Working Conditions of Performance Analysts in Oceania

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Form MAS8:

Declaration of Thesis Being Own Work

Otago Polytechnic

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Solemnly and sincerely declare, in relation to the thesis entitled:

The Working Conditions of Performance Analysts in Oceania

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Abstract

Introduction: Performance analysis (PA) has become an essential tool in the sports industry. Current PA research has been completed mainly exploring the application and effectiveness in different sport settings. Despite the continued growth of research on PA there is little known about the working condition of the analysts. Working conditions studies are completed to gain an understanding of the work environment and identify ways to better support practitioners.

Aim: The aim of this research is to understand the working conditions of performance analysts employed in the Oceania region

Method: An online survey distributed to performance analysts in Oceania collected data on PA demographics, job type, remuneration and job satisfaction. Sixty-five performance analysts completed the survey. Data analysis involved descriptive statistics, a T-test and a Mann Whitney U.

Results: The performance analysts were predominantly 25-34-year-old males on $62,000 per annum, with six years of experience. The majority of the participants held a Bachelor's degree or higher qualification and frequently travelled and worked above their agreed hours unpaid. The participants primarily responded 'strongly agree' or 'somewhat agree' to six out of the nine intrinsic work quality questions.

Discussion: The low number of females and older analysts are possibly due to the lack of family-friendly or flexible hours being worked and the travelling often involved. The work demands of a performance analyst could lead to burnout as found in other industries where employees were stressed and working long hours. Overall the analysts felt valued in their workplace and were satisfied with their job.

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To all the performance analysts who took the time to participate in this study. Thank you for taking time out to compete and share the survey. I know how hard you all work and hope the information in this study can be beneficial to you. I wish you all success in your careers.

Finally, to my family and friends especially my parents. Thank you for believing in me and supporting me. I could not have done it without you all by my side.

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Introduction

Performance Analysis

Performance Analysis (PA) has become an essential tool in the sports industry (O'Donoghue, 2014). PA is the process of analysing a game or training to assist coaches and athletes to develop a better understanding of match performance. Analysis of tactics, techniques and movements is completed to improve performance (O'Donoghue, 2014). PA completed by the performance analyst before, after or during a game or training to be used to gain an advantage over opposition and influence game plan. Using either video footage or by watching a live performance a performance analyst identifies different areas of interest. This can be done by clipping footage of notable events from multiple games together or by way of game statistics of key areas of the performance. A Performance analyst then collates the information on the team or opposition before providing coaches with information to better understand what has happened during a game allowing for greater effectiveness when devising methods for optimising performance (M. Hughes & Franks, 2015).

Sport is becoming more competitive, with little separating top teams. Performance analysis explores ways to gain an edge over the competition and assist in teams performing at their peak (M. Hughes & Franks, 2004; O'Donoghue, 2014). It is completed to assist coaches and athletes in their decision-making during games or training. An analysts role can frequently be time-consuming with them tasked to watch and analyse multiple games, often under time constraints, to be able to provide the coaches and athletes with the desired information. Performance analysis is primarily observational and commonly involves notational or biomechanical analysis to improve sports performance (M. D. Hughes & Bartlett, 2002). Both these areas of analysis (notational and biomechanical) use key indicators to highlight the positive and negative points of the match to coaches and athletes to improve performance. Performance indicators are variables that define key aspects of performance relating to successful outcomes (M. D. Hughes & Bartlett, 2002)

Types of Performance Analysis

Notational analysis is the simple recording of events, traditionally through means of pencil and paper, but is now commonly completed using apps, tablets and laptops. Notational analysis can be completed live (while the game is being played) or post-game. The recording of the key instances (e.g. intercepts in netball) can be a statistics, a snippet of video footage or a mixture of both (M. Hughes & Franks, 2004). Identifying both successful and unsuccessful instances in the game makes it far easier for the coaches and athletes to review. For example, examining types of passes and possession in a game of football (M. D. Hughes & Bartlett, 2002). This can also be done while investigating an upcoming opposition to identify areas of weakness or patterns of play that could be targeted to gain an advantage (O'Donoghue, 2014). Collected statistics on performance indicators (e.g. tackles completed in rugby) from a game provides a comparison between each match to see how a team is improving or not. It can also be used to track how one team compares to an opposition team, for example, the percentage of lineouts won in a game of rugby. Collating statistics from multiple matches is also useful for analysing trends across the season (M. Hughes & Franks, 2004).

Biomechanical analysis uses video footage and video-based technology to assess details of each joint and body segment during specific movement to improve sporting performance (M. Hughes & Franks, 2015). Biomechanical analysis examines how an athlete performs an individual skill (O'Donoghue, 2014). The Performance analysts assess the biomechanics of the skill and reports back to the coaches where corrections could help an athlete achieve better success and/or reduce the risk of injury. For example, cricket fast bowlers technique could be analysed by investigating performance indicators of the skills such as ball release and run-up speed. By identifying a problem early, it can be corrected by the athlete or coaches, leading to more accurate bowling and helping to reduce lower back and shoulder injuries which tend to occur if bowling technique is incorrect (M. D. Hughes & Bartlett, 2002).

