



Original research

Client experiences and confidence in nutrition advice delivered by registered exercise professionals

Lachlan Mitchell^{a,*,1}, Mark McKean^b, Helen O'Connor^{a,c}, Tania Prvan^d, Gary Slater^b^a Faculty of Health Sciences, The University of Sydney, NSW, 75 East St, Lidcombe, 2141, Australia^b School of Health and Sport Sciences, University of the Sunshine Coast, 90 Sippy Downs Dr, Sippy Downs, Queensland, 4556, Australia^c Charles Perkins Centre, The University of Sydney, NSW, John Hopkins Dr, Camperdown, 2006, Australia^d Department of Mathematics and Statistics, Macquarie University, NSW, Balaclava Rd, North Ryde, 2109, Australia

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ABSTRACT

Objectives: The aims of this cross-sectional study were to describe the client experiences of registered exercise professionals (REP) in regard to nutrition advice, and to identify factors considered important when selecting a REP.

Design: A convenience sample of fitness facility-users were recruited. Participants completed a 46 item online questionnaire.

Method: Frequency distributions were calculated for nutrition advice received from a REP, confidence in the nutrition advice received, and factors considered when selecting a REP. The effect of sex and level of education on participant responses were investigated.

Results: A total of 455 individuals participated, of which 55.6% had worked with a REP. Participants working with a REP had received nutrition advice on body fat loss (77.4%), muscle gain (78.7%), and clinical nutrition (51.9%). Sex and level of education did not influence confidence in nutrition advice, with 60.7% of participants reporting being 'very or extremely confident' in the nutrition advice. Over half of participants (58.3%) prefer to work with a REP who offers nutrition advice. Basic and personal professional conduct were identified as 'very or extremely important' by >70% of participants when selecting a REP.

Conclusion: Clients of REP prefer to work with a REP who provides nutrition advice and are generally confident in this advice. Educating fitness facility-users on the nutrition scope of practice of REP and promoting the role of accredited nutrition professionals should be advocated. Encouraging REP to work collaboratively with nutrition professionals will help ensure clients receive appropriate nutrition care, while better allowing REP to remain within their scope of practice.

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Practical implications

- Educating fitness facility patrons of the nutrition scope of practice of REP, and how to access accredited nutrition practitioners for individualised and clinical nutrition education, should be advocated.
- The expertise of accredited nutrition professionals in providing individualised dietary advice, including clinical nutrition advice, should be promoted.

- REP should be empowered and encouraged to work collaboratively with accredited nutrition professionals, referring clients requiring individually tailored dietary advice, particularly clinical nutrition advice.
- The efficacy of models of shared care between REP and nutrition professionals should be explored.

1. Introduction

Improvement in health and fitness is often a motivation for fitness centre clients, but body composition changes, which are best supported by combined diet and physical activity interventions,¹ are also a common driving factor.² There is increasing demand placed on registered exercise professionals (REP) to provide nutrition advice, and such advice is often expected by clients.^{3,4} Furthermore, REP perceive nutrition care to be an important part

Abbreviations: REP, registered exercise professionals.

* Corresponding author.

E-mail address: lachlan.mitchell@ucd.ie (L. Mitchell).

¹ Present address: School of Public Health, Physiotherapy and Sport Science, University College Dublin, Dublin 4, Ireland.

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of their role. The curriculum of the minimum certification required to obtain the REP accreditation, certificate III – Gym Instructor, includes one module on nutrition (approximately 12 h face to face, with additional self-directed study), addressing the provision of basic healthy eating information, while supporting positive attitudes towards eating and body composition.⁵ Two additional modules are provided in the certificate IV – Personal Trainer curriculum, covering the use of nationally endorsed eating guidance for individual lifestyle and food choices, and identifying dangers of providing nutrition advice beyond the scope of practice.^{6,7}

Many REP provide nutrition advice, albeit often outside of their professional scope of practice.^{8,9} This scope of practice aligns with the level of nutrition education of REP, limiting advice to the provision of non-medical nutrition information in accordance with nationally endorsed evidence based guidelines that is not individually tailored.¹⁰ However, REP have been reported to provide individually tailored advice, including individual diet-disease management.^{3,9} This may pose a potential risk of harm to clients,¹¹ and leaves REP vulnerable legally¹² given indemnity insurance only covers professional activities within the scope of practice. However, while the demand remains, this process will likely continue.

