

# Investigating personality and conceptualising allied health as person or technique oriented

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## Abstract

**Objective.** Allied health (AH) includes many diverse professions, each with a unique contribution to healthcare, making it possible to consider these professions as person oriented (PO) or technique oriented (TO). This paper explored the personality traits of AH professionals from the perspective of both the PO or TO orientation and the individual professions.

**Methods.** AH professionals ( $n = 562$ ) provided demographic data and completed the Temperament and Character Inventory. Examination of the literature and a consultation process resulted in nine professions classified as PO and 10 classified as TO. Multivariate analyses compared levels of personality traits and demographic variables between the PO ( $n = 492$ ) and TO ( $n = 70$ ) groups, and the professions within the groups.

**Results.** Professionals in the PO group showed significantly higher levels of traits that emphasise person orientation attributes, such as being sociable, empathic and cooperative, compared with AH professionals in professions with an emphasis on TO.

**Conclusions.** Trends in personality traits among AH professionals were congruent with the PO and TO aspects of their chosen profession. This supports the usefulness of the PO and TO concepts in describing AH professions and may provide new clues for policy aiming to enhance job satisfaction, retention and career development.

**What is known about the topic?** The literature suggests that certain medical specialities can be classified as person (PO) or technique oriented (TO) and that individuals attracted to those specialties display traits that are similar to that orientation. There is scant information on the AH professions regarding similar person or technique orientations.

**What does this paper add?** The diversity of professions within AH allows a new approach to describing each profession as either PO (socially dependent, cooperative and relationship focused), or TO (focused on skills and procedures). The trend in personality traits of individuals in certain AH professions is compatible with the orientation of that profession. Findings suggest that individuals may be attracted to professions that favour a similar personality pattern to their own.

**What are the implications for practitioners?** Gaining an improved understanding of the AH professions and individuals who are attracted to them in a climate of workforce shortage and increasing multidisciplinary service demand. The findings provide a new approach to understanding the characteristics of AH professions according to the personalities they attract. This information could guide recruitment and retention policy, and assist in career counselling by providing greater insight into personality profiles that are best suited to certain professions.

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## Introduction

Very little is known about personality characteristics of allied health (AH) professionals and any potential influence of personality on career pathways, despite the large number of professions and diverse work undertaken by professionals considered to be

AH. Holland's classic theory on job–person fit<sup>1</sup> argued that personality traits provide insight about the type of work to which an individual is best suited. Similarly, Sutin and Costa suggested that personality is influential in occupational experiences because work is a core aspect of identity.<sup>2</sup> Research in other

health professions, particularly medical specialities and subspecialties,<sup>3–6</sup> supports a relationship between personality traits and career choice.

Personality can be defined broadly as the ‘dynamic organisation of the psychobiological systems that modulate adaptation to experience’ (see Cloninger,<sup>7</sup> p. 266). Every individual’s personality is expressed through habits, skills, values and goals, all of which shape our experiences and decisions, including work choices.

### Person and technique orientation

An emerging body of research on medical specialities discusses personality differences based on the concept of person-oriented (PO) and technique-oriented (TO) work.<sup>5,8</sup> First described by Yufit *et al.*,<sup>9</sup> the PO–TO approach proposes that PO professions (e.g. paediatrician, physician) have a leaning towards people and the entire patient, focusing on the development of a therapeutic relationship,<sup>5,8,9</sup> a ‘deeper personal and emotional involvement with patients’ (see Yufit *et al.*,<sup>9</sup> p. 91). In comparison, TO professions (e.g. anaesthetist, ophthalmologist) focus on technical skills, procedures and instruments.<sup>9</sup>

Yufit *et al.*<sup>6,9</sup> reported that the PO medical specialities of paediatrics, psychiatry and obstetrics–gynaecology scored more highly on traits of Nurturance, Intimacy and Autonomy than radiology, pathology and ophthalmology, which had high ratings for Dominance, Order and Narcissism and low ratings for Autonomy and Dependency. Supporting the notion of differences based on person or technique orientation, PO and TO medical specialities were found to differ on Rule-consciousness and Abstractedness<sup>3</sup> and Defence and Social Recognition.<sup>8</sup> This early work has been extended to argue that the perspective of PO or TO offers insight for individuals in refining career choices<sup>8</sup> and, further, that personality traits can predict PO or TO medical speciality choice.<sup>5</sup>

The PO–TO approach is germane to conceptualising the AH professions. AH comprises a number of diverse tertiary-trained professions providing specialised services aimed at the diagnosis, treatment and prevention of acute and chronic health conditions. The professions are allied with each other in order to provide appropriate multidisciplinary healthcare.<sup>10–12</sup> The TO or PO focus varies across professions.<sup>12</sup> For example, a sonographer performing an ultrasound, a pharmacist dispensing medication and a podiatrist debriding a diabetic foot ulcer are undertaking professional responsibilities requiring a technical focus, compared with the PO focus of a social worker counselling a person involved in family violence, an exercise physiologist advising strategies to minimise an office worker’s back pain or a speech pathologist working with the family of a developmentally delayed child.

