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The Association between Dietitians' Personality Profiles and Practice Areas

ABSTRACT

Aim: Personality traits refer to habitual patterns of behaviour, thoughts and emotions, and have been shown to influence health professionals' career pathways. This study explored associations between dietitians' personality profiles and the areas of dietetic practice they have previously worked.

Methods: Survey of 346 dietitians; 95% female; aged 32±10 years; median 7 years (range 0-35) since graduation. Personality traits were investigated using the Temperament and Character Inventory, and cluster analysis was used to group participants into three clusters, known as Profiles, based on common combinations of personality trait levels. Relationships between personality clusters and areas of dietetic practice were investigated using univariate and multivariate analyses.

Results: Compared with other participants, dietitians in Profile A displayed moderate levels of Harm Avoidance, Persistence and Self-Directedness; dietitians in Profile B displayed higher levels of Persistence and Self-Directedness, and lower levels of Harm Avoidance; and dietitians in Profile C displayed higher levels of Harm avoidance and lower levels of Persistence and Self-Directedness. Dietitians in Profile A were twice as likely to have worked in Private Practice/Consultancy compared with Profile C (OR=1.90, 95%CI: 1.07-3.38, $p<0.05$); and dietitians in Profile B were over four times more likely to have worked in Food Service Management compared with Profile C (OR=4.35, 95%CI: 1.47-12.84, $p<0.01$).

Conclusions: Dietitians' personality may influence their decision to work in some areas of dietetic practice. Employees and employers should be mindful of personal traits when making employment decisions because some environments may be more conducive to specific attributes of dietitians to facilitate competent performance in a role.

Keywords (MeSH): Personality, Dietitian, Professional Practice, Career Counselling, Workforce

Introduction

Dietetic workforces have grown considerably in developed countries, including the United Kingdom, the United States of America, and Australia.¹⁻³ Dietitians are increasingly employed in diverse, 'non-traditional' areas of dietetic practice such as private practice, food industry and research,^{2,4,5} and consequently report a need for career guidance to support their career decisions.^{6, 7} However, there is currently limited understanding of the factors influencing dietitians' career pathways, including the decision to work in a particular area of dietetic practice.⁸

Personality traits have been shown to influence health professionals' career pathways, including career decisions, job satisfaction, and job retention.⁹⁻¹¹ Furthermore, personality traits have shown to influence the intended locations of work for nurses and nursing students,¹² allied health professionals,⁹ and doctors and medical students in Australia and the USA.^{13, 14} Using the Temperament and Character Inventory (TCI-R 140),¹⁵ the personality traits of dietitians have been described.¹⁶ The TCI was developed according to the psychobiological theory of personality, which describes personality within the domains of temperament and character. Temperament traits are mildly heritable, determine automatic emotional responses to experiences, and include '*Novelty Seeking*'; '*Harm Avoidance*'; '*Reward Dependence*', and '*Persistence*'. Character traits reflect personal goals and values, tend to develop with life experience, and include '*Self-Directedness*'; '*Cooperativeness*'; and '*Self-Transcendence*'.¹⁵ High and low descriptors of each trait are summarised in Table 1.

INSERT TABLE 1 ABOUT HERE

In comparison to the general population, dietitians displayed average levels of Novelty Seeking; higher levels of Harm Avoidance, Reward Dependence, Persistence, Self-directedness and Cooperativeness; and lower levels of Self-transcendence.¹⁶ The study

identified opportunities for tailored career advice based on dietitians' personality traits, and recommended further investigation into how personality may influence decisions to work in different areas of dietetic practice. Given that there are multiple dimensions to personality, it is important to look at combinations of the levels of traits (known as personality profile) to give a complete picture of how personality may influence career choices. Therefore, the aim of this study was to extend upon the initial descriptive work to investigate associations between dietitians' personality profiles and the areas of dietetic practice in which they have previously worked.