Little is known about factors that influence clients choice in REP. Attributes such as expertise, trustworthiness, specific techniques used, and interpersonal skills of the practitioner,¹³ plus honesty and empathy,¹⁴ have all been shown to influence therapeutic relationships. Physical traits influence client confidence in perceived efficacy of health care practitioners,^{15–18} playing a significant role in the recruitment of REP by facility managers.¹⁹ Furthermore, REP acknowledge that physical traits play a role in perceived professional efficacy, at least initially.²⁰ However, the influence factors such as REP physique, professional knowledge and skills, plus empathy, remains to be investigated amongst REP clientele.

The aim of the present study was to better understand the experiences of clientele working with REP. Specifically, we aimed to describe the nutrition advice they had received from REP, and their confidence in this nutrition advice. Furthermore, we aimed to identify the factors considered important when selecting a REP.

2. Methods

A convenience sample of fitness facility clients completed a 46-item survey related to fitness goals and services provided by REP. For the purpose of this study, a fitness facility client was defined as any individual attending a facility that provides a fitness related service inclusive of exercise equipment, personal training and instruction, group classes and group programs. Recruitment occurred both online and face to face, between July 2015, and February 2016. The online participants were recruited from all states of Australia using a network of REP to promote it to their clients, providing a web link to the survey. The online survey was self-administered, with responses directly recorded into a secure database. The face to face recruitment was conducted by researchers at various fitness facilities from cities and major regional towns. Face to face recruitment in fitness facilities provided participants a touch screen device with direct access to the online survey and was completed before or after their normal fitness activity. Survey completion time was typically 15–20 min.

The survey was developed by researchers and was initially piloted by 30 individuals for question refinement. The final version contained five sections, featuring short answer, multiple choice, yes/no, agree/disagree items, and questions that require participants to rate options (supplementary item). Section A contained demographic questions, such as age, sex, and level of education (11 items). Section B collected information regarding health and

fitness goals, and fitness behaviours (7 items). Section C probed experiences working with REP (4 items), while Section D contained questions about nutrition advice received from REP (10 items). Section E examined factors considered when selecting a REP to work with (1 item). Remaining questions were not analysed for the current study. Electronic informed consent was obtained prior to participation. The research was approved by the University of the Sunshine Coast Human Ethics Committee.

Analyses were performed for each survey section, with participants included in the section analysis if they had responded to every question in that section. Mean and standard deviation were calculated for demographic data. Frequency distributions were calculated for level of education, health and fitness goals, fitness behaviours, history of working with a REP, nutrition advice received from a REP, confidence in the nutrition advice received, plus factors considered when selecting a REP to work with. Health and fitness goals reported in section B were pooled into three categories: physique change, consisting of body fat loss, muscle gain, and weight loss; performance change, consisting of improve sport performance, strength and muscle balance, cardiovascular fitness, improve endurance, and flexibility and mobility; and health improvement, consisting of heart disease/cholesterol, diabetes/blood sugar, osteoporosis, and falls prevention. Factors considered when deciding to work with a REP in section E were pooled into eight categories: basic professional conduct (8 factors covering client confidentiality, awareness of limitations, punctuality, communication, confidence), personal professional conduct (6 factors covering empathy, rapport, ability to motivate), physique and perceived fitness (4 factors covering being physically fit, muscular, low body fat), presentation and physical attractiveness (4 factors covering physical appearance, being physically attractive, dress sense), advertisement (2 factors covering promotion and endorsement), academic qualifications (1 factor), gender compatibility (1 factor), and price (1 factor). Pearson's chi-squared tests and ordinal logistic regressions were performed to measure the effect of sex and level of education on participant responses. Significance was set at $p < 0.05$. All analyses were performed using SPSS (version 23.0.0.0, Chicago, IL).

