Attitudes Towards Patients by Undergraduate Health Students

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ABSTRACT

Introduction

Empathy is often considered an important trait for professionals in the health field along with positive attitudes toward all medical conditions. The objective of this study was to determine the extent of empathy and attitudes towards specific medical conditions amongst undergraduate students in six health-related courses at one Australian university.

Methods

A convenience sample of undergraduate students enrolled in six health-related courses in first, second and third years at Monash University were surveyed. The Jefferson Scale of Physician Empathy (Health Professional version) and the Medical Condition Regard Scale were completed by students along with a brief demographic questionnaire. Mean scores, t-tests, and ANOVA were used to analyse student attitudes. Ethics approval was granted.

Results

The study involved 549 students. Female students were significantly more empathic than male students (p=0.002). Older students were more empathic than younger students (p=0.039). No significant differences between year level of study, and professional course of study were found. Statistically significant differences were found between the health professional courses for each of the three medical conditions focused on in the study – intellectual disability (p<0.002), substance abuse (p<0.033,) and acute mental illness (p<0.023).

Conclusion

This study suggests a strong presence of empathy amongst undergraduate allied health students who also have a strong regard for some medical conditions.

Keywords

allied health, education, empathy, Jefferson Scale of Physician Empathy - Health Professional version, Medical Condition Regard Scale, undergraduate students.

INTRODUCTION

Empathy is considered to be an important trait for professionals in the health field to possess. Several previous studies have assessed empathy in medical students and medical interns.[1-8] No previous studies were located that investigated empathy in the allied health professions nor specifically undergraduate allied health science students.

There is a long history of certain medical conditions being associated with stigma, stereotypes, and negative attitudes. Research has shown that such attitudes can have a detrimental effect on the patients suffering a stigmatised medical condition and can even flow on to negatively impact their family.[9] There have been three previous studies that have use the Medical Condition Regard Scale (MCRS) to determine attitudes of healthcare professionals towards patients with specific medical conditions.[10-12]

There have been no previous published studies into undergraduate students’ attitudes towards specific medical conditions for midwifery, health science, occupational therapy, physiotherapy, and emergency health (paramedics).

The objective of this study was to determine the extent of empathy and attitudes towards specific medical conditions amongst undergraduate students in six health-related courses at Monash University - Peninsula Campus.

METHODS

Design

A cross-sectional study using a paper-based Jefferson Scale of Physician Empathy - Health Professional (JSPE-HP) version and Medical Condition Regard Scale (MCRS) were completed by students.

Participants

All students enrolled as an undergraduate student in one of the health-related courses at Monash University - Peninsula Campus were eligible to participate in the study. This included students from any year of their course (see Table 1).

Table 1: Number of student enrolled by course by year

<table>
<thead>
<tr>
<th>Course</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Health (Paramedic)</td>
<td>249</td>
</tr>
<tr>
<td>Nursing</td>
<td>458</td>
</tr>
<tr>
<td>Midwifery</td>
<td>86</td>
</tr>
<tr>
<td>Occupational</td>
<td>169</td>
</tr>
<tr>
<td>Therapy</td>
<td>236</td>
</tr>
<tr>
<td>Health Science</td>
<td>98</td>
</tr>
</tbody>
</table>

Instrumentation

We utilised the Jefferson Scale of Physician Empathy Health Professional (JSPE-HP) version, a psychometrically validated measurement of empathy.[2] The JSPE-HP required students to answer 20 questions using a 7-point Likert scale (Strongly disagree=1 to Strongly agree=7). Ten of the 20 questions were negatively worded in order to decrease the confounding effect of acquiescence responding, which were afterwards reversed-scored for analysis.[13] The scale can be completed in approximately five minutes and produces scores ranging from a minimum of 20 through to a maximum of 140. The higher the score, the higher the participant’s level of empathy. The JSPE-HP has proven reliability and validity.[4, 5, 13-15]

The Medical Condition Regard Scale (MCRS) was developed to provide a measure of attitudes that could be applied to any medical condition and allow for comparison between them.[10] This study utilised the MCRS since it measures attitudes toward medical conditions and in particular the extent to which students find such medical conditions to be treatable and worthy of medical resources. The MCRS is designed such that it can be used with any medical condition. This provides a useful degree of flexibility allowing the health-related courses involved in this study to apply five medical conditions most relevant to their professional field, giving a total of thirteen different medical conditions in the final results. The MCRS is considered valid and reliable and its authors found the scale to have a Cronbach coefficient alpha of 0.87 and a test re-test reliability of 0.84.[10] The eleven items on the MCRS were rated on a 6-point Likert scale (1=strongly disagree, 6=strongly agree). To reduce the confounding effect of acquiescence responding, five of the eleven items are worded negatively, which were later reversed for analysis.
**Procedures**

All students participating in the study received an explanatory statement about the study and were informed that participation was voluntary and anonymous prior to commencing the survey. Each participant was required to complete a self-reporting questionnaire which included demographic questions the JSPE-HP and MCRS. The survey was completed at the end of a lecture for each respective group of health students. A non-teaching member of staff facilitated the process and collected the questionnaires and consent was implied by completion of the survey. It took participants on average 20 minutes to complete the questionnaires.