Working Conditions of a Performance Analyst

Despite PA becoming an essential performance tool in the sporting industry, there has been little research on the working conditions of a performance analyst. The term 'working conditions' refers to the working environment and any factors relating to work such as hours, responsibilities and remuneration (Maestas, Mullen, Powell, Wenger, & Wachter, 2016). Working conditions in the high performance and sport science industry are dominated by males under 35 years of age with almost half of them earning between $50,000 and $99,9999 annually (Dwyer, Bellesini, Gastin, Kremer, & Dawson, 2019). Similarly, working conditions of the general sporting industry workforce found the average employees to be 30-year-old males with an annual salaries ranging from NZD$10,000 to $102,000 (Bentzen, Lemyre, & Kenttä, 2016; Bernabe, Campos-Izquierdo, & Gonzalez, 2016; Mafini, Surujlal, & Dhurup, 2011; Massey, Schwind, Andrews, & Maneval, 2009; Massey & Vincent, 2013; Massey, Vincent, & Maneval, 2004; York, Gastin, & Dawson, 2014). It is reported that sports-related employees often work unpredictable long and varied hours; have large workloads and are required to travel frequently(Massey et al., 2004; York et al., 2014). One study found that despite the long hours and being frustrated or very dissatisfied with pay, practitioners were still satisfied with their job and workplace (Massey et al., 2004; York et al., 2014). One study that included Performance analysts found typically work between 6-10 hours per week over their contracted hours (Dwyer et al., 2019) and present similarities to other working condition aspects (e.g. male-dominated) in the high performance and sport science industry (Massey et al., 2009; Massey et al., 2004; York et al., 2014)

Outside of the sporting industry studies investigating working conditions have been conducted on a national scale (D'Souza, Strazdins, Lim, Broom, & Rodgers, 2003; Maestas et al., 2016; Norlund et al., 2010) or focusing solely on one industry such as healthcare or education (McGowan, Humphries, Burke, Conry, & Morgan, 2013; Pedersen & West, 2017; Schreuder, Roelen, Koopmans, & Groothoff, 2008). A large focus of these studies has been around improving the health of employees and examining mental health or burnout associated

with poor working conditions such as long or varying hours (D'Souza et al., 2003; Norlund et al., 2010). Another common aim of working conditions studies has been to address the poor retention rates of certain industries like teaching (Pedersen & West, 2017). The working conditions found in this study conducted by Pedersen & West (2017) were similar to those found in the sporting industry with employees working long hours, having large workloads, and low pay satisfaction (McGowan et al., 2013; Pedersen & West, 2017; Schreuder et al., 2008).

Positive work environments identified in other industries came from the workplaces that supported the employees, encouraged autonomy and made the employees feel valued (D'Souza et al., 2003; Strazdins et al., 2011). Working conditions found to have a negative impact on the employee have included things such as unrealistic workloads, long hours and low pay satisfaction (McGowan et al., 2013; Raedeke, Granzyk, & Warren, 2000; Schreuder et al., 2008). Previous studies in other industries have found a relationship between burnout and high work demand, including working long hours and unrealistic workloads (McGowan et al., 2013; Norlund et al., 2010). Burnout can lead to fatigue, cognitive weariness, sleep disturbances, depression and anxiety (Norlund et al., 2010) (Bentzen et al., 2016). When burnout has occurred, it has led to a decrease in work performance or absence due to health problems.

Aim and Purpose

Presently there is little known about the working conditions of performance analysts with assumptions being drawn from other areas of the sporting industry, and literature exploring the application of PA. The aim of this research is to understand the working conditions of performance analysts employed in the Oceania region

Method

Design

Otago Polytechnic ethics committee approved this study's procedures (reference: 786). The Treaty of Waitangi was taken into consideration when undertaking the research with consultation from local Maori.

An online survey (Qualtrics, Provo, Utah, USA) was distributed to performance analysts across Oceania, with the region encompassing Australia, New Zealand and the Pacific Islands The survey was created by two of the researches by adapting questions from other working conditions studies to suit the target respondents (Dwyer et al., 2019; Maestas et al., 2016). The survey was piloted using performance analysis students associated with the institute. A pilot was done to test the survey worked correctly and that it was appropriate for the target audience. No other validity tests were completed. An online format was favoured due to the large geographical area of Oceania and ease of distribution. The survey was conducted in 2018 between October 28th and December 20th. The survey collected data on four main areas: demographics, job type, remuneration, and job satisfaction.

Participants

Participants for this study were recruited with the assistance of the International Society of Performance Analysis of Sport (ISPAS), using the distribution list of the Oceania subcommittee. Snowball recruitment was used to recruit other analysts with the study participants sharing the link with other potential participants. The survey link also shared on social media. The inclusion requirements of the study were for participants to have been working in performance or sports analysis for at least six months and working in the Oceania region. Participants were given the opportunity to go in the draw to win one of three gift vouchers as an incentive for completing the survey. Participants were required to be practising in Oceania with at least six months experience, with 65 participants meeting the inclusion

criteria and completing the survey. A response rate was unable to be determined for this study due to using snowball recruitment.

