

The Career Destination, Progression, and Satisfaction of Exercise and Sports Science Graduates in Australia

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ABSTRACT

Background: The availability of higher education courses/degrees in exercise and sports science has increased exponentially over the last 20 years. Graduates of these courses/degrees have many career possibilities; however, the distribution of the occupations is relatively unknown. Therefore, the purpose of this study was to gain an in-depth understanding of exercise and sports science graduates in Australia.

Methods: Australian exercise and sports science graduates (n = 747) completed an online survey about their occupation and employment conditions, career progression, and satisfaction.

Results: Approximately 70% of graduates were employed in the exercise and sports science workforce (57% full time, 25% part time, and 18% casual). Their occupations were predominately accredited exercise physiologists (29%), personal trainers/fitness leaders (9%), and teaching/research academics (8%). A total of 42% had a postgraduate qualification, and 40% had a clear progression pathway in their exercise and sports science role. Graduates were predominately extremely satisfied (35%) or somewhat satisfied (48%) with their current situation, and half (49%) planned to remain in their occupation for more than 10 years.

Conclusion: Despite most graduates obtaining exercise and sports science employment, many are part time or casual and still seeking full-time work. The workforce is highly educated and well supported, but many occupations lack a clear developmental pathway. *Journal of Clinical Exercise Physiology*. 2018;7(4):76–81.

Keywords: workforce, education, occupation, exercise physiologist

INTRODUCTION

The popularity of higher education courses/degrees (n.b. these terms should be considered equivalent) in exercise and sports science in Australia has increased exponentially over the last 20 years. There are currently 72 courses/degree programs (53 undergraduate) across 28 universities that have obtained accreditation with Exercise and Sports Science Australia (ESSA; www.essa.org.au). ESSA is the primary

body representing tertiary trained exercise and sports science practitioners in Australia (1). Anecdotally, however, careers in exercise and sports science are believed to be limited, particularly without a postgraduate qualification.

Graduates of exercise and sports science undergraduate courses/degree programs have many career pathways available: general health, fitness and sports development, and high performance sports settings (with many career options

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in between). A career as an accredited exercise physiologist (AEP) is the most well-defined career pathway in Australia. An AEP is a 4-year university-qualified and ESSA-accredited allied health professional specializing in clinical exercise interventions for persons at high risk or with existing chronic medical conditions (1). However, not every graduate obtains accreditation with ESSA as an AEP (AEPs in Australia as of March 2018 as specified by ESSA = 4,648; personal communication). Therefore, the career destination and progression of the remaining graduates is still relatively unknown.

A recent investigation of the Australian high performance and sports science workforce demonstrated that their professional development needs were not being met, and one-third of the workforce were dissatisfied with their current employer due to the stress of the high workload and unpaid overtime (2). However, it is unclear if similar challenges exist across the rest of the exercise and sports science workforce in Australia. Therefore, this project aimed to investigate the occupations and employment conditions, career progression, and career satisfaction of Australian exercise and sports science graduates.

METHODS

This project used a cross-sectional, survey design to collect data on graduates of Australian exercise and sports science undergraduate courses/degrees. An exercise and sports science course/degree was defined as any higher education institution course/degree with “exercise science,” “sports science,” or “human movement” in the course/degree name. An individual was eligible for this survey if they had completed 1 of the courses/degrees mentioned above at the undergraduate level in Australia. A total of 747 graduates completed the survey (age = 30 ± 8 years, range = 21–64 years; female = 381, male = 366; age at graduation = 21 ± 5 years, range = 20–51 years; and year of graduation = 2011 \pm 6, range = 1976–2016) representing 30 Australian education provider institutions. Data obtained from ESSA indicates that this sample is representative of current AEPs in terms of age, sex, and location. Data obtained from the Australian Government Department of Education and Training demonstrated that there were 16,671 graduates of these courses/degrees between 2006 and 2015 (unpublished observation). Our survey captured 3% of these graduates who completed their course/degree in this time period. The Human Research Ethics Committee at Southern Cross University granted approval for the project, and participants provided written informed consent before commencing the survey.

Two distinct recruitment strategies were used including (a) education providers attempting to contact their exercise and sports science graduates directly to invite them to complete the survey ($n = 273$) and (b) a social media advertising campaign ($n = 474$). Separate Web addresses with identical surveys were used to distinguish between the 2 recruitment strategies. The 2 samples were combined to create the total sample ($n = 747$). To determine the frequency distributions of occupations, only sample (A) was used in order to

minimize any biases associated with the online recruitment. The total sample was used for all other objectives.

