Determinants of Undergraduate Program Choice in Two Health Science Fields: Does Personality Influence Career Choice?

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Abstract
One hundred and twelve first year health science students enrolled in medical radiation sciences (n = 76) and speech pathology (n = 36) from the Faculty of Health Sciences, the University of Sydney participated in a survey designed to determine factors influencing career choice and the role of personality in this process. Findings indicated that the two groups of health science students were similar on major factors explored in our study. In terms of dominant personality types, students from both groups were more likely to be Guardians and Idealists, thereby suggesting that personality does not have an influential role in their career choice. Both groups of students were similar in the reasons influencing their career decision, including interest in working in a health science field, working with and helping others. These reasons were endorsed strongly. The level of knowledge both groups of students possessed regarding their chosen career was similar although on all working dimensions a proportion of students reported no knowledge of this information. Of relevance to the above findings is the fact that 36% of the total sample indicated that they were not enrolled in their first career choice, with the majority of these students selecting a different health science field as their first preference. The implications of these findings for university educators and career advisors are discussed in the paper.

Keywords: personality, career choice, allied health, health science education, first year university students

Introduction
The focus of this paper is to determine whether first year students from two distinct health science fields, namely medical radiation sciences (MRS) and speech pathology (SP) differ from each other in terms of personality, their success in obtaining entry into their first preference of a university degree, the reasons for their choice of undergraduate program, and/or their knowledge of future career prospects.
and working conditions.
More specifically, our interest in similarities and differences in personality characteristics of health science students is largely motivated by a need to determine the ‘fit’ between suitability of career choice and subsequent work role. The assumption that ‘goodness of fit’ is likely to lead to successful entry into the chosen profession, work satisfaction, and retention of personnel in the workplace is frequently cited (Rovezzi-Carrol and Leavitt 1984).

Literature Review
Holland argues that career choices represent an extension of personality and many professional groups have been described as possessing particular personality characteristics (Holland 1973). Studies to date that have been conducted within the health science context can be classified into two main types: those involved with university students during the course of their studies; and those involved with practitioners in a work context.

Studies conducted with university students:
The few studies that have been conducted on health science students lend only partial support to group differences in personality characteristics. Firestone (1990) reported significant differences on certain personality traits including dominance, autonomy and aggression between health science students enrolled in four university degree programs (cardiorespiratory sciences, medical technology, physical therapy and physician’s assistant) but no significant differences on other personality traits (e.g. nurturance, affiliation and self control). To account for these findings, the dissimilar work roles (e.g. client-centred, task oriented) of different professional groups has been singled out as a possible major contributing factor in attracting students possessing different personality characteristics (Avi-Itzhak and Ben-Shern 1993). However, the degree of commonality across the four health science student groups reported by Firestone (1990) on certain personality traits should be noted.

Other investigations with health science students have focused on personality changes during students’ university degree programs as a product of professional socialization and/or educational experiences (Rovezzi-Carrol and Leavitt 1984; Donohue 1994). Donohue (1994) reported significant increases in 13 of the 18 scales from the California Psychological Inventory (e.g. dominance, responsibility, tolerance) when entry level Occupational Therapy (OT) students’ scores were compared with their scores following two years of academic and clinical education.

Finally, there has been some interest in within profession comparisons on personality traits. One such approach is to examine the match between personality characteristics of students and clinicians. Brown (1989) reported that fourth year OT students scored significantly higher on certain personality characteristics (e.g. affiliation, nurturance) compared to clinicians and that clinicians scored significantly higher than their students on other personality characteristics (e.g. endurance, harm avoidance).
Another approach illustrating a within profession comparison was conducted by Tutton (2002). He reported personality differences between first year medical students who performed well in different types of assessments and across different medical specialties such as community medicine, paediatrics and surgery. The results of this study are interesting in that they suggest that students with certain personality traits are attracted to different specialties within the one profession. This highlights possible complexities in detecting personality differences between professional groups, if personality differences exist within specialties of the one profession.