3. Results

A total of 455 participants (61.3% female) completed section A. Sections B, C, D, and E were completed by 411 (90.3%), 411 (90.3%), 394 (86.6%), and 391 (85.9%) of participants, respectively. Demographic characteristics are presented in [Table 1](#).

Participants attended a commercial fitness facility ($n = 338$, 74.3%), private fitness facility ($n = 97$, 21.3%), outdoor fitness business ($n = 50$, 11.0%), member-based personal training ($n = 90$, 19.8%), and appointment-only personal training facility ($n = 35$, 7.7%).

Participants' history of training with a REP is presented in [Table 1](#). More than half of the participants ($n = 253$ (55.6%)) indicated they currently or had previously worked with a REP. The impact of REP on achieving health and fitness goals was rated as 'positive' or 'very positive' by 87.2% of participants. Ratings were similar between males (83.7%) and females (88.9%).

Health and fitness goals identified as 'very important' or 'extremely important' are presented in [Fig. 1a](#). These included physique change ($n = 78$ (49.1%) males, $n = 58$ (62.7%) females), performance change ($n = 108$ (67.9%) males, $n = 176$ (69.8%) females), and health improvement ($n = 48$ (30.2%) males, $n = 94$ (37.3%) females). Sex significantly influenced physique change goals when they were identified as important or very important ($p = 0.009$), females were 1.7 times more likely than males to identify physique change goals as important. Sex and level of education did not influ-

Table 1
Participant demographic and training characteristics, and history of working with a registered exercise professional.

	Total (n = 455)	Male (n = 176)	Female (n = 279)
Age (years)	33.7 ± 13.4	33.9 ± 14.5	33.5 ± 12.6
Stature (cm)	169.7 ± 11.1	177.7 ± 9.2	164.6 ± 9.1 ^d
Body mass (kg)	73.1 ± 15.7	82.9 ± 12.8	66.9 ± 14.2 ^d
BMI (kg/m ²)	25.4 ± 5.0	26.3 ± 4.3	24.8 ± 5.3 ^d
Education (%) ^a			
Year 12 or less	35.5	39.7	33.0
Vocational college	32.7	24.1	38.0
University degree	31.8	36.2	29.0
Training hours per week (%) ^b			
<3	11.0	12.0	10.4
3–5	38.5	34.0	41.3
6–9	36.3	31.4	39.3
≥10	14.4	22.6	9.1
Frequency working with a REP (%) ^c			
Never	38.4	46.5	33.3
1–4 per year	17.8	15.7	19.0
1–2 per month	8.8	8.2	9.2
Weekly	18.2	15.1	20.2
>1 per week	16.8	14.5	18.3
History of working with a REP (%) ^c			
<3 months	30.4	26.4	32.4
3–6 months	13.9	13.2	14.3
6–12 months	15.8	17.0	15.2
≥1 year	39.9	43.4	38.1

BMI, body mass index; REP, registered exercise professionals.

- ^a Highest level of education.
- ^b Result acquired from Section B, n = 411.
- ^c Result acquired from Section C, n = 411.
- ^d Significantly different to males, p < 0.05.