The survey consisted of 65 items across the themes: (i) background, (ii) education, and (iii) work. The survey was developed in collaboration with ESSA staff and produced within the Qualtrics survey software system (Qualtrics, Provo, Utah, USA). An occupation within the exercise and sports science workforce was defined as any role with a focus on sport or exercise (exclusions included “physiotherapist” and “Personal Development, Health and Physical Education teacher”). Multiple experts reviewed the survey questions to ensure face validity. The experts included a representative from ESSA, who was familiar with the topic, as well as an independent expert in question development, who ensured that there were no leading, confusing, or double-barreled questions. A pilot test ($n = 30$) with feedback from participants was implemented to ensure that questions were clear and that the data obtained were in a useful form. Finally, common terms and definitions were used in alignment with the Australian Bureau of Statistics to maximize the opportunity for comparisons. The survey was made available online on March 15, 2017 for a 3-month period.

The data were downloaded from the Qualtrics online survey program into a file to allow the data to be cleaned and analyzed within Microsoft Excel. Descriptive statistics were used to describe the basic features of the data. Categorical survey items were summarized as frequency distributions (i.e. percentage of respondents), while continuous survey items were converted to summary statistics (i.e. means and standard deviations).

RESULTS

The following data relating to occupation distribution are derived from sample (A) as described above. A summary of the occupation distribution of all graduates is illustrated in Figure 1. For these graduates, 70% were employed within the exercise and sports science workforce, and 30% were employed elsewhere. Less than 1% of all graduates were unemployed.

For those working in the exercise and sports science workforce, 57% were employed full time, 25% were employed part time, and 18% were employed on a casual basis. The frequency distribution of full-time employment within each occupation was as follows: AEP (67%), personal trainer/fitness leader (31%), teaching/research academic (61%), occupational rehabilitation consultant (100%), strength and conditioning coach (55%), exercise scientist (40%), sports scientist (75%), where remaining graduates were working part time or casual. A total of 36% of the exercise and sports science workforce had a second job (i.e. with a separate employer) within the workforce. For those working in the exercise and sports science workforce part time or casually, 24% were taking active steps in the last 7 days to look for full-time employment. For those not currently in the exercise and sports science workforce, 17% were taking active steps in the last 7 days to look for a job in the industry.

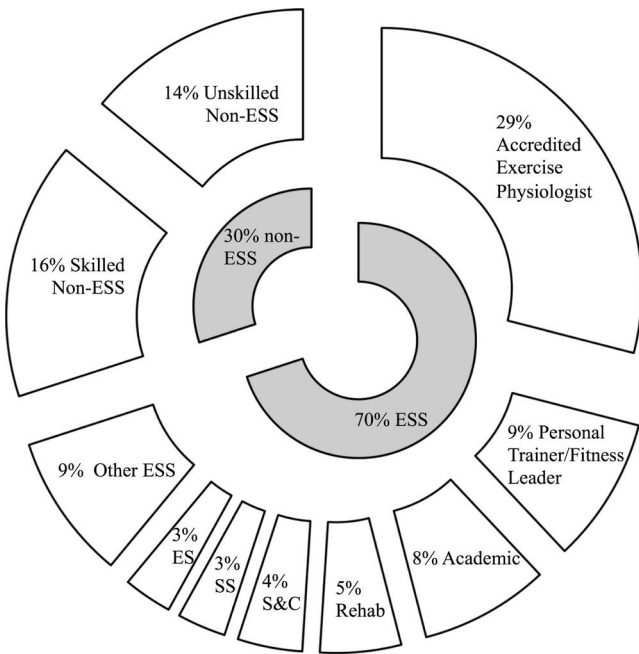


FIGURE 1. The occupation distribution of exercise and sports science graduates. ES = exercise scientist, ESS = exercise and sports science, Rehab = occupational rehabilitation consultant, SS = sports scientist, S&C = strength and conditioning coach.

The most common (mode) gross income for each occupation for full-time employees presented in Australian dollars (AUD; \$1 AUD is ~\$0.75 US) is illustrated in Figure 2. The highest paid occupations in the industry are high-performance managers and academics. While the mode wage of most of the occupations was fairly low, there was at least 1

individual in each job category that reported earning more than \$100,000 AUD gross income.