There are many limitations to the findings of studies conducted with university students. Comparisons tend to be limited largely to certain health science fields (e.g. medicine, OT), with little research on students from other health science fields. The type of assessment of personality characteristics has not been consistent. For example, some studies use Adjective Checklists (Firestone 1990) while others use more standardized tests such as the Myers-Briggs Type Indicator (Rovezzi-Carrol and Leavitt 1984) or the California Psychological Inventory (Donohue 1994; Tutton 2002). Little attention has been devoted to longitudinal research allowing the possibility of detecting change in personality traits over time. Studies that have included a longitudinal component report significant change (Rovezzi-Carrol and Leavitt 1984; Donohue 1994).

Studies conducted with health professionals:
In relation to allied health professionals (as opposed to health science university students), Lysack et al. (2001) reported that OTs and physical therapists (PTs) differed significantly in their personality type as assessed by the Keirsey-Bates Personality Inventory. PTs were more likely to be ‘Guardians’ (sensing and judging) and OTs more likely to be ‘Artisans’ (sensing and perceiving). The researchers suggest that these differences were likely to be a function of their differing work roles, OTs being more likely to be people-oriented and concerned about psychological well-being, and, PTs more likely to be task-oriented and concerned about impaired body structures. However, Lysack et al’s research (2001) was conducted with practitioners not students, hence it is unknown whether these differences in personality existed prior to and during student enrolment in university studies. This is an important question in assessing the role played by personality in career choice. Hence, the findings of their study may not be strictly comparable to the findings of studies based on health science university students.

The higher education context:
Renewed interest in career choice and subsequent work role stems from current pressure to increase retention rates of undergraduate health science students and retention rates of graduates in the workforce. Retention of allied health professionals on a global scale is a growing and important area with some health science fields, for example, nursing and MRS suffering heavy attrition rates (Summers et al. 2000; Brownson and Harriman 2001). Similarly, within the higher education sector, student retention rates have attracted attention. Currently in Australia there is much research into
what has been called ‘the first year experience’ (McInnes et al. 1995). The impetus for this research is to improve adjustment into university life for new students. In so doing, it is hoped that student retention will be increased, thereby cutting the financial losses that have traditionally been borne by universities. In addition to the impact on universities, poor retention rates of students results in personal and financial costs to the students, where an unsuitable/incorrect career decision has been made.

 Whilst institutional responses such as the ‘first year experience’ have been shown to have a beneficial effect on student retention (Guthrie 1987; Garcia 1991), they ignore some of the more fundamental questions that may be pertinent to students enrolled in vocational courses such as those in the allied health sciences as opposed to more avocational or generic courses such as arts and science. What attracts students to health science fields? What motivates them to choose a profession in the health care sector where government funding, at least in the public domain has decreased dramatically in recent years (Gardner 1997), and workloads have reportedly increased, often due to labour shortages (Lauzon 2001)? In addition the salaries of health science graduates are less than many other professional groups so this cannot be considered an inducement to enroll in health science degrees. Do students make an informed choice about health fields in which they wish to work and the type of working conditions they will be exposed to? Are students matched in terms of personality type and their future work role? Does academic performance in Secondary School determine the health science field in which students gain entry? Answers to these questions may provide an alternative approach to improving retention rates. Evidence based information provided to potential students while they are in the process of choosing a career may enhance the success of their choice.

 Obtaining entry into one’s first preference is highly competitive in the Australian university system. In the state of New South Wales, it is not unusual for students to gain entry into their second or third preference. Entry is based on a University Admissions Index (UAI) which is derived from academic performance in the last two years of High School. If students do not gain entry into their first career preference, then it may be hypothesised that their knowledge of the profession and associated working conditions may be limited. In addition, their motivation for continuing in the course in which they gained acceptance and their continuing employment within the profession may be less than optimal.