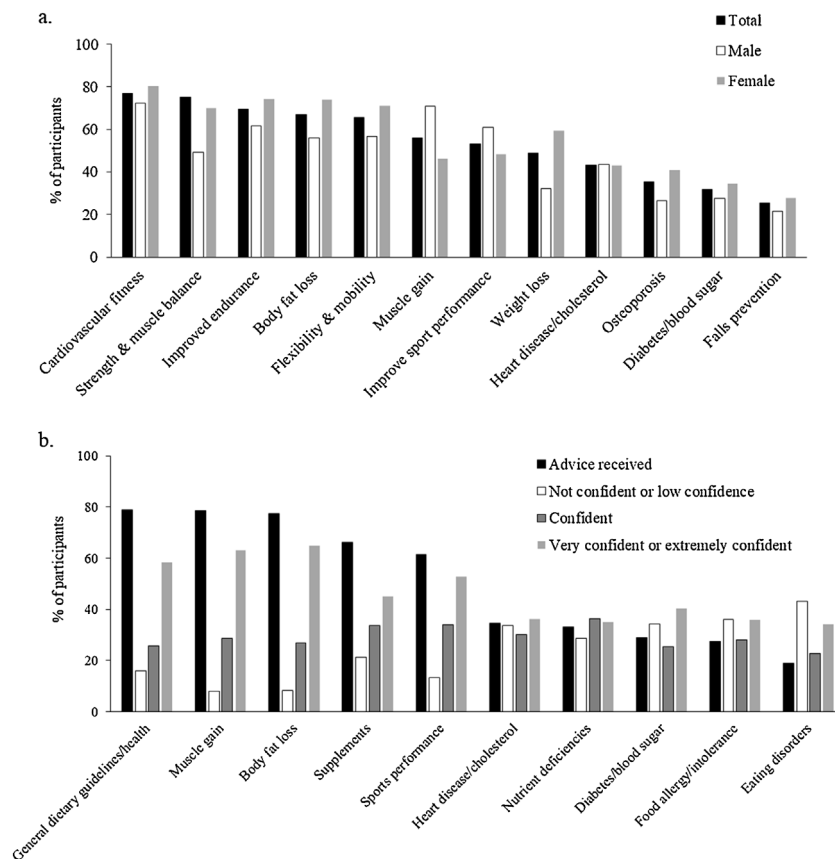


Fig. 1. a Health and fitness goals identified as very important or extremely important to fitness facility clients. Bars represent the percentage of total, male, and female participants, respectively. Section B, n = 411. **b.** The percentage of all participants who had received nutrition advice from registered exercise professionals, and the level of confidence in the advice received. For each area, bars represent the percentage of all participants who had received nutrition advice, 'not confident or low confidence', 'confident', and 'very confident or extremely confident'. Confidence values represent the percentage of participants who had received advice for each area of nutrition. Section D, n = 394.

ence the importance placed on performance change ($p=0.963$) or health improvement ($p=0.235$) goals. Participants had been exercising towards their goal for <1 year ($n=71$, 17.3%), 1–3 years ($n=126$, 30.7%), 4–7 years ($n=96$, 23.4%), and ≥ 8 years ($n=118$, 28.7%).

More than half ($n=239$, 58.1%) of participants reported asking a REP for nutrition advice. REP were reported to have provided nutrition advice to 59.6% of participants. The form of nutrition advice received included verbal information ($n=220$, 93.6%), specific fact sheets ($n=74$, 31.5%), specific meal plans ($n=76$, 32.3%), practical activities ($n=10$, 4.3%), software/app recommendations ($n=21$, 8.9%), internet based programs ($n=28$, 11.9%), and meal replacement formulas ($n=27$, 11.5%).

Where participants had indicated that they had received dietary advice from a fitness professional in the past year, they reported receiving advice in the areas of body fat loss ($n=182$, 77.4%), muscle gain ($n=285$, 78.7%), sports performance ($n=145$, 61.3%), supplements ($n=155$, 66.0%), and general dietary guidelines ($n=186$, 77.9%). Receiving clinical nutrition advice was reported by 120 (51.9%) participants (heart disease/cholesterol, $n=80$ (34.0%); diabetes/blood sugar, $n=67$ (28.5%); food allergy/intolerance, $n=64$ (27.2%); nutrient deficiencies, $n=77$ (32.8%); eating disorders, $n=44$ (18.7%)). Supplement use was the only area of advice that was influenced by level of education ($p=0.036$). Participants with year 12 or less education were 2.3 times more likely ($p=0.018$), and participants with certificate or diploma education were 2.1 times more likely ($p=0.034$), to report receiving advice on supplements than university educated participants. Level of education did not influence whether clinical nutrition advice had been received. The level of client confidence in the advice received for these nutrition areas is presented in Fig. 1b.