A total of 41% of graduates had to volunteer in their current role to gain experience (in addition to undergraduate course/degree placement requirements; i.e. 140 hours for undergraduate and 500 hours for AEP) before becoming hired and paid in the exercise and sports science workforce. Volunteering was required for >12 months (18% of workforce), 7 to 12 months (6% of workforce), 2 to 6 months (12% of workforce), or 7 to 31 days (5% of workforce). Those employed in the exercise and sports science workforce overwhelmingly had the ambition to progress their career (87%), while the remainder either had no ambition to progress (3%) or felt neutral about their ambition to progress (10%). The factors (frequency distribution) identified by graduates as enhancing progression included personal skills (31%), gaining experience (20%), networking (20%), volunteering (17%), and professional development (4%). The barriers (frequency distribution) to progression as identified by graduates included a lack of: jobs (29%), recognition (16%), experience (15%), opportunities (13%), and support (7%), as well as low income (6%) and location (5%).

A total of 14% of respondents completed an honors course/degree (i.e. a 1-year or full-time equivalent research project culminating in the submission of a thesis), and 47% of respondents completed a postgraduate course/degree after graduating from their undergraduate course/degree. There were 8% of respondents who had completed another undergraduate course/degree since completing exercise and sports science. A further 30% of graduates were enrolled as a student in further education (e.g. honors, postgraduate, or a different

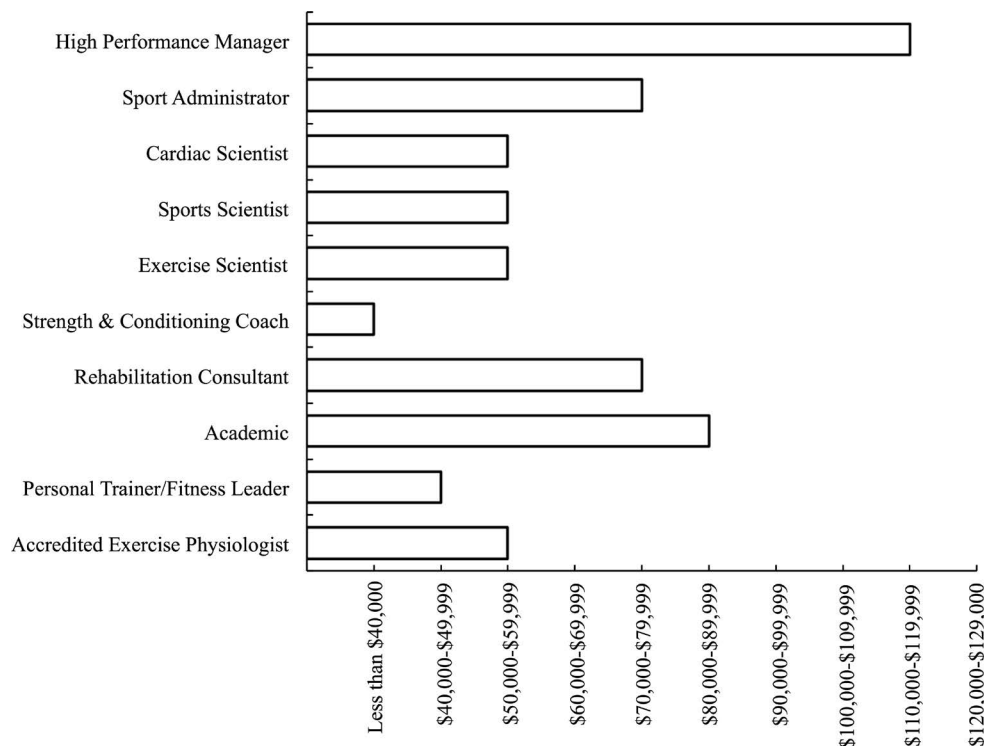


FIGURE 2. The modal gross income by profession for full-time employees.