Quality health care provision and professional standards require AH professionals to be both technically competent and to apply well-developed relationship skills, such as communication, in their specific work context.<sup>13</sup> The PO or TO classification does not diminish the importance of technical and relationship competence for all health professionals, or the preferred approach to relationships for individual AH professionals. The contribution of this approach is its conceptualisation of the core work of each profession (i.e. an orientation towards technique or person and a potential link with personality trends).

### Personality findings in health professionals

Personality has been shown to differentiate between health professions in several studies.<sup>3,5,14–16</sup> Rural Australian doctors were characterised by openness,<sup>15</sup> TO specialities (surgeons and anaesthetists) exhibited higher levels of tough mindedness than PO specialities (family practitioners)<sup>3</sup> and anaesthetists were characterised by lower openness and neuroticism compared with other specialities.<sup>17</sup>

Recent studies of personality in Australian rural doctors, nurses and medical students using the Temperament and Character Inventory (TCI) R-140<sup>18</sup> found higher levels of Persistence, Self-Directedness and Cooperativeness compared with urban counterparts.<sup>19–22</sup> Table 1 provides a summary of findings on specific personality traits in health care professionals in studies using the TCI.

The literature describing personality in AH professionals or seeking to understand the influence of personality on AH professional career choice is scant. First-year Australian students in both medical radiation science and speech pathology exhibited characteristics compatible with being a health professional (e.g. dependability and empathy); however, clear personality differentiation between the two groups was not evident.<sup>24</sup> Differences were found between practicing physiotherapists (sensing-judging temperament) compared with occupational therapists (sensing-perceiving or intuitive-feeling temperament),<sup>25</sup> medical laboratory scientists seemed to have a preference for working alone on highly controlled and predictable tasks<sup>26</sup> and some pharmacists self-selected work environments where the demand for patient contact was reduced.<sup>27</sup>

A recent study by the authors using the TCI reported AH professionals to be high or very high in personality traits of Reward Dependence, Persistence, Self-Directedness and Cooperativeness compared with the general population, and those with experience working in remote areas were higher in Novelty Seeking than those without remote experience.<sup>28</sup> A qualitative study investigating AH professionals in rural or remote areas described qualities of independence, resourcefulness, flexibility, adventurous, organisational ability and sensitivity to culture.<sup>29</sup>

Building on the literature showing links between personality and medical professions, the aim of the present study was to provide a description of the personality traits observed in Australian AH professionals based on the person or technique orientation of the professions. The study further asks whether there are different levels of certain traits in the individual professions. The usefulness of this information for individuals and organisations to address career satisfaction, recruitment and retention is discussed.

### Methods

The study was a cross-sectional design (self-report online questionnaire). Participants were Australian AH professionals recruited by snowball sampling through Services for Australian Rural and Remote Allied Health (SARRAH), the peak body for AH professionals in regional and remote Australia; however, AH professionals working across Australia were eligible to participate. (For more details, see Campbell *et al.*<sup>28</sup>)

**Table 1. High and low descriptors of temperament and character traits and key findings from the literature using the Temperament and Character Inventory in health professionals**  
GPs, general practitioners