Methods

Overview

A cross-sectional design used an online survey to explore associations between dietitians' personality profiles and the areas of dietetic practice in which they had previously worked. The study was approved by the *blinded for peer review* Human Research Ethics Committee (PBH/32/13/HREC).

The original methodology has been described elsewhere.¹⁶ Briefly, the online survey comprised two sections; (i) demographic characteristics including areas of dietetic practice in which dietitians had previously worked; and (ii) the Temperament and Character Inventory (TCI-R 140).¹⁵ The TCI-R 140 was used to measure the 7 dimensions of personality. It has been validated in several countries¹⁷⁻¹⁹ and has good internal reliability with 0.86 - 0.89 for the character traits, and 0.69 - 0.91 for temperament traits. The 140-item version uses 5-point Likert scales (1=absolutely false to 5=absolutely true) to investigate anticipated social and emotional responses to situations.

The areas of dietetic practice were determined from the Dietitians Association of Australia 2013 annual report,²⁰ and included: Clinical; Community/Public Health Nutrition; Private

Practice/Consultancy; Non-government/not-for-profit; Academia/Lecturing; Food Service Management; Food Industry/Marketing/Media; and Research. The potential participant pool comprised Australian dietitians who were members of *Dietitian Connection*; a free, online resource and networking website for dietitians (n=2418).²¹ A description of the study and link to the online survey was included in the *Dietitian Connection* weekly electronic newsletter, and posted on the associated Facebook and Twitter pages in November 2013. The survey was available for two months, and was only available in English.

Data analysis was conducted using SPSS statistical software (version 22.0, IBM Corporation, 2014). Descriptive statistics were determined for continuous and categorical variables. K-means cluster analysis was undertaken to identify natural groupings of dietitians based on their levels of the seven personality traits. In this analysis, dietitians with similar combinations of trait levels should fall into the same cluster, while dietitians with disparate combinations of trait levels should fall into different clusters. Based on group size and patterns of mean trait levels, three clusters were identified as: Profile A, Profile B, and Profile C. Associations between each profile and the eight areas of dietetic practice were investigated using Pearson's Chi-Squared tests. Multivariate logistic regression analyses were then performed on the areas of dietetic practice that were significantly associated with personality profiles after controlling for gender, age, years since graduation, highest level of education and rural background. Statistical significance was set at $p < 0.05$.

Results

A total of 346 dietitians completed the survey, and detailed demographic characteristics of participants have previously been described.¹⁶ Briefly, the sample was representative of the Australian dietetic workforce for gender, however it contained more younger dietitians, ($p < 0.001$), and dietitians recently graduated ($p < 0.001$) compared to the national association

membership.²⁰ The most common areas of dietetic practice that participants had worked in were Clinical (n=231, 67%), Private Practice/Consultancy (n=184, 53%), and Community/Public Health Nutrition (n=143, 41%). Fewer participants had worked in Non-government/Not-for-profit roles (n=73, 21%), Research (n=64, 18%), Food Service Management (n=45, 13%), Academia/Lecturing (n=40, 12%), and Food Industry/Marketing/Media (n=34, 10%).

Dietitians fell into three clusters based on similar combinations of personality trait levels, named as Profile A, B, and C (Figure 1), and their experience in areas of dietetic practice are displayed in Table 2. All three Profiles demonstrated mature and well-organised characters, with high levels of Self-directedness, Cooperativeness and low Self-transcendence. The Profiles also demonstrated complementary temperaments, including high Reward Dependence and Persistence. However as shown in Table 3 and Figure 1, significant differences were detected in some trait levels between the three Profiles. Comparing all three, these differences were most notable in Profile A (n=122) which was highest in Reward Dependence and Self Transcendence; Profile B (n=96) which was lowest in Harm Avoidance, and highest in Persistence and Self-directedness, and Profile C (n=103) which was highest in Harm Avoidance and lowest in Self-directedness.