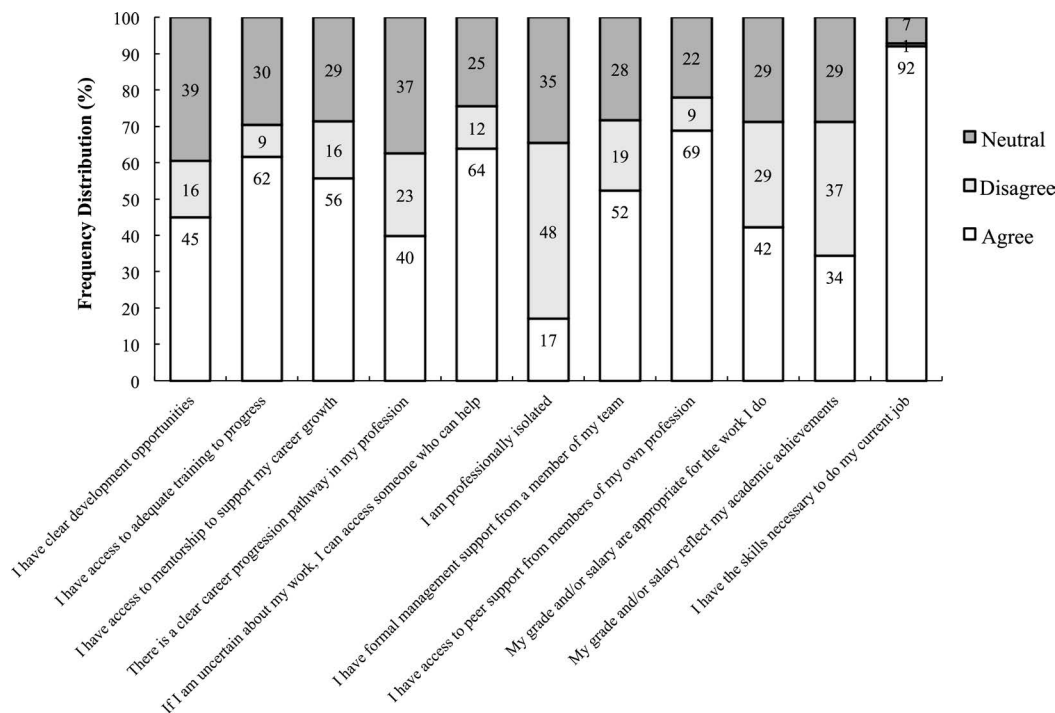


FIGURE 3. Perceptions of development and support in the exercise and sports science workforce.

undergraduate course/degree). A total of 22% had obtained Certificate 3 in fitness and 24% had obtained Certificate 4 in fitness (i.e. equivalent of the American College of Sports Medicine personal trainer certification but in 2 distinct levels; Certificate 3 is a prerequisite for Certificate 4, meaning that, of the graduates who had obtained Certificate 3, only 2% had not obtained Certificate 4). Some of the respondents had also obtained the Australian Strength and Conditioning Association's (ASCA) strength and conditioning coach certifications including Level 1 (15%), Level 2 (4%), and Level 3 (0.1%).

A range of questions were asked related to the development of opportunities and the support available for those in the exercise and sports science workforce. The response distribution is illustrated in Figure 3. Less than 50% of the workforce agrees that they have clear development opportunities or a clear progression pathway in their occupation.

For those in the exercise and sports science workforce, 35% were extremely satisfied, 48% were somewhat satisfied, 8% were neither satisfied nor dissatisfied, 7% were somewhat dissatisfied, and 2% were extremely dissatisfied with their current work situation. A total of 61% of individuals in the workforce have the intention to leave their current role in the next 2 years or less, while 49% of the workforce plans to remain in their current occupation for more than 10 years. The vast majority of individuals in the exercise and sports science workforce have only had 1 to 2 employers (74%), compared to 3 to 4 employers (15%), 5 to 6 employers (4%), or more than 6 employers (1%), while others have always been self-employed (7%).

DISCUSSION

A major finding of the current study was that the majority of graduates (70%) have secured employment in the

exercise and sports science workforce (Figure 1). However, 43% of these graduates are employed on a part-time or casual basis, which is 11% higher than the Australian average for all employees (3). Importantly, approximately one-quarter of these part-time/casual workers are currently seeking full-time work, demonstrating that this is not the preferred type of employment for these graduates. This could be regarded as a large amount, especially when considering that the Australian Bureau of Statistics definition for *seeking employment* is rather strict (i.e. made an attempt within the last 7 days). On a positive note, the reported unemployment rate was very low (<1%), but this may be an underestimation considering that the unemployment rate of exercise and sports science graduates in the UK was 4% in 2015 when 80% of the total graduates were assessed (4), which is also similar to the current Australian unemployment rate for bachelor degree graduates (3.4%) (5). Indeed, low survey penetration of graduates (3%) is a limitation of this finding. It should also be highlighted that 14% of respondents were currently working unskilled jobs, and a similar number of those working outside of the exercise and sports science industry are seeking employment within the industry.