 Our study included students from two health science fields, namely MRS and SP. These student groups were chosen since on the surface at least, their work roles appear different. Thus if these two health science fields attract students with different personality types then there may be grounds for a larger scale study that includes students from other health science fields (e.g. PT, OT, nursing, orthoptics), with the potential results being of use in advising students when making career choices. Accordingly, a brief description of the work roles of SP and MRS graduates, in the Australian health care sector follows.
Speech pathology graduates work in health, education, disability or private practice settings. They are responsible for the assessment and treatment of people with communication and swallowing disorders. Typically, intervention involves intensive one on one or small group work with clients, often over an extended period of time. Speech pathologists need to establish professional working relationships with clients, other professionals, colleagues and management personnel within their organisation. Specific information about the roles, responsibilities and work practices of speech pathologists in Australia can be found in the Competency-based Occupational Standards for Speech Pathologists (Speech Pathology Association of Australia 2001).

Graduates of MRS are employed in public and private health care settings as diagnostic radiographers, nuclear medicine technologists or radiation therapists. They work closely with clients and a health care team using radiation for medical diagnosis or therapeutic purposes. A diagnostic radiographer uses x-ray equipment to create anatomical images and may see a large number of clients within a single working day. A nuclear medicine technologist uses radiopharmaceuticals and gamma cameras to image physiological function and would spend 30-60 minutes with each client. A radiation therapist plans and administers high levels of radiation for therapeutic purposes and would treat the same client daily for a number of weeks. MR scientists from all three strands must have good interpersonal skills to effectively communicate with clients and staff. Decreasing health care budgets have resulted in a working environment with low staffing levels and high workloads.

Against this background our research examines whether there are differences in personality type, degree to which students are successful in obtaining entry into their chosen career, the reasons for their career choice and their level of knowledge about their career and working conditions in first year health science students enrolled in the fields of MRS and SP.

Methods

The Questionnaire

The questionnaire contained three sections. The first section consisted of demographic information including age, gender, health science field and student status (local/international) using close-ended questions.

The second section sought information regarding choice of undergraduate program. It contained items gauged to estimate the level of interest students have in their chosen health science field, their preference to work with and help people, and the influence of others on their choice of undergraduate program. Students were asked to indicate their level of agreement with each of the items using a 10 point Likert scale (1=Strongly disagree, 10=Strongly agree).

Students were also asked if the field in which they are currently enrolled was their first choice and if not to specify their first preference. In addition, information was gathered on the level and types of student knowledge about their future career, including job prospects, working conditions, starting
salary and whether they have personal experiences of others who are working in the chosen health science field. Responses to these items were measured using 3 discrete categories namely, no knowledge, some knowledge and considerable knowledge.

The third section contained the Keirsey Temperament Sorter II (Keirsey 1998) personality scale. This scale was chosen in preference to other scales for several reasons. Firstly, Keirsey reports no gender differences with the use of this scale. This is an important consideration given the differences in gender breakdown between students enrolled in the two professional fields under study, and the reported gender differences using other scales (e.g. Tutton 2002). Secondly, the 70 items contained in the scale take approximately 10 minutes to complete, unlike other scales that can take considerably longer (e.g. one hour for the California Psychological Inventory). Given that the questionnaire also contained other sections for participants to complete time constraints with volunteer participants was an important consideration. Finally, since Lysack et al. (2001) reported differences between OTs and PTs, albeit health professional groups, this was an important reason for selecting this scale.

Each of the 70 scale items contains an ‘a’ or ‘b’ option. The items are then grouped into the following four personality types: Artisans (SP-Sensing Perceiving), Guardians (SJ-Sensing Judging), Idealists (NF-Intuition Feeling) and Rationals (NT-Intuition Thinking). Within each of these personality types there are four subtypes. For the purpose of this study only overall personality types are examined. Each personality type is considered in terms of the following dimensions: language (referential, syntactical, rhetorical), intellect (tactics, logistics, strategy, diplomacy), interest (education, preoccupation, vocation), orientation (present, future, past, place, time), self-image (self-esteem, self-respect, self-confidence), values (being, trusting, yearning, seeking, prizing, aspiring), and, social role (mating, parenting, leading). According to the author of the personality scale, the four personality types differ most noticeably in the domain of values. However, personality type differs across all other dimensions as well. Artisans and Guardians share a sensing component whereas Idealists and Rationals share an intuition component. For example, on the dimension of self-image, Artisans are artistic, Guardians are dependable, Idealists are empathic and Rationals are ingenious. In terms of intellect, the dominant feature for Artisans is tactical, for Guardians logistical, for Idealists diplomatic and for Rationals strategic.