**Ethics**

Ethics approval for the study was obtained from the Monash University Standing Committee on Ethics in Research Involving Humans (SCERH).

**Data analysis**

Descriptive and inferential data analysis was undertaken using SPSS (Statistical Package for the Social Sciences Version 17.0, SPSS Inc., Chicago, Illinois, USA). Descriptive statistics, means, and standard deviations, were used to summarise the demographic and some JSPE-HP and MCRS data. Inferential statistics, t-test, and ANOVA, including post hoc tests, were used to compare the difference between courses, age groups, gender, and year of the course. All tests were two tailed unless otherwise stated with the results considered statistically significance if the p value is < 0.05.

**RESULTS**

**Student Demographics**

A total of 459 students participated in the study with all six health-related courses having an adequate representation of participants for statistical analysis. The number of students from each course who participated in the study is presented in Table 2. Because convenience sampling was used we cannot be sure of the number of students who declined to participate, therefore, no response rate can be provided.

<table>
<thead>
<tr>
<th>Course</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Health (Paramedic)</td>
<td>120</td>
</tr>
<tr>
<td>Nursing</td>
<td>107</td>
</tr>
<tr>
<td>Midwifery</td>
<td>52</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>92</td>
</tr>
<tr>
<td>Physiotherapy</td>
<td>109</td>
</tr>
<tr>
<td>Health Science</td>
<td>69</td>
</tr>
</tbody>
</table>

Table 2: Total number of student respondents by health-related course enrolled in

Of the student participants overall, the majority were female (81.3%) and were under the age of 21 (55.2%) or between 21 and 25 years of age (24.7%). There was a good representation of students from each of the three years of study; 24.6% from first year, 42.7% from second year, and 32.7% from third year. An important phenomenon encountered in the results was the uneven distribution of males across the six health-related courses. Most of the male students were studying physiotherapy (38.6%) or emergency health (paramedic) (35.6%) with no males studying midwifery.

**Jefferson Scale of Physician Empathy- Health Professional version**

**Comparison of Mean Empathy**

The mean empathy score for female students (mean=109.78, SD=14.73) was significantly higher than the mean empathy score for males (mean=104.76, SD=12.21), p=0.002. There was a significant difference in empathy scores between younger students (< 26 years), p=0.039, however post hoc testing did not demonstrate any statistically significant difference between the age groups. Students enrolled in Occupational Therapy reported the highest levels of empathy (mean=111.55, SD=17.12) while nursing students reported the lowest levels of empathy (mean=107.34, SD=13.74). However, there was no statistically significant variation between the students enrolled in the six allied health courses (p=0.164). There were no statistically significant difference recorded for year level of the course (p=0.862).

The Cronbach alpha coefficient was 0.85 for this study which demonstrates a good level of internal consistency. An analysis of the individual JSPE-HP items showed that respondents tended to answer all, but one item in a way that was indicative of empathy. The exception being, ‘I do not allow myself to be touched by intense emotional relationships among my patients and their family members.’ For this item responses were centred around ‘4—not sure’ on the 7-point Likert Scale (mean=4.03).

**Medical Condition Regard Scale**

Students from six health-related courses were administered different sets of medical conditions. Consequently there were a total of thirteen different medical conditions. The focus is on an overview of student attitudes and how they differ between the health-related courses. Therefore the analysis focussed on the three most commonly encountered medical conditions: intellectual disability, substance abuse, and acute mental illness.

There was also a strong internal consistency for the MCRS as measured by Cronbach’s Coefficient Alpha of 0.93.

**Intellectual Disability Medical Condition Group**

Overall intellectual disability as a medical condition was held in high regard by the students (mean=51.98, SD=7.97). There was a statistically significant difference in the attitude reported towards intellectual disability as a medical condition between the six courses (p=0.02), with students studying physiotherapy having reported the lowest mean regard (mean=49.83, SD=7.90). Statistically significant differences were also reported between year level (p<0.013) and gender (p<0.017). The notable differences within these two variables were that third year students reported the lowest regard (mean=50.50, SD=8.30) and females reported the highest regard (mean=52.56, SD=7.82) compared to male students.