Overall confidence in the nutrition advice received from REP was high, with 142 (60.7%) participants reporting being 'very or extremely confident' in the advice received. Sex and level of education did not influence participants' overall confidence in the advice received ($p=0.228$). Over two-thirds ($n=161$, 68.8%) of participants 'agreed or strongly agreed' the nutrition advice they received from their REP made a difference in reaching their health and fitness goal. Sex and level of education did not influence whether participants believed the nutrition advice received from a REP made a difference in reaching their health and fitness goals ($p=0.307$). Over half ($n=229$, 58.3%) of participants 'agreed or strongly agreed' that they prefer to work with a REP who offers nutrition advice. Level of education significantly influenced whether participants preferred to work with a REP who offers nutrition advice ($p=0.003$). Participants with year 12 or less education were 1.8 times more likely ($p=0.007$), and participants with certificate or diploma education were 2.1 times more likely ($p=0.002$), to prefer working with a REP who provides nutrition advice than university educated participants. Over half ($n=228$, 58.0%) of participants 'agreed or strongly agreed' that they prefer to work with a REP who has specific nutrition qualifications. Sex and level of education did not influence whether participants preferred to work with a REP who had a specific nutrition qualification ($p=0.189$). A small proportion (6.9%) of participants identified REP as experts in nutrition, 29.8% believed REP should be experts in nutrition, 52.4% felt REP should know a reasonable amount about nutrition but not be experts, 2.8% felt REP do not need to know much about nutrition, and 8.1% felt REP should refer clients to nutrition experts. Sex and level of education did not influence participants' perception of REP nutrition expertise ($p=0.238$).

For participants who reported receiving clinical nutrition advice, overall confidence with the nutrition advice received was high, with 77 (64.7%) reporting 'very or extremely confident'. Sex and level of education did not influence confidence ($p=0.126$). Three-quarters ($n=90$, 75.3%) of these participants agreed or strongly

agreed the nutrition advice received made a difference in reaching their goal, with no influence of sex or level of education ($p=0.490$). Similarly, three-quarters ($n=91$, 76.5%) of these participants agreed or strongly agreed that they prefer to work with a REP who provides nutrition advice. Sex and level of education did not influence these opinions ($p=0.649$). Over two-thirds ($n=81$, 68.1%) of these participants agreed or strongly agreed that they prefer to work with a REP who has a nutrition qualification, with neither sex nor level of education influencing this preference ($p=0.970$).

The importance placed on factors when deciding to work with a REP are presented in Fig. 2. Basic professional and personal professional conduct were identified as 'very or extremely important' by $72.2 \pm 9.7\%$ and $71.6 \pm 8.9\%$ of participants, respectively. Academic qualifications were identified as 'very or extremely important' by 59.6% of participants. Physique and perceived fitness, and presentation and physical attractiveness, were identified as 'very or extremely important' by $48.7 \pm 22.3\%$ and $29.9 \pm 10.0\%$ of participants, respectively.

4. Discussion

This study aimed to describe the experiences of the clientele of REP in regard to nutrition advice, and to identify factors considered important when selecting a REP. Participants engaged REP to achieve performance and physique change, with a smaller percentage aiming for health improvement. More than half of participants had received nutrition advice, including on topics beyond the scope of practice of REP. Despite this, the general confidence in the nutrition advice was high. Additionally, the selection of REP by clientele was based in part on the provision of nutrition advice, as well as professional conduct and qualifications. Participants with lower levels of education were more likely to prefer working with a REP who provides nutrition advice.