Data Analysis

The survey data was anonymised to protect the participant's privacy. Data was cleaned in Excel to remove uncompleted responses and exclude responses from PA's outside of the Oceania region. All salary figures for converted to NZD based on the currency indicated by the participants. The employment types were sorted into three categories; permanent (full and part-time), self-employed, and 'other' before the data was imported into IBM SPSS Statistics for Windows, version 25, (IBM Corp. Armonk, N.Y., USA). Descriptive statistics were completed. An independent samples T-test was then completed on the numerical data, comparing the means of the permanent contact with self-employed and then permanent versus other. For the ordinal data, a Mann Whitney U test was completed to compare the medians of each employment type. The significance level was set at $p < 0.05$.

A Chi-Squared test was planned if adequate samples were available for categorical data but were discarded due to low sample numbers, with some responses having a frequency of less than five in each cell.

Results

Demographics

Sixty-five performance analysts from across Oceania completed the survey. Initial results identified the Performance Analyst responding to this survey were predominantly 25-34-year-old Australian males (n=48) on an average salary of $62,000 per annum, with an average of six years industry-specific experience (Table 1). Females represented 26% (n=17) of respondents and were paid an average of $47,000 per annum. There was no significant difference between pay and gender. (T=1.535, P= 0.131). The majority of participants held a bachelor's degree or higher qualification while 18.5% (n=12) held no qualification.

Analysts frequently worked above their agreed hours with PA's in permanent employment working above their agreed hours per month significantly more than the self-employed PA's (T= 2.982, P=0.008). There was a significant difference between years of PA experience for the permanent and other employment types (T=2.303, P=0.025; Table 2).

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Workplace

Almost half (48.3%) of the respondents were working with full-time professional athletes, most commonly working in Rugby Union (26.3%), with signed contracts for all jobs (73.8%). 7.7% (n=5) were working without a contract.

Performance analysts were most commonly employed on full times hours with an average salary of $61,856 and no additional pay for working overtime. The average salary for analysts in 'other' employment type group was lower but there were no significant differences between any of the groups. It was common for performance analysts to receive some sort of remuneration during their employment.

On average performance analyst were required to travel six days per month. While the permanent employment group travelled more, there were no significant differences between them and either of the other two employment groups.

Job Satisfaction

The results of the current study found that job satisfaction amongst performance analyst was high with "strongly agree" or "somewhat agree" being the most common answers for the job satisfaction questions. There were significant differences between the permanent and other employment types in how they felt their work was valued by the coaches they were working with (U=280, P=0.033). On average, participants indicated they were moderately satisfied with their salary. While the self-employed were most commonly slightly dissatisfied with their pay satisfaction there was no significant difference between the different employment types.

Table 1: Comparison of Mean and Mode of the Working Conditions Across the Three Employment Types

	Comparison of Employment Types			
	Permanent = 35	Other = 23	Self-Employed = 7	All = 65
Years in PA**	7 (5.85)	4 (3.72)	7 (6.04)	6 (5.32)
Age Range	25-34	25-34	25-34	25-34
Gender	Male	Male	Male	Male
Ethnicity	Australian	Australian	NZ European	Australian
Level	Full-Time Professional	Full-Time Professional	Full-Time Professional	Full-Time Professional
Sports	Rugby Union	Australian Rules	Rugby Union	Rugby Union
Location Based	New Zealand	Australia	New Zealand	New Zealand
Number of Jobs**	2 (0.92)	1 (0.57)	2 (1.16)	2 (0.85)
Signed Contracts	Yes	Yes	Yes	Yes
Hours	Full Time	Part-Time	Part-Time	Full Time
Preferred Hours	Full Time	Full Time	Full Time	Full Time
Days Travelling P/M**	7 (6.16)	4 (8.47)	5 (5.56)	6 (7)
Above Agreed Hours P/M**	12 (10.31)	11 (11.92)	5 (5.06)	11 (10.64)
10+ HR Days P/M**	10 (8.48)	8 (7.31)	8 (9.06)	9 (8.09)
Salary**	69,297 (43,902)	50,913 (36,920)	51,286 (28,877)	61,856 (40,790)
Paid Overtime	No	No	No	No
Benefits	Yes	Yes	Yes	Yes
Qualification	Bachelor	Bachelor	Bachelor	Bachelor
Accreditation	No	No	Yes/No*	No

*Equal number of responses
**Mean (Standard Deviation) used for numerical values

Table 2: T-Test Comparison of Working Conditions Between Employment Types

	Permanent vs Other			Permanent vs Self-Employed		
	t Statistic	p-Value	95% CI	t Statistic	p-Value	95% CI
Years' Experience	2.303	0.025	0.38 - 5.41	0.023	0.981	-4.84 - 4.98
Number of Current Jobs	0.849	0.399	-0.23 - 0.56	-1.224	0.228	-1.29 - 0.32
Days Travelling P/M	1.230	0.224	-1.149 - 6.21	0.460	0.648	-3.92 - 6.24
Over Hours P/M	0.411	0.682	-4.69 - 7.11	2.982	0.008	2.28 - 13.15
10+ Hour Days P/M	1.027	0.309	-2.11 - 6.54	0.588	0.560	-5.09 - 9.26
Salary	1.404	0.167	-7995 - 44762	1.032	0.309	-17357 - 53379

P/M = Per Month

Table 3: Mann-Whitney U Comparison of Intrinsic Work Quality Between Employment Types