INSERT FIGURE 1 ABOUT HERE

INSERT TABLES 2 AND 3 ABOUT HERE

Following the cluster analysis, dietitians' personality profiles were found to be significantly associated with four areas of dietetic practice: Private Practice/Consultancy (p=0.006); Academia/Lecturing (p=0.023); Food Service Management (p=0.010) and Food Industry/Marketing/Media (p=0.011). Dietitians who had previously worked in Private Practice/Consultancy appeared more likely to be in Profile A and less likely to be in Profile

C. Dietitians who had previously worked in Academia/Lecturing, Food Service Management and Food Industry/ Marketing/Media appeared more likely to be in Profile B and less likely to be in Profile C. No significant associations were found between dietitians' personality profiles and other areas of dietetic practice: Clinical; Community/Public Health Nutrition; Non-government/not-for-profit; and Research ($p>0.05$).

Subsequently, multiple logistic regression modelling on these four areas of dietetic practice (Private Practice/Consultancy; Academia/Lecturing; Food Service Management and Food Industry/Marketing/Media) showed that dietitians' personality profiles independently predicted working in two areas of dietetic practice; Private Practice/Consultancy and Food Service Management, as displayed in Table 4. Personality profile ($p=0.029$), years since graduation ($p=0.013$), and highest level of education ($p=0.004$) were predictors of having had experience in Private Practice/Consulting. After adjusting for the effect of these demographic characteristics, dietitians in Profile A were nearly twice as likely to have worked in Private Practice/Consultancy compared with dietitians in Profile C. Personality profile ($p=0.024$) and years since graduation ($p=0.041$) were predictors of experience in Food Service Management. After adjusting for the effect of demographic characteristics, dietitians in Profile B were over four times more likely to have worked in Food Service Management compared with dietitians in Profile C.

INSERT TABLE 4 ABOUT HERE

Discussion

This study explored associations between dietitians' personality profiles and the areas of dietetic practice in which they have previously worked. Overall, dietitians' personality profiles were independently associated with working in Private Practice/Consultancy and Food Service Management. This suggests that personality may influence dietitians' attraction

and ultimate decision to work in these areas of practice. Other professions have previously shown that personality influences the decision to work in some areas of practice. For example, personality has been shown to influence medical students' decision to specialise in surgery, emergency and obstetrics,²² as well as their decision to work in rural areas.^{13, 23} This information has been valuable for career guidance in medicine,²⁴ and the results of this study are similarly valuable for career guidance provided to dietitians.

This study was able to distinguish three different profiles of traits among the sample of dietitians which have implications to recruitment and retention of the profession. All three Profiles displayed personalities which are often seen among intelligent and high achieving individuals and would be expected in health professionals who must perform at a high level of pressure and communicate with a wide variety of people in both a personal and professional capacity.^{12, 13} However in comparing the three Profiles, Profile B stands out as one that has a combination of traits that are known to be most conducive to mental well-being.²⁵ Like Profiles A and C, Profile B has high Reward Dependence which indicates a warm and sociable demeanour, is highly Cooperative and is likely to be agreeable and a 'team player' i.e. they work toward the best solution for everyone. Importantly, Profile B has low levels of Harm Avoidance (anxiety-proneness), combined with high levels of Persistence (industrious, ambitious) and Self-directedness (responsible, reliable), which culminate to being most conducive to high-functioning professionals who are able to cope with challenges and uncertainties. This Profile may be indicative of the area of practice these dietitians choose, which may attract ambitious, hard-working and independent dietitians who are confident and approach life with an optimistic attitude.

Dietitians in Profile B were over four times more likely to have worked in Food Service Management compared with dietitians in Profile C. Food Service Management is a small area of dietetic practice, comprising less than 5% of the national professional workforce.²⁶ These

dietitians often work independently, without constant contact with fellow dietetic peers. Dietitians working in Food Service Management predominantly work in hospitals, nursing homes, hospitality and catering settings to improve food services through their nutrition and management skills.²⁷ Attributes of dietitians in Profile B, who were distinguished by low Harm Avoidance and high Self-directedness and Persistence, are likely to be confident and conscientiousness with an optimistic attitude, and this suggests career guidance for Food Service Management may be appropriate. However, despite dietitians in Profile B being more likely to have experience in Food Service Management compared with dietitians in Profile C, only a small proportion of dietitians in Profile B (18.8%) had actually gained experience in this area, suggesting that other areas of dietetic practice are also common for dietitians in Profile B.