Over half of the participants surveyed in this study had experience working with a REP. Of those, nearly 60% had asked for and received nutrition advice. General dietary guidelines were received by most participants, as were advice on body fat loss, muscle gain, and sports performance. Clinical nutrition advice had been received by half of the participants working with a REP. This included advice on heart disease, diabetes, food intolerance, nutrient deficiencies, and eating disorders. Additionally, supplement advice had been received by two-thirds of participants. These specific topics go beyond the scope of practice of REP, supporting previous observations of nutrition advice provided by REP.^{4,9}

Although the general nutrition knowledge of REP has been shown to be greater than that of the general community, their level of diet-disease nutrition knowledge has been shown to be no better than the general community, and substantially less than dietitians.²¹ This raises concerns regarding the safety and efficacy of clinical nutrition advice participants in the present study reported receiving. The scope of practice reflects the general nutrition training REP receive during accreditation, and previous reports have documented adverse outcomes in cases of REP providing nutrition advice beyond their scope of practice.^{12,22} Encouraging and empowering REP to refer and work in a collaborative nature with dietitians, who have the expertise required to provide clinical advice, will assist in ensuring clients receive safe and appropriate care. Ensuring owners and managers of fitness facilities are aware of the REP scope of practice is also fundamental, as they can provide the encouragement for REP to remain within this scope, as well as assist in developing a collaborative environment.

Informing clientele of the REP scope of training and the role in nutrition care of REP is also justified. More than half of participants who had engaged with a REP believed REP should know a reasonable amount about nutrition, and 29.8% believed they should be

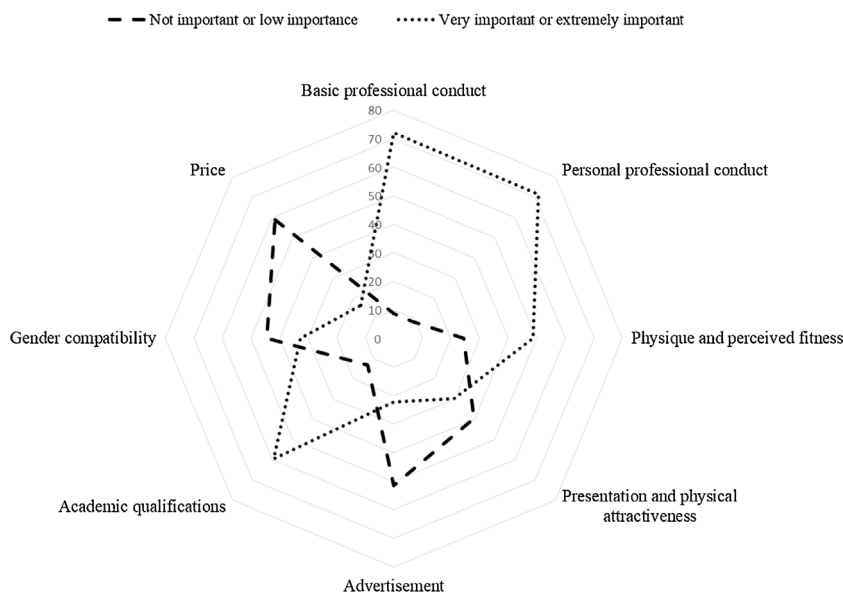


Fig. 2. Level of importance placed on different factors when deciding to work with a REP. Values are presented as percentage of participants. Basic professional conduct contained 8 items, personal professional conduct contained 6 items, physique and perceived fitness contained 4 items, presentation and physical attractiveness contained 4 items, advertisement contained 2 items, and academic qualifications, gender compatibility, and price each contained one item. Section E, n = 391.

experts in nutrition. In contrast, 8.1% believed REP should refer clients onto nutrition experts. Furthermore, over half of participants agreed or strongly agreed that they prefer to work with a REP who provides nutrition advice, with those with lower levels of education more likely to endorse this preference. Clearly, participants consider nutrition advice an important component of the REP service. However, a lack of understanding of what advice falls within and outside the scope of practice of REP is present in their clientele, as previous research has indicated clients of REP expect clinical nutrition advice.⁴ Informing fitness facility-users of the scope of practice of REP may be a viable strategy in better enabling REP to work within this scope. Promoting the expertise of accredited nutrition practitioners in providing individualised dietary care, in particular clinical nutrition care, may better enable fitness facility-users to access appropriate advice, while assisting REP to remain within their scope of practice.