	Permanent v Other		Permanent v Self-Employed	
	U-Value	p-Value	U-Value	p-Value
Pay Satisfaction	285.50	0.057	98.00	0.405
Feel Valued by Organisation	361.50	0.505	113.50	0.755
Feel Valued by Coaches	280.00	0.033	117.00	0.778
Feel Valued by Athletes	402.00	1.000	105.50	0.590
Feel Valued by Support Staff	397.50	0.936	99.00	0.454
Feel Valued by Manager	394.50	0.898	119.00	0.923
Future Employment Opportunities	325.00	0.208	86.00	0.222
Career Development Opportunities	330.00	0.241	105.50	0.618
Future Working in PA	343.00	0.335	112.00	0.732

When exploring how valued the participants felt their work was by athletes and support staff the most common answer across all three groups was 'somewhat agree'. The remaining work valued questions also received either a 'strongly agree' or 'somewhat agree' from each of the groups. The only answer that fell outside this was from the self-employed group, who were 'neutral' on whether their work was valued by their organisation.

Thirty-two (49.2%) participants somewhat or strongly agreed their current employment would lead to future employment within the same organisation. When asked about their future in the PA industry 76.9% of participants answered across one of the three 'agree' responses. Only 15.4% indicated they would not be employed in the PA industry in the next five years.

Discussion

The aim of this research is to understand the working conditions of Performance Analysts employed in the Oceania region. The key findings of this study found the performance analyst workforce to be predominantly 25-34-year-old males on $62,000 per annum, with an average of six years of experience. The permanent employment group were found to have more years of experience than those in the other employment group. They also typically hold a bachelor's degree or higher qualification and frequently worked above their agreed hours unpaid. The results from this study are similar to that of other sporting industry studies (Bentzen et al., 2016; Dwyer et al., 2019; Massey et al., 2009; Massey et al., 2004; York et al., 2014)

While the current was not focused-on gender a key finding from the results was the low number of females in the PA industry, which is consistent with the literature on Australian coaches and sports scientists and other studies conducted further afield (Allen & Shaw, 2013; Dwyer et al., 2019; Massey & Vincent, 2013). It was identified in one study on the career experiences of Australian sports scientists that a reason behind for few females in the industry was that employment conditions are not "family-friendly" and often lack flexibility which could also be a factor affecting older performance analysts (Dwyer et al., 2019). Another study identified that women's sporting organisations were more considerate when it came to accommodating family needs but noted in mixed organisations there was still some gender bias present (Allen & Shaw, 2013). An American study found that the industry was changing with the number of females involved starting to increase (Massey & Vincent, 2013). This could be a possibility with the performance analysis industry.

The current study found that on average, PA's in Oceania have less experience in working sport sciences than strength and conditioning coaches (Massey et al., 2009; Massey et al., 2004). American strength and conditioning coaches were found to have an average of 12.6 years for division I-A (Massey et al., 2004) and range of 6-10 years for division II (Massey et al., 2009) collegiate athletic programmes. In Australia, the average years of employment for

coaches, strength and conditioning coaches and sports scientists ranged from 9-13 years (Dwyer et al., 2019; York et al., 2014). The results of the current study had average years of experience at 6 years, which is less than the average for other areas of the sporting industry. A possible reason for this is that PA is a young industry compared to coaching therefore there are not as many long-serving practitioners in Oceania at this stage. There was a significant difference in the years of PA experience between permanent employees and others. This result was expected as the other group included interns who were most likely attempting to enter the industry and start their careers by gaining industry experience.

Previous studies in other industries have found a relationship between burnout and high work demand, including working long hours (Norlund et al., 2010; McGowan et al., 2013). The findings of the current study have found that analysts are frequently working overtime and travelling for work. In addition to working overtime analysts are also working an average of two jobs which is likely to increase their workload. (Raedeke et al., 2000) investigated burnout in coaches and found similar results, with burnout occurring in coaches who frequently worked overtime and were put under pressure to get the team to perform. It was found that prolonged burnout affected a coach's productivity and effectiveness, in turn having an impact on the performance on the team (Raedeke et al., 2000). The environments coaches and analysts are working in in the two studies are similar, with long hours and high stress. The work demands of analysts are of potential concern with employee burnout potentially having an impact on the performance of an organisation.

Job satisfaction has been investigated in the sporting industry exploring strength and conditioning coaches and sports instructors. (Massey et al., 2009) found job satisfaction was substantial despite the strength and conditioning coaches having some frustrations around low pay, high stress and desire to progress their career. It was established, during the interview phase of Massey et al's (2009) study, that the strength and conditioning coaches felt their job had a positive contribution to their life, with a lot of comments also centring around the coaches love of the job. A study exploring sport and physical activity instructors had similar findings,

with satisfaction coming from the job they were doing and feeling valued within their organisation (Bernabe et al., 2016). The performance analysts in this study were satisfied with their employment and felt they were valued within the organisation despite having high work demands. The satisfaction of the analysts could be due to similar factors as the strength and conditioning coaches and sports instructors, with the positives of the job outweighing the negatives.