Sampling Procedure

First year MRS and SP students enrolled in the Faculty of Health Sciences were invited to participate in the study. Their participation took place on a voluntary basis in compliance with the ethical guidelines of the University of Sydney. Students were assured that their data would remain confidential.

Participants

A total of 112 first year health science students completed the questionnaire. The total study sample consisted of 76 MRS students and 36 SP students. This
number represents a response rate of 78% for MRS and 35% for SP resulting in an overall response rate of 56%. The sample was predominantly female (72%), with 33 male participants from MRS and one male participant from SP. The male/female ratio obtained in our study for both of these health science fields is characteristic of the total enrolment for each of these professional groups. The students' ages ranged from 17 to 45 years with a mean age of 19.6 years (SD = 3.7). Seventy two percent of the sample was aged between 18 to 19 years. The majority of students were local (94%) with only 3 international students. MRS students represented the three strands of MRS, diagnostic (n = 35), nuclear medicine (n = 12) and radiotherapy (n = 25).

Results

Data Analysis

Data were analysed using the statistical package for the social sciences (SPSS). Chi square was used to analyse categorical data and t tests were conducted on continuous data.

What is the personality type of MRS and SP health science students?

The personality type of the two health science student groups is presented in Figure 1 below. Fourteen students (9 MRS and 5 SP) could not be classified into a particular personality type and were removed from subsequent analyses. In terms of gender breakdown, 5 female and 4 male students were from MRS and 5 female students from SP. Thus the original gender breakdown of participants would not have been disturbed.

Based on the results, 98 students could be classified across four distinct personality types and two overlapping types: Artisan/Guardian and Idealist/Rational. The overlapping types require that a person makes a decision as to which one is more representative of their personality as there are similarities...
based on the sensing-intuition dimension. The reason that fourteen students could not be classified was because their results did not produce a distinct personality type on the sensing-intuition dimension. The scale's author suggests that in such cases the use of the Temperament Sorter should be replaced with the Keirsey Four Types Sorter which identifies the basic temperament type - NF, NT, SP, SJ. Because of the nature of our study, that is a single sampling of participants, such a follow-up assessment was not possible. The majority (52%) of students have a Guardian personality type followed by an Idealist personality type (20%).

Are there gender differences in personality type?

With the combined sample of MRS and SP students, no gender differences in relation to personality types was found ($\chi^2 = 1.9$, df = 5, $p = 0.9$). This analysis could not be conducted on SP participants since the group contained only one male and there were insufficient numbers across the three strands of MRS to make a comparison.

Do students from the two health science fields differ in their personality type?

Students from the two health science fields were not significantly different on the distribution of personality types ($\chi^2 = 4.7$, df = 5, $p = 0.5$). Among the 67 MRS students, 54% were Guardians and 18% were Idealists. Among the 31 SP students, 48% were Guardians and 26% were Idealists. Students from the three MRS strands were also compared on the distribution of personality. No significant difference across the strands was found ($\chi^2 = 7.4$, df = 10, $p = 0.7$).

Do students from the two health science fields differ in their success of gaining entry into their first preference of undergraduate program? If students do not gain entry into their first preference, what was their first preference?

Overall, 64% of students were enrolled in the health science field of their first choice. MRS and SP students did not differ in terms of the proportion of students gaining entry into their first preference ($\chi^2 = 1.0$, df = 1, $p = 0.3$). For another 29% the first choice was still within a health science field (e.g. medicine, PT, OT), while for the remaining 7% their first choice was outside a health science field (e.g. science/arts, mining engineering). It is interesting to note that for MRS students where their first preference was in a non-health science field, ten of the eleven fields could be classified as technical (e.g. business information technology, software engineering).