In general, participants were confident in the nutrition advice they received from REP, most believing the advice made a difference in reaching their goals. Levels of extreme confidence were reported for the areas of body fat loss, muscle gain, and general dietary guidelines. However, those who had received advice in areas of clinical nutrition reported more moderate levels of confidence, and a higher percentage reported low or no confidence in this specific advice. Despite this, those who had received clinical nutrition advice were confident with the overall nutrition advice received, believed the advice helped in achieving their goals, and preferred to work with a REP who offered nutrition advice. This disparity in reported confidence may be explained by these participants receiving advice on other topics, such as body fat loss and general dietary guidelines, increasing overall confidence. The overall high levels of confidence reported by participants may reflect the manner in which advice is provided. REP have been reported to be very confident in their nutrition skills and in communicating nutrition information.⁸ As such, confidence in the nutrition message may be reciprocated by clients. It may also be the case that clientele confidence arises from feeling they are receiving individualised advice from a trusted source whom they have a personal relationship with, rather than broader public health guidelines. Previous research has shown REP are trusted by clients, as their physical appearance broadcasts their

knowledge of exercise and health.²³ Therefore, it is possible that confidence in the advice arises from this perception.

Research focussing on the factors considered when selecting a REP is limited. In the present study, factors composing basic and personal professional conduct were identified as of high importance by participants when selecting a REP. These themes included factors such as respecting client confidentiality, communication, empathy, confidence, and ability to motivate. Several of these factors have been previously identified by both REP and their clientele. In a small sample of female clientele, empathy was identified as a key component in selecting a REP. These women described the importance of the trainers' ability to understand the experience of clients, and their skill in effectively listening to client difficulties.²⁴ Similarly, REP have previously identified empathy as a quality which helps them maintain clients and remain successful in their business.²⁰ Motivational and social skills, including communication skills, have also been identified by REP as qualities required to maintain clients.²⁰ Given empathy and motivational qualities were emphasised by participants in the present study, integrating these skills into the training curriculum of REP may be an important consideration.

Interestingly, physical appearance, in the form of physique and perceived fitness, and presentation and physical attractiveness, were not identified as key factors when considering a REP to work with in the present study. This differs from previous studies, which reported physical appearance as a key first impression for clientele, which gave confidence in the knowledge and skills of REP in producing client results.^{20,24} Physical traits have also been shown to influence perceived effectiveness of nutrition professionals.^{15–17} Although physical characteristics may not directly impact the knowledge and teaching capacity of exercise and nutrition practitioners, being aware of these preconceived biases is likely important in delivering effective therapy.

Also of note was the level of importance placed on academic qualifications by participants. Although this was deemed of high importance by 59.6% of participants, it did not rank as important as basic and personal professional conduct factors. It appears that this sample of REP clientele value qualifications when selecting a REP to work with, however of greater importance is the ability of the REP to communicate, motivate, empathise, and be attentive to

their individual needs. This may reflect the view that although REP knowledge is deemed important by clientele, they place value in building a relationship based on strong rapport, accountability, and building self-efficacy.²⁰

Given a modest, female dominant response, the responses of participants in this investigation may not reflect the perceptions of the broader community of fitness facility-users. Additionally, only half of participants had worked with a REP which may introduce bias and should be considered when interpreting findings. Finally, as participants were fitness-facility users and the clientele of REP, no verification of the registration status of REP was conducted in this study.

5. Conclusion

The clientele of REP expect nutrition advice, and in general are confident with the advice received. However, the level of confidence varies based on the specific focus of advice. Given the prevalence of advice beyond the scope of practice, REP should be encouraged and empowered to work collaboratively with nutrition professionals such as accredited dietitians, and models of shared care between REP and nutrition professionals should be explored. Educating fitness facility-users of the nutrition scope of practice of REP should be advocated, while concomitantly promoting the expertise of accredited nutrition professionals in providing individualised and clinical nutrition education.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.jsams.2020.09.018>.

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