A limitation of the current study is the survey used to collect data. While a pilot study was completed to test that the survey worked and was suitable for the target audience there were no tests completed on the data output from the survey. This limited the information that was able to be extracted from the survey data with data from some questions becoming unusable. Another limitation of this study is the sample size. The number of participants in the study restricted the type of statistical tests that were able to be completed on the data with a Chi-Squared test originally planned but later discarded. There is also a lack of information available on the number of performance analysts currently practising in Oceania making it difficult to determine how much of the population is reflected in the study. Another factor of note was the lack of responses from the Pacific Islands which could be due to distribution methods or there could be a small number of analysts working in the Pacific Islands but again there is a lack of information currently available surrounding this.

A strength of the current study is that this is the first study to investigate the working conditions of performance analysts in Oceania. This research will provide the governing bodies and employers with valuable information on the performance analyst workforce. It will also be useful for students as they transition to the workforce by providing them with an insight into what they can expect when working in the industry. Another strength of the current research was the use of snowball recruitment to limit potential bias that may have occurred from only surveying performance analysts on the ISPAS distribution list.

Practical Applications

The aim of this study was to understand the working conditions of performance analysts employed in the Oceania region. This study provides initial data on the working conditions of performance analysts that can be used for further research. It is also hoped it will provide valuable insight for governing bodies, educational institutes and employers to help them provide current and future performance analysts with support in the workplace. In addition, this research could be used to inform professional development and help practitioners make informed career decisions.

Conclusion

The results of the current study represent the first performance analysis force working conditions study in Oceania. By investigating the working environment, it will provide the knowledge base needed to better support current practitioners in their future employment.

This study found the performance analyst workforce to be predominantly 25-34-year-old males earning on average $62,000 per annum, with an average of six years of experience. They also typically hold a bachelor's degree or higher qualification and frequently worked above their agreed hours unpaid. The issue of the work demands is something that potentially could be addressed before it becomes a bigger issue with burnout and poor retention of employees a possibility, as seen in the coaching industry. Further investigations on a larger scale and at regular intervals examining the working conditions to provide a more comprehensive picture and monitor how the industry is changing over time would be beneficial. This will help to support the ongoing development and education of current and future performance analysts.

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Appendix A: Performance Analysis Working Conditions Survey

PA Work Conditions Survey

Start of Block: Partners

Welcome to the Oceania Performance Analyst Work Conditions Survey.
The aim of this research is to understand the working life of people currently employed within the field of performance analysis in the Oceania region (New Zealand, Australia and The Pacific Islands).
On average, this survey takes between 10-12 minutes to complete.

This research project is a collaboration between The Institute of Sport, Exercise & Health (Otago Polytechnic) and The Sports Performance Research Institute (Auckland University of Technology).

AUT SPORTS PERFORMANCE RESEARCH INSTITUTE NEW ZEALAND

This research project is supported by the International Society for Performance Analysis in Sport - Oceania (www.ispas.org), a sub-committee of ISPAS established in 2017 to provide guidance and support for analysis professionals in the Oceania region.

ISPAS
INTERNATIONAL SOCIETY OF PERFORMANCE ANALYSIS OF SPORT

End of Block: Partners

Start of Block: Consent

Consent to participate

By completing the survey, you are providing us with consent to use your responses in the analysis and presentation of the research. Once you submit the completed form you will not be able to withdraw it.

Assurances of anonymity You will not be personally identified in any reports published as a result of the survey. Your comments and feedback are completely anonymous. The email address that you may choose to give us will not be linked to the results. Use of the data Following completion of this research, we may submit reports to sport science journals and conferences in New Zealand and internationally.

Consent statement: I have read the material above and I freely and voluntarily consent to participate in this study.

- ○ Yes I consent (1)
- ○ No, I do not consent (2)

Skip To: End of Survey If Consent statement: I have read the material above and I freely and voluntarily consent to party... = No, I do not consent

End of Block: Consent

Start of Block: QUALIFIER

In this survey, the term 'Performance Analyst' is used to denote a person engaged in the provision of analysis support within a sporting context. This role:
(i) often involves activities such as capturing competition and training sessions, coding, statistical and video analysis, team and opposition analysis, delivery of feedback to staff and players and the creation of reports on various aspect of performance. **Using this definition, have you been working as a Performance Analyst within the last 12 months?**

- ○ Yes (1)
- ○ No (3)

Skip To: End of Survey If In this survey, the term 'Performance Analyst' is used to denote a person engaged in the provis... = No

Display This Question:

If In this survey, the term 'Performance Analyst' is used to denote a person engaged in the provis... = Yes

How long have you been working as a Performance Analyst? Take into account all the of time you have been working in this role. Please add a number in years below:

_____

End of Block: QUALIFIER

Start of Block: DEMOGRAPHICS

Q68 This section covers demographic questions.

Name:

_____

Email address:

_____

Age: What is your age?

- ○ 18-24 (1)
- ○ 25-34 (2)
- ○ 35-44 (3)
- ○ 45-54 (4)
- ○ 55-64 (5)
- ○ 65 or above (6)

Gender: What is your gender?

- ○ Male (1)
- ○ Female (2)
- ○ other (specify) (3) _____

X→

Ethnicity: What is your ethnicity?