Do students from the two health science fields differ on the reasons that determined their choice of undergraduate programs?

Students were asked to indicate to what extent they agreed with statements regarding the reasons for their choice of undergraduate program. The possible range of scores was 1 (minimum) to 10 (maximum), the higher the score the greater the degree of influence in career choice. Data from this scale were treated as having the characteristics of continuous interval data. This is commonplace in the social sciences (e.g. Lincoln, Adamson et al. 2001) when judgements of this kind (using an 'interval scale' with equal distance between each point) are required.
Accordingly, the t test which is described as ‘robust, meaning that it is more or less unaffected by moderate departures from the underlying assumptions’ (Howell 2002) was employed. The t test results together with the means and standard deviations for both groups are presented in Table 1.

The two health science fields were compared across the four items. Students from both groups were strongly influenced in their choice of program by their interest in a health science field, their wish to help others, and the rewarding aspects of working with people. The influence of others (friends and family) on their choice of undergraduate program was found to be only moderate.

T test results indicate that on each of the 4 items no significant difference between the two groups was found. Students were also asked to indicate any other reasons that influenced their choice of career. Thirty four students (21 from MRS and 13 from SP) responded to this question. Some students specifically mentioned that their UAI score determined their choice. For many, inside knowledge, work experience, family experience and their desire to further their knowledge (e.g. linguistics, biology) in their respective field was mentioned as a determinant of their choice.

Table 1: Comparison of MRS (n = 76) and SP (n = 36) students on their reasons for choice of health science field

<table>
<thead>
<tr>
<th>Item</th>
<th>Health field</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest in a health science field</td>
<td>MRS</td>
<td>8.1</td>
<td>1.9</td>
<td>-1.1</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>8.5</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find helping others rewarding</td>
<td>MRS</td>
<td>8.1</td>
<td>2.2</td>
<td>-1.9</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>8.9</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like working with people</td>
<td>MRS</td>
<td>8.0</td>
<td>2.0</td>
<td>-1.9</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>8.7</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence of friends and/or family</td>
<td>MRS</td>
<td>6.0</td>
<td>2.4</td>
<td>-1.0</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>6.5</td>
<td>2.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant if p<0.05

Accordingly, the t test which is described as ‘robust, meaning that it is more or less unaffected by moderate departures from the underlying assumptions’ (Howell 2002) was employed. The t test results together with the means and standard deviations for both groups are presented in Table 1.

The two health science fields were compared across the four items. Students from both groups were strongly influenced in their choice of program by their interest in a health science field, their wish to help others, and the rewarding aspects of working with people. The influence of others (friends and family) on their choice of undergraduate program was found to be only moderate.

T test results indicate that on each of the 4 items no significant difference between the two groups was found. Students were also asked to indicate any other reasons that influenced their choice of career. Thirty four students (21 from MRS and 13 from SP) responded to this question. Some students specifically mentioned that their UAI score determined their choice. For many, inside knowledge, work experience, family experience and their desire to further their knowledge (e.g. linguistics, biology) in their respective field was mentioned as a determinant of their choice.

Do students from the two health science fields differ on their knowledge of their future career?

Students were asked to indicate what level of knowledge they had in the areas of career prospects, working conditions, private practice opportunities, starting salary and whether they had personal experience with people they know in their chosen field. The comparison of the two groups of students is presented in Table 2.

As is evident from the chi-squared results in Table 2 there was no
significant difference between students enrolled in the two health science fields. Overall the majority of students had some to considerable knowledge across the five items considered. Considerable lack of knowledge (no knowledge) was found in the area of starting salary (41%) and personal experience of others they know who are working in the field (38%).