Trait	Descriptors: low ↔ high scorers	Literature findings
Novelty Seeking	Exploratory activity in response to novelty: Orderly and reflective ↔ Exploratory and curious	Higher in: Trainee anaesthetists compared with specialist anaesthetists, but lower in community GPs <sup>23</sup> Medical students planning to specialise in surgery, emergency medicine or obstetrics/gynaecology compared with those interested in primary care and paediatrics <sup>4</sup> Nurses than doctors <sup>22</sup> Australian GPs than average population norms <sup>19</sup>
Harm Avoidance	Worry in anticipation of problems: Bold and confident ↔ Worrying and pessimistic	Higher in: Australian specialist anaesthetists compared with physicians, surgeons and GPs <sup>23</sup> Medical students planning to specialise in primary care compared with those interested in surgery <sup>4</sup> Lower in: Rural physicians <sup>19</sup> Medical students with a strong rural intention <sup>20</sup>
Reward Dependence	Dependence on approval of others: Not influenced by others ↔ Needs to please	Higher in: Trainee anaesthetists compared with specialist anaesthetics <sup>23</sup> Nurses than doctors <sup>22</sup>
Persistence	Industriousness of behaviour despite obstacles: Quitting and pragmatic ↔ Ambitious and industrious	Higher in GPs; <sup>19</sup> high in nurses <sup>21</sup>
Self-Directedness	Responsibility, goal orientation and self-confidence: Purposeless and ineffective ↔ Purposeful and reliable	Higher in: Rural doctors and nurses <sup>22</sup> Doctors than nurses <sup>22</sup> Medical students with a strong rural intention than those with a weaker rural intention <sup>20</sup>
Cooperativeness	Tolerance, cooperativeness & empathy: Critical & unhelpful ↔ Empathic & compassionate	Higher in: Physicians and anaesthetists than the normal population <sup>23</sup> Rural doctors and nurses <sup>22</sup> Rural-intention medical students <sup>20</sup> Physicians than anaesthetists <sup>23</sup>
Self-Transcendence	View of self in relation to the universe as a whole: Materialistic and practical ↔ Humble and spiritual	Lower in: Rural GPs <sup>19</sup> Physicians and anaesthetists than in the normal population <sup>23</sup>

### Materials

Demographic data included profession, year of graduation, current work role, geographical classification of current work location, as well as gender, year of birth, marital status and dependents. Personality was measured using the TCI R-140,<sup>18</sup> a self-report survey consisting of 140 Likert scale questions (1 = definitely false; 5 = definitely true).

The TCI was chosen because it is derived from a psychobiological model of personality and a theoretical perspective on how brain structure, brain organisation and environment interact throughout development.<sup>7</sup> It provides a measure of the dynamic personality configuration of healthy people. The TCI is empirically related to the Big Five model of personality<sup>30</sup> and shares variance with all Big Five traits. It is widely validated<sup>14,31,32</sup> and identifies the seven basic dimensions of personality by independently assessing inherited (temperament) and developmental (character) traits. According to Cloninger's psychobiological model,<sup>7</sup> temperament is defined as those components of personality that are heritable, developmentally stable, emotion based

and not influenced by sociocultural learning. Character traits reflect personal goals and values and are subject to sociocultural learning.<sup>18</sup> (See Table 1 for the trait descriptors.)

### Classification of PO and TO

The AH professions included in the present study are listed in Table 2. An investigative consultation process was undertaken to understand each profession's core work and emphasis on PO and TO. This included extensive discussion with multiple experienced people from each profession and discussion with government AH advisors in regard to the best fit for each profession as PO or TO. Comparison with the literature<sup>3,10,12</sup> and examination of professional association and government career advisory<sup>33</sup> internet information was used to triangulate the consultation information. Table 2 includes the final allocation of each profession to either the TO or PO group. It is acknowledged that for any individual the actual PO or TO demands may be influenced by the work context.

Statistical analysis

Demographic data and TCI trait scores were entered in SPSS version 19 (SPSS Inc., Chicago, IL, USA) for analysis. Statistical analysis was descriptive of the whole sample, and comparative between PO and TO groups using independent samples *t*-test. Differences between professions ( $P > 0.05$ ) were analysed using ANOVA (post hoc comparisons using Bonferroni's test) for

**Table 2. Demographic variables and classification by person-oriented or technique-oriented profession**

Unless indicated otherwise, data are given as the mean  $\pm$  s.d. or as the number of respondents in each group, with percentages in parentheses. PO, the profession was designated as person oriented; TO, the profession was designated as technique oriented