Differences in areas of practice were observed for dietitians in Profile A, who were nearly twice as likely to have worked in Private Practice/Consultancy compared with Profile C. Private Practice/Consultancy is the fastest growing area of dietetic practice in Australia. The number of dietitians working in private practice has more than doubled in the past 10 years, and currently represents over a third of the national professional workforce.⁴ This considerable increase has been attributed to the Australian Medicare Chronic Disease Management (CDM) Program, which was introduced in 2004 to enable patients to receive subsidised multidisciplinary care for chronic disease management.²⁸ Dietitians are the only health professionals recognised as providing nutrition care under the CDM program, which provides opportunity to engage in flexible consulting work, and be self-employed.²⁹ However, these dietitians are likely to encounter new experiences and challenges that are not traditionally covered in dietetic training, including marketing, business planning and accountancy. Private Practice dietitians have previously reported enjoying the challenge of being responsible for their own workload and subsequent income,⁴ which directly reflects

traits of high levels of Novelty Seeking. In line with this, it is interesting that many dietitians (40.8%) in Profile C, who were distinguished by high Harm Avoidance and low Self-directedness, had experience in Private Practice/Consultancy. This is despite uncertainties such as the risk of inconsistent work by relying on patient attendance, and the low amount of peer support generally experienced in this setting. This setting may be better suited to dietitians who are comfortable with a degree of risk and uncertainty and are highly self-directed and motivated to build a private practice.

The results of this study have implications for the development of the dietetic profession and for career guidance offered to dietitians. Dietetic managers are encouraged to consider the personality of dietitians when making employment decisions and work allocations to help facilitate the most competent performance of a task. Similarly, dietetic educators are encouraged to consider the personality of student dietitians when providing guidance on possible areas of future employment in order to increase the likelihood that the work undertaken is suited to the attributes of the individual. Notably, the utility of personality traits in career guidance relies on the individual's awareness of their own personality traits. Therefore, career counsellors' use of tools such as the TCI and the provision of appropriate person-centred feedback may prove helpful both to the individual and recruitment outcomes. Furthermore, as personality appears to influence the decision to work in some, but not all, areas of dietetic practice, other strong determinants of practice areas such as demographic characteristics, location, skillset, and general preferences should also be considered.³⁰

The results of this study suggest some possible benefits of a greater understanding of personality traits within the dietetic profession. This sample of dietitians has already been shown to differ from the general population,¹⁶ and further delineation reflects small changes in personality relative to other dietitians. Opportunities for further research in this area continue to exist, including investigating reasons that dietitians choose to change their area of

dietetic practice, the influence of dietetic training on students' character traits, as well as the influence of dietetic educators' personality on learning experiences provided to students. As an example, the rapid growth of dietitians working in private practice has contributed to changes in the professional competencies that are developed during tertiary education. Therefore, the future experiences of dietitians working in private practice may not always be as 'new' as presently experienced, and dietitians with other personality types may subsequently be more attracted to this area of practice.

The present study described the associations between dietitians' personality profiles and the areas of dietetic practice in which they have previously worked. Notably, many (39%) of the dietitians in this study graduated less than 2 years ago, and their decisions around employment may be based on opportunity, rather than broader considerations for differences in skills required across areas of dietetic practice. Furthermore, the study utilised recall to identify the areas of dietetic practice in which participants had previously worked. It is possible that some workplaces could be interpreted as aligning with different areas of dietetic practice (such as research vs. academia/lecturing). Regardless, the information in this study was captured using a valid and reliable instrument for investigating personality traits, and is valuable for career guidance provided to students and dietitians.

Conflict of interests: None declared.

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