Tick as many boxes as you feel apply to you

- ☐ New Zealand European / Pakeha (1)
- ☐ Australian (2)
- ☐ New Zealand Maori (3)
- ☐ Pasifika (please specify) (4) _____
- ☐ Indigenous Australian (5)
- ☐ Torres Strait Islander (please state): (6) _____
- ☐ British (7)
- ☐ Asian (8)
- ☐ Indian (9)
- ☐ Other (please specify) (10) _____

End of Block: DEMOGRAPHICS

Start of Block: SPORTS

Q69 The following questions relate to the sports you work with as an Analyst.

What level best describes the level of athlete you primarily work with in your role(s)?

- [ ] Full-time professional (1)
- [ ] Semi-professional (2)
- [ ] Olympic / Paralympic (3)
- [ ] National (4)
- [ ] Amateur (5)
- [ ] Other (Please specify): (6) _____

Which sport are you currently employed/contracted to work with?

Please select all that apply to you.

- [ ] Rugby Union (1)
- [ ] Rugby league (2)
- [ ] Soccer (3)
- [ ] Netball (4)
- [ ] Australian Rules Football (5)
- [ ] Olympic / Paralympic sport (please specify) (6) _____
- [ ] Other sport(s) (please specify) (7) _____

Where are you based?

- ○ New Zealand (1)
- ○ Australia (2)
- ○ Pasifika (please specify) (3) _____
- ○ Other (please specify) (4) _____

End of Block: SPORTS

Start of Block: CURRENT ROLE

The following questions ask about your current Analyst role, or roles.

How many organisations are you currently contracted/employed to provide analysis support?

- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ More than 3 (4)

Display This Question:

If How many organisations are you currently contracted/employed to provide analysis support? = 1

You said you were working for one employer. Please state the name of this employer.

- ○ Employer (1) _____

Display This Question:

If How many organisations are you currently contracted/employed to provide analysis support? != 1

You said you were working for more than one employer. Please state the name of these employers.

- ☐ Employer (1) _____
- ☐ Employer (2) _____
- ☐ Employer (3) _____
- ☐ Employer (4) _____
- ☐ Employer (5) _____

End of Block: CURRENT ROLE

Start of Block: CONTRACT

X→

As a Performance Analyst, are you employed…

- ○ Permanent (full-time or equivalent) (1)
- ○ Permanent (part-time) (2)
- ○ Fixed Term (3)
- ○ Casual / Hourly (4)
- ○ Intern - paid (5)
- ○ Intern – unpaid (6)
- ○ Self-Employed / Contractor (7)
- ○ Other (please specify) (8) _____

Do you have an employment contract or a signed agreement with your current employer(s)?

- ○ Yes, for all roles (1)
- ○ Yes, but for not for all roles (2)
- ○ No (3)

End of Block: CONTRACT

Start of Block: WORK HOURS

The following questions ask about the hours you work and your contract. We acknowledge that these are not fixed and can be changeable. Please estimate your answers based on your current role(s).

In total, how many hours are you currently employed/contracted to work in your analyst role?

- ○ Full-time (30 or more hours per week) (1)
- ○ Part-time (less than 30 hours per week) (2)

Would you prefer to work as an Analyst ...?

- ○ Full-time (1)
- ○ More hours but not full-time (2)
- ○ The same number of hours (3)
- ○ Less hours (4)
- ○ Don't Know / no opinion (5)

End of Block: WORK HOURS

Start of Block: ACTUAL WORK

X→

How many days per month on average do you spend doing the following activities in your role:

☐ Travelling away from home (1)
_____

☐ Working over and above your agreed / contracted hours? (2)
_____

☐ Working 10 hours or more a day? (4)
_____

End of Block: ACTUAL WORK

Start of Block: REMUNERATION

The following questions ask about your remuneration (or pay). We acknowledge that you may be employed by a number of organisations. Please estimate your answers based on your current role or roles.

The country / currency I am paid in is:

_____

Salary: What is your gross (before tax) annual salary from your Analysis work? If you are contractor, can you please estimate your fee based on one of the options below.

○ Annual salary (1) _____

○ If you do not know your gross (before tax) annual salary, what is your weekly (before tax) wage rate? (2) _____

○ If you do not know your gross (before tax) annual salary what is your hourly (before tax) wage rate? (3) _____

X→

Do you get paid for working overtime?

○ Yes, at the same rate I am paid (1)

○ Yes, at a higher rate of pay (2)

○ No, I do not get paid extra for working overtime (3)

End of Block: REMUNERATION

Start of Block: BENEFITS

Do you receive other benefits as part of your employment?

○ Yes (1)

○ No (2)

Display This Question:

If Do you receive other benefits as part of your employment? = Yes

X→

If Yes, which benefits do you receive? Do not tick items that are considered essential to your job role.

- ☐ Medical insurance (1)
- ☐ Accreditation membership fees (2)
- ☐ Uniform (3)
- ☐ Professional development allowance (4)
- ☐ Discounts/reduced clinical fees (5)
- ☐ Performance-related bonuses (6)
- ☐ Tickets (7)
- ☐ Vehicle (8)
- ☐ Accommodation (9)
- ☐ Computer/tablet (10)
- ☐ Phone / Phone calls (11)
- ☐ Other (please specify) (12) _____

End of Block: BENEFITS

Start of Block: COMMENT - remuneration

Overall, how satisfied are you with the total remuneration your receive for your analysis work?