Variable	Whole sample	PO group	TO group
No. women (%)	503 (89.5)	448 (91.8)	55 (78.6)
Mean age (years)	36.7 $\pm$ 11.2	36.6 $\pm$ 11.4	37.5 $\pm$ 9.9
Mean experience (years)	12.1 $\pm$ 10.1	11.8 $\pm$ 10.1	13.8 $\pm$ 9.8
No. with a clinical role	428 (76.2%)	384 (78.7%)	44 (62.9%)
No. partnered	406 (72.2%)	351 (71.6%)	38 (55.1%)
No. with dependants	211 (37.5%)	180 (36.7%)	31 (44.9%)
Aboriginal health worker <sup>A</sup>	3 (0.5%)	PO	
Audiologist <sup>A</sup>	4 (0.7%)		TO
Dietitian or nutritionist	85 (15.1%)	PO	
Exercise physiologist <sup>A</sup>	4 (0.7%)	PO	
Health promotions <sup>A</sup>	8 (1.4%)		TO
Imaging	14 (2.5%)		TO
Medical laboratory science <sup>A</sup>	1 (0.2%)		TO
Occupational therapist	94 (16.7%)	PO	
Optometry <sup>A</sup>	5 (0.9%)		TO
Oral health <sup>A</sup>	3 (0.5%)		TO
Orthotics or prosthetics <sup>A</sup>	3 (0.5%)		TO
Orthoptics <sup>A</sup>	1 (0.2%)		TO
Pharmacist <sup>A</sup>	8 (1.4%)		TO
Physiotherapist	105 (18.7%)	PO	
Podiatrist	23 (4.1%)		TO
Psychologist	48 (8.5%)	PO	
Social worker	53 (9.4%)	PO	
Speech pathologist	98 (17.4%)	PO	
Other <sup>A</sup>	2 (0.4%)	PO	
Total	562 (100%)	492 (87.5%)	70 (12.5%)

<sup>A</sup>For these categories,  $n < 10$ . Therefore, the data were included in PO–TO analysis, but were excluded from professions analysis.

professions where  $n > 10$ . Because of the small number of men in the sample, we included only women in the analysis of professions. Internal consistency (Cronbach's alpha  $\pm$ ) of the TCI scales ranged from 0.76 to 0.89.

The University of Queensland Behavioural and Social Sciences Ethical Review Committee provided ethics approval for the study (#2010000872).

Results

The whole sample ( $n = 562$ ) was largely female, partnered and working in clinical roles in a range of geographical areas across Australia. The PO–TO classification resulted in 492 participants in the PO group and 70 in the TO group. Table 2 shows key demographic variables with comparative data for the two groups, as well as the classification of professions as TO or PO. As reported previously,<sup>28</sup> women had lower levels of Harm Avoidance ( $P = 0.059$ ) and higher levels of Reward Dependence ( $P = 0.001$ ) and Cooperativeness ( $P = 0.008$ ).

The whole sample means for each TCI trait are given in Table 3. Compared with previously published population norms,<sup>34</sup> the sample was high or very high in all personality traits except Self-Transcendence, which was low, and Harm Avoidance, which was average. Comparisons of the means between the PO and TO groups using *t*-tests showed that Reward Dependence, Self-Directedness, Cooperativeness and Self-Transcendence were all significantly higher in the PO group.

Using ANOVA to explore TCI mean scores between individual professions revealed that several PO professions exhibited a trend for higher levels in two character traits, namely Self-Directedness and Cooperativeness (see Table 4). Post hoc tests indicated significantly higher levels of Self-Directedness among professionals in psychology (PO) and social work (PO) compared with imaging (TO), dietetics (PO) and speech pathology (PO). Levels of Cooperativeness for imaging (TO) were significantly lower than for psychology (PO), social work (PO) and occupational therapy (PO). No other significant differences were detected.

Discussion

This study describes the levels of personality traits in AH professionals classified on the basis of the person or technique orientation of each profession. There is an emerging

**Table 3. Comparison of temperament and character for the whole sample and by person or technique orientation**

Data are the mean  $\pm$  s.d. \**P*-values ( $P < 0.05$ ). TCI, temperament and character inventory

TCI trait	Whole sample ( $n = 562$ )		Mean scores for PO group ( $n = 492$ )	Mean scores for TO group ( $n = 70$ )	<i>P</i> -value	Cohen's <i>d</i> (effect size)
	Mean score	Population rank <sup>A</sup>				
Novelty Seeking	55.5 $\pm$ 8.4	High	55.6 $\pm$ 8.5	55.0 $\pm$ 7.7	0.555	–
Harm Avoidance	54.2 $\pm$ 12.0	Average	53.9 $\pm$ 12.0	55.7 $\pm$ 11.8	0.264	–
Reward Dependence	71.9 $\pm$ 9.6	Very high	72.3 $\pm$ 9.4	68.7 $\pm$ 10.6	0.004*	0.370 (small)
Persistence	72.4 $\pm$ 9.5	Very high	72.2 $\pm$ 9.4	73.6 $\pm$ 9.7	0.254	–
Self-Directedness	77.4 $\pm$ 10.0	Very high	77.8 $\pm$ 9.7	74.8 $\pm$ 11.0	0.036*	0.300 (small)
Cooperativeness	83.4 $\pm$ 7.3	Very high	84.0 $\pm$ 7.0	79.5 $\pm$ 7.8	0.000*	0.610 (moderate)
Self-Transcendence	45.0 $\pm$ 11.0	Low	45.5 $\pm$ 11.0	41.1 $\pm$ 10.9	0.002*	0.400 (small)