**Discussion**

The results of this study yield interesting findings. Before these findings are explored, discussion of the response rate is warranted. The overall response rate to this survey was 56%, a rate similar to other surveys (Covic et al. 2003) where students are invited to participate in research. Of possible concern though, is the difference in the response rate between MRS and SP students. Perhaps the SP group is less representative of the cohort of first year SP students. However, there is no reason to believe that those who participated were different from those who did not. Nonetheless, the results of the study should be interpreted cautiously and considered as providing preliminary data for further research.

Perhaps the most interesting finding is the similarity in the distribution of personality type between SP and MRS

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### Table 2: Comparison of MRS and SP students on their knowledge about future career showing number and (total percentage) for each category within each item

<table>
<thead>
<tr>
<th>Item</th>
<th>Health field</th>
<th>No knowledge</th>
<th>Some knowledge</th>
<th>Considerable knowledge</th>
<th>X²</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MRS</td>
<td>10</td>
<td>42</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>7</td>
<td>19</td>
<td>10</td>
<td>0.8</td>
<td>0.68</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>17 (15%)</td>
<td>61 (55%)</td>
<td>34 (30%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career prospects</td>
<td>MRS</td>
<td>7</td>
<td>47</td>
<td>22</td>
<td>1.4</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>5</td>
<td>24</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>12 (11%)</td>
<td>71 (63%)</td>
<td>29 (26%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working conditions</td>
<td>MRS</td>
<td>14</td>
<td>38</td>
<td>24</td>
<td>1.0</td>
<td>0.61</td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>4</td>
<td>20</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>18 (16%)</td>
<td>58 (52%)</td>
<td>36 (32%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private practice</td>
<td>MRS</td>
<td>28</td>
<td>41</td>
<td>7</td>
<td>2.7</td>
<td>0.27</td>
</tr>
<tr>
<td>opportunities</td>
<td>SP</td>
<td>18</td>
<td>17</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>46 (41%)</td>
<td>58 (52%)</td>
<td>8 (7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Starting salary</td>
<td>MRS</td>
<td>32</td>
<td>29</td>
<td>14</td>
<td>5.8</td>
<td>0.12</td>
</tr>
<tr>
<td>Personal experience</td>
<td>SP</td>
<td>11</td>
<td>22</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of others they know</td>
<td>Total</td>
<td>43 (38%)</td>
<td>51 (46%)</td>
<td>17 (15%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in their chosen field</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant if p<0.05
first year students. Whilst the
distribution covers the four major
personality types as assessed by the scale,
there is a prevalence of Guardians and
Idealists for both student groups.
Guardians are predominantly concerned
for their families, homes, jobs,
neighbourhoods, duty, responsibility, and
the health and finances of others.
Although other personality types have
concerns, ‘Guardians can truly be said to
be the concerned citizens’ (Keirsey 1998:
97). Idealists trust their intuition and
have an ability to identify with others.
They are said to transcend the material
world and have a philosophic view of life
(Keirsey 1998: 143). Perhaps it is not
surprising that these two personality
types are principal across students
aspiring to a career in health science.
The finding of similarity in personality
across students enrolled in two distinct
health science fields, at first glance seems
to be inconsistent with other studies
reporting personality differences (e.g.
Firestone 1990; Tutton 2002), although
it should be stressed that Firestone
(1990) reported some similarities in
personality across students enrolled in
four health science fields. Perhaps of
relevance here is the fact that both studies
reporting differences employed adjective
checklists in the form of the California
Psychological Inventory (Tutton 2002)
and the Adjective Checklist (Firestone
1990). It may be the case that such
personality measures are better able to
detect differences using a range of scales
(22 for the California Psychological
Inventory) compared to the Keirsey
Temperament Sorter II which allows for
classification of four personality types.
Further research should employ an
adjective checklist approach to assess
possible personality differences between
students enrolled in different health
science fields.
In our study, personality type was
assessed with health science students at
an early stage of their university degree
(nearing completion of first year).
Accordingly, with our student groups
there has been little opportunity for
professional socialisation to take place.
Research reported by Donohue (1994)
with OTs suggests that personality traits
do change over time due to socialisation.
It may be the case, that at a later stage
of their university degree program
(nearing completion), personality type
between students in the two health
science fields investigated in our study
will diverge. Further research needs to
be conducted with these two groups of
health science students when they are
nearing completion of their university
studies, before definitive statements can
be made. That is, longitudinal research
needs to be conducted and if possible
using an adjective checklist approach.
In summary, the results of the present
study suggest that personality type does
not dictate career choice, at least across
the two health science student groups
included. It may be the case that the
broad field of health sciences rather than
specific health science fields attracts
particular personality types. This
hypothesis requires further testing across
students enrolled in other health science
fields. Further support for this finding is
given by the similarities between the two
groups in terms of their reasons for their
choice of undergraduate program. With
the exception of the statement ‘I was
encouraged to enrol in the undergraduate
program by friends and/or family’ the
overall means of the other three items

