes study more than 4 hours a day, normally. The results of the examination in terms of discipline indicate that in first- and second class, both individual and team athletes usually study for exams, though, occasionally they might devote time for 1-2 hours of study. Many athletes on regional level answered that they studied every day. Based on the examination of time devoted to study and training it can be concluded that athletes, who study more than 4 hours a day, train the most on a daily basis.

4.3 Role of Institutional Policies and Regulations in Successful Academic Performance

Further elaboration is needed to explore in what extent institutional policies and regulations contribute to the realization of athletes' dual career objectives. The majority of respondents is aware of the possibility of individual schedule for class attendance, however, 79% have not applied for individual schedule so far. The most athletes -19 out of 60 respondents-, who sent an application for individual schedule, study on the Faculty of Applied Economics and Rural Development; concerning the Faculty of Humanities, 3 out of 10 respondents used this opportunity. The majority of student athletes studies sport organisation on the Faculty of Applied Economics and Rural Development, which explains the high number of applicants for individual schedule. None of the respondents used this possibility on medical faculties where individual schedule cannot be implemented due to the characteristics of medical studies. An interesting fact is that 11 out of 55 international elite athletes and 12 out of 61 division II athletes applied for individual schedule which is about 20% of the respondents. More male athlete (26/114) applied for individual schedule than female athlete (4/45). Regarding the discipline, significant differences can be observed; 22 team athletes and only 9 individual athletes made use of this option. Athletes with individual schedule showed a general average of 3.56 and 3.46 in the two semesters compared to the patten averages (3.60 and 3.66). Those athletes who did not apply for individual schedule reached an average of 3.52 and 3.69 in the two semesters, thus no significant differences can be observed.

As for the individual exams, most of the athletes (94.4%) could not and therefore did not make use of the option. The majority has heard about the mentor programme at the uni-

versity, which intends to help elite athletes balance sport and studies, but they are not aware of how this programme works. Since most of the athletes do not use the support instruments provided by the university, they cannot judge whether these institutional support instruments are of any help in balancing academic and athletic fields; only 10% indicated that these instruments provide a great deal of help. Based on these findings it can be concluded that elite athletes, in most cases, manage to balance academic and athletic requirements without applying for any support provided by the university.

5. CONCLUSIONS

The study aimed to explore the connection between the balance of academic and athletic performance. The subjects in this particular research were athletes receiving sport scholarships at the University of Debrecen, of whom the majority taking up non-sport-related majors. Noticeable results were found in the two examined semesters related to academic performance and effectiveness in connection to earning course credits as the best academic results were found of student athletes majoring in humanities, followed by athletes in public health faculties. The results also show that the general grade point average do not differ significantly on the first- and second level of sport. Athletes tend to reach better academic performance in the autumn semester in comparison to the spring semester. According to the results, first year student-athletes do not have any difficulties earning selected course credits beside maintaining their athletic engagements. The research also shed light on the fact that academic performance is not only influenced by the level of sport and the major chosen, but the time devoted to study or athletic activity, and the sport discipline as well. There are some differences observed between individual and team sport athletes in terms of general average of grades, effectiveness of earning course credits, weekly training numbers as well as time devoted to training. The weekly number of training, and the time devoted to training a week and a day in both preparatory and competitive periods show significant differences between individual athletes and athletes doing team sports on the highest performance oriented level.

Based on the findings it can be concluded that international elite and national elite athletes do reach less academic performance than the average. Hence, these athletes are able to devote as much time to study as needed to successfully meet the academic requirements. The majority of elite athletes manage to balance athletic activities and academic requirements without using for any supportive instruments provided by the university. This bolsters the fact that in the period of athletic career overlapping the years of university studies, high level of athletic and academic performance can be realized.

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