<sup>A</sup>Whole sample means were ranked by population norms. This is the ranking of the whole sample mean for each TCI subscale against the published TCI normative percentile rankings for population norms. Very low = 0%–16.7%; low = 17%–33%; average = 34%–66.7%; high = 67%–83.3%; very high = 84%–100% (see Cloninger *et al.*<sup>18</sup>).

**Table 4. Means ( $\pm$ s.d.) scores for Self-Directedness and Cooperativeness according to profession**

\* $F_{(7,460)} = 4.2, P < 0.001$ ; eta squared = 0.06 (medium effect size). † $F_{(7,460)} = 3.76, P < 0.001$ ; eta squared = 0.05 (small effect size).  
PO, the profession was designated as being person oriented; TO, the profession was designated as technique oriented

PO or TO classification	Profession	<i>n</i>	Self-Directedness	Cooperativeness
PO	Psychology	42	82.7 $\pm$ 9.9*	85.2 $\pm$ 6.2 <sup>†</sup>
	Social work	43	81.3 $\pm$ 7.5*	86.1 $\pm$ 5.2 <sup>†</sup>
	Occupational therapy	89	78.2 $\pm$ 8.1	85.3 $\pm$ 6.1
	Physiotherapy	90	77.9 $\pm$ 9.5	83.9 $\pm$ 7.1
	Speech pathology	97	76.4 $\pm$ 10.3*	83.4 $\pm$ 7.0
	Dietetics and/or nutrition	79	75.3 $\pm$ 10.9*	82.8 $\pm$ 7.3
TO	Imaging	11	72.4 $\pm$ 10.8*	77.5 $\pm$ 6.8 <sup>†</sup>
	Podiatry	17	75.3 $\pm$ 8.4	80.5 $\pm$ 9.1

understanding of the PO–TO classification and personality in medical professions,<sup>8,19</sup> but very little in AH.<sup>35</sup> This is a major gap given the contribution of AH professionals to health care.

Our large sample represented a range of different AH professions working in mostly clinical roles across a variety of Australian workplaces and geographical regions. As a whole, the sample scored higher than population norms<sup>34</sup> on nearly all TCI traits, indicating an AH professional workforce with similar trends in personality traits to those found in medicine<sup>19,36</sup> and nursing.<sup>21,37</sup>

The PO and TO groups differed with regard to several traits. For example, the PO group were higher in levels of Reward Dependence, Self-Directedness, Cooperativeness and Self-Transcendence compared with the TO group. This appears to be a logical fit. People who are more highly reward dependent and cooperative are more socially attached and tolerant, empathic and helpful. In general, PO professions are likely to be most effective in their work by developing strong, trusting and influential relationships with individuals (e.g. a dietitian recommending a change in eating habits). Their propensity to build relationships could also assist professionals who need to be in close physical proximity to patients for extended periods (e.g. a rehabilitation physiotherapist mobilising a patient). In contrast, the work locations of TO professions often physically or emotionally separate them from their client (e.g. a pharmacist behind a shop counter,<sup>38</sup> a medical laboratory professional reporting results over the phone or a radiographer behind a radiation safety barrier<sup>39</sup>).

The findings support the *a priori* classification of each profession to the PO or TO group. For example, those in the imaging profession (the largest group of TO professionals) were the most frequently different from those in the PO professions. Thus, the trend in personality traits of individuals is compatible with the orientation of that profession and suggests that individuals may be attracted to and find enhanced job satisfaction in professions that favour a similar personality pattern to their own.

The AH workforce is characterised by gender imbalance<sup>11</sup> and this was reflected in our sample. Gender differences found in our sample<sup>28</sup> align with previously published TCI findings.<sup>4,18,22</sup> This must be considered when looking at differences between professional groups and suggests potential for professions to be affected by gender-based differences, which will, in turn, influence the values, priorities and image of the profession.<sup>40</sup>

The differences we detected between PO and TO in levels of certain traits adds new information to contemporary discussions on recognition of advanced skills within the AH professions.