related to reasons for career choice
namely, 'interest in a health science field',
'helping others as rewarding' and 'like
working with people' were strongly
endorsed since they are close to the
maximum score of 10. Further, there is
no significant difference between the two
groups on these items.

The results pertaining to knowledge of
working dimensions of their future
career also suggests that the two groups
are fairly homogeneous with no
significant differences obtained. Whilst
the majority of students had 'some' to
'considerable' knowledge on career
prospects (85%), working conditions
(89%), private practice opportunities
(84%), starting salary (59%) and
personal experience of others in their
chosen field (61%), on all of these
working dimensions it is clear that some
students had no knowledge.

Students' success in entering their first
career choice lends further support to
this argument. That is, where students
did not gain entry into their first
preference (36%), a content analysis of
their first choice indicates
overwhelmingly that their first
preference was in another health science
field (e.g. medicine, pharmacy, PT, OT).
Only 7% of the entire sample selected a
field of study that was not classified as
health science (e.g. arts/science). Thus
the findings suggest that desire to work
in a health science field was an
overriding motivation.

This raises the question about what
determines success in obtaining entry
into one's chosen career. Certainly in
NSW the UAI plays a critical role. For
example, in 2002, the UAI for medicine
was higher than for PT, PT was higher
than for SP, and SP was higher than for
MRS. Thus, a finding of no difference
in personality type between SP and
MRS students may not be surprising
given the potential for transference
across health science fields depending on
the student's UAI. What is clear is that
a career in a health science profession
seems to be a predominant feature of
choice by students.

Other factors however, also play a role in
determining career choice within the
health professions apart from a desire to
work with and help people. It is clear
from the open-ended responses of
students that an interest in
communication and/or linguistics (SP
students) or an interest in computer
technology and technical topics (MRS
students) plays an important role in
determining career preference for these
two groups. Further research needs to be
conducted on these issues and with
students from other health science fields
before definitive statements can be made.

Conclusions

The results of our study have important
implications not only for university
educators of health science students but
also for advisors of potential applicants
contemplating a career in a health
science field. Whilst other studies have
conducted research on personality types
between students and personnel across
health science fields, no other research
has linked personality types with
motivation and knowledge in pursuing a
career in a health science field at the
point of entry into university studies.

An overriding interest in working with
and helping people, irrespective of
preferred health science field appears an
important motivating factor in a student’s choice of career in the health sciences. In addition, given that a proportion of students do not gain entry into their preferred career choice may suggest that first year academic coordinators need to implement an orientation program to assist students in adjusting to the field of study in which they are currently enrolled. The results of the present study also suggest that more information needs to be available for prospective students to make an informed choice about working dimensions of their chosen health science field. Whilst university educators might be successful in retaining students within their field, particularly in their first year of study, further research needs to be conducted to ascertain attrition rates within health science fields in the workplace. The issue of retention of health personnel is currently gaining more attention. Clearly, the only way to investigate these issues systematically is to conduct longitudinal research with health science students from the point of entry to university studies and throughout their career.

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References


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