- ○ Extremely satisfied (11)
- ○ Moderately satisfied (12)
- ○ Slightly satisfied (13)
- ○ Neither satisfied nor dissatisfied (14)
- ○ Slightly dissatisfied (15)
- ○ Moderately dissatisfied (16)
- ○ Extremely dissatisfied (17)

End of Block: COMMENT - remuneration

Start of Block: Intrinsic Work Quality

The following questions are related to your intrinsic work quality and the training / education of performance analysts.

To what extent do you agree with the following statements?

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I feel my work is valued by the organisation / organisations that I work for (1)	○	○	○	○	○
I feel my work is valued by the coach(es) I directly work with (2)	○	○	○	○	○
I feel my work is valued by the athletes I directly work with (3)	○	○	○	○	○
I feel my work is valued by the other members of the support team I work with (4)	○	○	○	○	○
I feel I am well supported by my immediate line manager (8)	○	○	○	○	○
I feel my current employer offers good opportunity for further employment (5)	○	○	○	○	○
I feel the analysis field offers good opportunity for career development (6)	○	○	○	○	○

End of Block: Intrinsic Work Quality

Start of Block: TITLE

Professional Title: What is your preferred professional title(s)?

Please select as many answers as apply to you.

- [ ] Performance Analyst (2)
- [ ] Sports Analyst (1)
- [ ] Coach Analyst (3)
- [ ] Biomechanist (4)
- [ ] Technician (5)
- [ ] Specialist coach (6)
- [ ] Coach (7)
- [ ] Sport Scientist (8)
- [ ] Other (please specify) (10)

_____

End of Block: TITLE

Start of Block: EDUCATION / TRAINING

Have you completed formal educational qualifications?

If yes, please state name of qualification and level achieved.

- ○ Yes, in a related subject area (1) _____
- ○ Yes, but in an unrelated subject area (2) _____
- ○ No (3)

X→

Do you currently hold or are working towards a recognised industry accreditation relevant to this profession? If yes, please state qualification provider and level achieved/working towards.

- ○ Yes, I have achieved... (1) _____
- ○ No, but I am currently working towards... (2) _____
- ○ No (3)

Display This Question:

If Do you currently hold or are working towards a recognised industry accreditation relevant to this... = Yes, I have achieved...

And Do you currently hold or are working towards a recognised industry accreditation relevant to this... = No, but I am currently working towards...

X→

I hold / am working towards this qualification because...

- ○ My employers required this (1)
- ○ It is the gold standard in my field (2)
- ○ It was part of another qualification I completed (3)
- ○ etc... (4)

Display This Question:

If Do you currently hold or are working towards a recognised industry accreditation relevant to this... = No

X→

If not, why not?

You can select as many reasons as you want from this list

- ☐ Not aware of any recognised industry accreditation in this field (1)
- ☐ Not relevant / Don't see the value in holding an accreditation (2)
- ☐ Personal cost/employer won't pay (3)
- ☐ No time (4)
- ☐ Employer does not require formal accreditation for employment (5)
- ☐ I don't have the skills / qualifications required (8)
- ☐ Other (please specify) (7)

End of Block: EDUCATION / TRAINING

Start of Block: SKILLS

Considering the skills you were trained for, are you satisfied with the level of skills you are using in your current role?

- ○ Yes, I am happy and satisfied (1)
- ○ Yes, although I'd like to do more (2)
- ○ No, I rarely get to do advanced skills that I was trained for (3)
- ○ No, I am asked to perform skills I am not adequately trained for (4)
- ○ Other (please specify) (5) _____

End of Block: SKILLS

Start of Block: FUTURE

Finally, to what extent do you agree with the following statement:
I see myself working in this profession in 5 years' time

- ○ Strongly agree (11)
- ○ Agree (12)
- ○ Somewhat agree (13)
- ○ Neither agree nor disagree (14)
- ○ Somewhat disagree (15)
- ○ Disagree (16)
- ○ Strongly disagree (17)

End of Block: FUTURE

Start of Block: END OF SURVEY

Thank you for your responses.

The researchers are planning to conduct a small number of follow-up interviews with

respondents over the coming six months.

Would you be willing to participate in such a follow-up Interview?

- ○ Yes (23)
- ○ No (24)

Would you like to be entered into the draw to win one of three $100 NZD gift vouchers?

- ○ Yes (1)
- ○ No (2)

End of Block: END OF SURVEY

Appendix B: Ethics Approval

18 February 2019

Simon Middlemas

c/- Otago Institute of Sport

Private Bag 1910

Dunedin 9054

Dear Simon

Re: Ethics Approval for project amendment

Reference Number: 786

Application Title: *An examination of the Working Conditions of Oceania Performance Analysts*

Thank you for notifying Ethics Committee of amendments to this project.

This letter is to advise that the following have been approved:

1. Redistribution to a sub-sample of the original project
2. Inclusion of new researchers on the project: Bennett Jones, Leaha Dickey, Codi Ramsey, Matt Blair.

We wish you well with your work and remind you that at the conclusion of your research to send a brief report with findings and/or conclusions to the Ethics Committee.