For example, workplace policy may designate a particular PO position ‘specialist’ if it required technical expertise beyond the usual scope of practice of that profession. Conversely, a TO position could be deemed ‘specialist’ if it required highly developed person-oriented skills. To illustrate, a pharmacist (TO) working in a predominantly cross-cultural environment could be recognised for advanced communication skills and cross-cultural competence. In comparison, a physiotherapist (PO) may be recognised for advanced technical expertise in managing specific conditions above and beyond the usual competencies and knowledge required. Understanding their personality trait pattern and gaining insight into their natural tendency towards people or technique is of practical importance to individuals. People considering an AH career could reflect on their personal preference for technical skills or a person-oriented focus when selecting between the professions. The PO–TO classification may also provide insight to qualified professionals planning career specialisation (which may require additional technical expertise) or moving into management (requiring people skills).

Recruitment policy for short-term workforce in areas of need may also find the PO–TO classification informative to help match professionals to their work environment. For example, professionals who undertake locums or short-term backfill need to be able to step into a workplace, effectively undertake the tasks and leave the results for the next professional to pick up. This may be more easily accomplished by TO professions because the outcomes of their work rely on successful and accurate task completion (e.g. providing quality X-rays or dispensing medications). In contrast, PO professions must prioritise the patient relationship, building a holistic understanding of the patient and their context in order to be most effective. Typically, establishing this level of trust and insight takes a period of time. Regions that experience difficulties recruiting a PO workforce may wish to consider how the community could implement strategies that support the short-term PO professional to establish trusting relationships more quickly in order to capitalise on that professional’s time with them. For example, in remote Aboriginal communities, using the influence of community elders and partnering with Aboriginal health practitioners and local staff<sup>29</sup> may assist in promoting the health care services available from the AH professional.

Certain traits did not discriminate between the PO and TO groups. Novelty Seeking and Persistence were high and Harm Avoidance was average in both groups. This could mean that an individual’s preference for either a PO or TO profession is not

overly influenced by their levels of curiosity (Novelty Seeking), anxiety (Harm Avoidance) or drive (Persistence). It may further suggest that the AH professions are generally viewed as providing intrinsically interesting and varied career opportunities that are sufficiently challenging to satisfy high curiosity, but not to the point of deterring someone with average levels of anxiety.

This work is exploratory. The conceptualisation of AH professions as PO or TO is potentially a continuum. The literature supports the notion that individuals are likely to self-select, or possibly be directed by managers, towards work roles that suit their individual inclination towards people or technique.<sup>27</sup> For example, a TO professional, such as a rehabilitation audiologist, a behavioural optometrist working with special needs children or a medical radiation therapist, may (in certain circumstances and depending on the clientele) need to be more people oriented. Similarly, a PO physiotherapist working in a large intensive care unit or a dietitian in food manufacturing may need to be technique oriented. It is also possible that individuals intentionally seek skill development to better equip them for a new role. For example, a medical laboratory scientist who manages a large laboratory of junior staff may undertake training in communication and management to enhance his/her role and, in doing so, influence levels of certain character traits, such as Cooperativeness. These exploratory scenarios demonstrate potential reasons for differences between professions and individuals. The PO–TO concepts could be usefully applied to create policies and professional development programs that recognise and predict the career development needs of the AH professions and the individuals within those professions.

#### Limitations and further directions

Although the total sample was large, the subset of TO professions was considerably smaller than the PO professions. In addition, some professional groups were small. Snowball sampling and a lack of comprehensive comparative workforce data<sup>11</sup> precluded the calculation of a response rate. These limitations suggest caution in generalising the results, and further research in specific professions has the potential to further refine the findings.

Further development of the PO – TO classification could include investigation as to whether positions in specific geographical locations or requiring specialisation demand emphasis on either PO or TO approaches. Individual AH professional opinion as to whether their own role was PO or TO would also be informative.

#### Conclusion

In conclusion, this exploratory research has examined personality in the AH professions from the perspective of the profession and its orientation to technique or people. It has also looked closely at personality trait similarities and differences between the professions. The findings have implications for employers and policy makers in the selection, training and support of AH professionals to maximise workforce recruitment and retention. The findings have advanced our understanding of the dominant traits and trait patterns of AH professionals and introduced a new approach for describing the professions and individuals attracted to them.

#### Competing interests

The authors declare there are no competing interests.

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