The most common occupation in the exercise and sports science workforce is an AEP. These professionals specialize in clinical exercise interventions for persons with an existing or high risk of developing chronic medical conditions. The AEP is equivalent to the clinical exercise physiologist in the USA and Canada, with the main difference being that Australian AEPs are supported (i.e. allowed to bill for services) through the Medicare public health care system (1,6). The second most common occupation was a personal trainer/fitness leader, even though a

bachelor degree is not required for these positions. Interestingly, another common occupation was a teaching and/or research academic position. With now 32 higher education institutions that offer exercise and sports science courses/degrees across Australia (and several with multiple campus locations), it is not surprising that many graduates are required to teach into these courses/degrees. However, it should also be noted that recruitment of study participants through higher education institutions may have somewhat biased these results toward academics. In comparison with these occupations, very few graduates work as an exercise scientist or sports scientist, which are two of the most heavily promoted careers to undergraduate students.

High paying jobs exist within the exercise and sports science industry, with selected graduates reporting that they were paid more than \$100,000 AUD gross income per annum in all of the major exercise and sports science occupations outlined in the current study. Further, the modal gross income per annum for those who work in academia and high performance management is more than \$80,000 AUD (Figure 2); however, due to the number of graduates that work part-time, casual, and/or unskilled jobs, almost half of the graduates surveyed earned less than \$50,000 AUD gross income per annum. The most common gross salary for full-time AEPs was \$50,000 to 59,999 AUD per annum. This income is similar to tertiary trained full-time clinical exercise physiologists in the USA (\$48,751 USD/\$62,000 AUD) (7) and recent physiotherapy (i.e. physical therapist) graduates in Australia (\$49,730 AUD) (8). In the current study, the most common gross salary for full-time exercise scientists and full-time sports scientists was also \$50,000 to 59,999 AUD per annum. While the AEP would be expected to earn more than the less qualified exercise scientist [in terms of ESSA's accreditation framework (1)], these figures may be a result of this survey capturing a high proportion of self-employed workers and/or workers in the early stages of their careers. The lowest income earners who were employed full time were strength and conditioning coaches, which may be a result of the competitive nature of such positions, leading to high amounts of volunteering and low paying internships within the occupation.

The exercise and sports science workforce is highly educated, as 47% of graduates have completed a postgraduate course/degree and another 30% of graduates were currently enrolled in further education. This is not unexpected considering 2 of the major occupations

identified in this report (AEP and teaching/research academic) generally require a postgraduate qualification (1). Despite these qualifications, 42% of the workforce was required to volunteer in their current role before being paid, and 18% of the workforce volunteered for a period of greater than 12 months before being paid. This volunteering excluded university placements/practicum. Indeed, volunteering was identified as a major factor resulting in progression in the exercise and sports science workforce, alongside gaining experience (which may also include volunteering), networking, and having adequate personal skills. Such findings suggest that the industry is highly competitive, where committed potential employees must differentiate themselves with additional qualifications, skills, and extended volunteering.

Exercise and sports science professionals have a high amount of support in the workplace, as the majority agreed that they have access to direct formal management, peer support, and mentorship. Further, the majority of graduates also stated that they have access to adequate training programs, contradictory to those working in sports science and high performance management as described previously (2). Notwithstanding this training and support, less than half of the workforce has clear development opportunities or a clear progression pathway, which may be another contributor to the relatively low wages in some of the occupations. Despite these challenges, most of the workforce is satisfied with their job and has demonstrated a commitment to their role by working for only 1 to 2 employers. While 61% of individuals plan to leave their current role in the next 3 years, half plan to remain in their occupation and in the exercise and sports science workforce indefinitely, further confirming the high levels of satisfaction in this workforce.

CONCLUSIONS

Despite the success of most graduates in obtaining exercise and sports science employment, many are part time or casual and still seeking full-time work. The most common occupation for graduates is an AEP, whereas very few graduates gain employment as an exercise scientist or sports scientist. The workforce is highly educated and has attributed their progression to volunteering, networking, and their personal skills. While the workforce is well supported, many employees lack development opportunities or a clear progression pathway. Despite these challenges, most of the workforce is satisfied with their job, and many plan to remain in their occupation and in the exercise and sports science industry indefinitely.

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