All correspondence regarding this application should include the project title and reference number assigned to it.

This protocol covers the following researchers: Simon Middlemas, Bennett Jones, Leaha Dickey, Codi Ramsey, Matt Blair.

Regards

Dr. Liz Ditzel

Chair, Otago Polytechnic Research Ethics Committee

Otago Polytechnic

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Appendix C: Survey Response Count

Table 4: Response Count

	Permanent (n=35)	Other (n= 23)	Self-Employed (n=7)	All (n=65)
Age range				
18-24	7	5	0	12
25-34	15	10	5	30
35-44	7	6	0	13
45-54	4	2	2	8
55+	2	0	0	2
Gender				
Male	28	15	5	48
Female	7	8	2	17
Ethnicity*				
NZ Euro	15	3	5	23
Australian	18	14	2	34
NZ Maori	1	1	0	2
Pasifika	3	0	0	3
Torres Strait Islander	1	5	0	6
British	1	6	1	8
Asian	0	1	0	1
Indian	1	0	0	1
Other	0	3	0	3
Level of athletes*				
Full-Time Professional	26	14	3	43
Semi-Professional	9	11	2	22
Olympic/Paralympic	4	4	0	8
National	4	4	1	9
Amateur	2	2	1	5
Other	0	2	0	2
Sports*				
Rugby Union	13	4	3	20
Rugby League	3	1	0	4
Soccer	6	1	0	7
Netball	5	2	1	8
Aussie Rules	8	8	1	17
Olympic/Paralympic	5	1	1	7
Other	4	8	1	13
Location Based				
New Zealand	20	7	6	33
Australia	14	16	1	31
Pasifika	1	0	0	1
Signed Contracts				
Yes	31	12	5	48
Yes, Not for all	4	7	1	12
No	0	4	1	5
Hours				
Full Time	30	10	3	43
Part-Time	5	13	4	22
Preferred Hours				
Full Time	24	15	4	43
More But Not Full Time	1	3	0	4
Same	5	2	1	8
Less	3	2	2	7
Don’t Know	1	1	0	2

Currency				
NZD	19	4	6	29
AUD	14	14	1	29
TP	1	0	0	1
Not Stated	1	5	0	6
Paid Overtime				
Yes: same rate	3	1	1	5
Yes: higher rate	0	0	0	0
No	31	21	6	58
No Answer	1	1	0	2
Benefits				
Yes	25	15	4	44
No	10	8	3	21
Pay Satisfaction				
Extremely Satisfied	4	1	0	5
Moderately Satisfied	13	5	2	20
Slightly Satisfied	4	5	1	10
Neither	3	2	0	5
Slightly Dissatisfied	3	0	3	6
Moderately Dissatisfied	7	5	1	13
Extremely Dissatisfied	1	5	0	6
W/V Organisation				
Strongly Disagree	0	1	0	1
Somewhat Disagree	6	4	0	10
Neutral	5	3	3	11
Somewhat Agree	10	8	2	20
Strongly Agree	14	7	2	23
W/V Coaches				
Strongly Disagree	0	1	0	1
Somewhat Disagree	1	2	0	3
Neutral	0	0	1	1
Somewhat Agree	14	13	2	29
Strongly Agree	20	7	4	31
W/V Athletes				
Strongly Disagree	1	0	0	1
Somewhat Disagree	2	1	0	3
Neutral	7	4	1	12
Somewhat Agree	16	14	4	34
Strongly Agree	9	4	2	15
W/V Support Staff				
Strongly Disagree	0	0	0	0
Somewhat Disagree	1	2	0	3
Neutral	3	1	1	5
Somewhat Agree	19	12	5	36
Strongly Agree	12	8	1	21
W/V Manager				
Strongly Disagree	3	3	0	6
Somewhat Disagree	2	3	1	6
Neutral	6	2	1	9
Somewhat Agree	14	6	3	23
Strongly Agree	10	9	2	21
Future Employment				
Strongly Disagree	2	3	2	7
Somewhat Disagree	7	6	1	14
Neutral	7	4	1	12

Somewhat Agree	12	8	3	23
Strongly Agree	7	2	0	9
Career Development				
Strongly Disagree	1	2	1	4
Somewhat Disagree	7	7	2	16
Neutral	11	5	0	16
Somewhat Agree	6	5	3	14
Strongly Agree	10	4	1	15
Qualification				
PhD	3	2	1	6
Masters	5	1	0	6
PG Dip	2	2	0	4
Bachelor	15	16	5	36
UG Dip	0	0	0	0
Certificate	0	0	1	1
No Qualification	10	2	0	12
Accreditation				
Yes	14	4	3	21
Working Towards	4	4	1	9
No	17	15	3	35
Skills Used				
Yes: Happy	13	6	1	20
Yes: Like to do more	20	14	5	39
No: Don’t use my skills	1	3	1	5
No: Skills outside training	1	0	0	1
Future				
Strongly Agree	13	4	3	20
Agree	9	9	2	20
Somewhat Agree	5	4	1	10
Neutral	2	3	0	5
Somewhat Disagree	3	1	0	4
Disagree	2	2	1	5
Strongly Disagree	1	0	0	1