On the MCRS, students rated their level of agreement on a 6-point scale for each item and mean item scores below 3.5 are therefore indicative of negative regard or attitude. For intellectual disability, there were no negative means for each course on any individual scale item. There were, however, three items which received notably high means overall. From highest to lowest they were ‘Treating patients like this is a waste of medical dollars’ (mean=5.87), ‘Patients like this irritate me’ (mean=5.60) and ‘There is little I can do to help patients like this’ (mean=5.48).
**Substance Abuse Medical Condition Group**

Substance abuse as a medical condition was held in the lowest regard by health science students overall (mean=46.37, SD=8.80), with midwifery students holding substance abuse in the lowest regard by a statistically significant margin (p=0.033). A statistically significant difference was also reported between the two genders with respect to substance abuse (p=0.028), with females (mean=46.82, SD=8.81) reporting more positive attitudes to clients with substance abuse problems than males (mean=44.19, SD=8.72).

Results from the MCRS’s individual items provide more detail as to how students reported their regard for patients with substance abuse problems. Slightly negative mean scores were obtained for three items on the MCRS, ‘I feel especially compassionate toward patients like this’ (mean=3.36), ‘I wouldn’t mind getting up on call nights to care for patients like this’ (mean=3.35) and ‘I enjoy giving extra time to patients like this’ (mean=3.31).

Despite some negative regard, three items received means indicative of a positive regard towards substance abusing patients. They were: ‘There is little I can do to help patients like this’ (mean=5.46), ‘Patients like this irritate me’ (mean=5.00) and ‘Treating patients like this is a waste of medical dollars’ (mean=5.45).

**Acute Mental Illness Medical Condition Group**

Acute mental illness as a medical condition was also held in high regard by students overall. The only demographic variable to have a statistically significant difference with respect to mean regard for acute mental illness was by course (p<0.023) and students enrolled in emergency health (paramedics) reported the highest mean regard for acute mental illness (mean=53.3, SD=7.48).

The MCRS item that received the highest mean with regard to acute mental illness was ‘Treating patients like this is a waste of medical dollars’ (mean=5.81). Two other items that received particularly high mean scores were: ‘There is little I can do to help patients like this’ (mean=5.41) and ‘I prefer not to work with patients like this’ (mean=5.46). An item which would have received a mean score indicative of high regard if students enrolled in health science were not included was: ‘Patients like this irritate me’ (mean=4.87). Students enrolled in health science reported an extremely low regard for this item (mean=2.36).

**DISCUSSION**

Like other studies of students studying in the health-related disciplines, females in this study reported being more empathic than their male counterparts. [2, 4, 15] Studies using versions of the JSPE-HP typically found females to have significantly higher mean empathy scores than males.[4, 5, 13-15] While this gender difference is commonly reproduced in studies, there are still some studies that do not find a significant difference.[2, 16, 17]

This study demonstrated no statistically significant decline in empathy across the year levels of study for students. On the surface this result is contrary to the findings obtained in other studies which typically report declines in empathy as students’ progress through their professional education.[2, 18] Likewise, there was no significant difference between students from the six health-related courses in this study.

One course did demonstrate an increase in empathy from year one to year three, that being midwifery. The participants enrolled in midwifery reported a statistically significant rise in mean empathy levels (p=0.025), a rise from first year (mean=101.00) through to third year (mean=119.88). This may be explained by midwives working in more intimate, one-to-one relationships with childbearing women over extended periods of time, needing to be ‘in tune’ with women’s needs and feelings throughout pregnancy, labour and birth. It should also be noted that there were no male students enrolled in the midwifery course.

One JSPE-HP item that warrants highlighting is the, ‘I do not allow myself to be touched by intense emotional relationships among my patients and their family members.’ Participants across all disciplines evidently had some difficulty with this item. The other 19 items were answered consistently, showing a strong presence of empathy.

The findings also indicated that students have a high regard for both acute mental illness and intellectual disability conditions. Substance abuse, however, received a comparatively low regard. Across all the medical conditions, students answered in such a way indicative of a desire to act professionally with patients. Items such as ‘Patients like this irritate me’ and ‘Treating patients like this is a waste of medical dollars’ were answered favourably across all the medical conditions, showing an intention to be fair and responsible in their conduct and interactions with patients.

The item ‘I feel especially compassionate toward patients like this’ differed between the medical conditions and was particularly low for substance abuse (mean=3.36) than it was for either intellectual disability (mean=4.25) or acute mental illness (mean=4.29). Because items were rated on a 6-point Likert scale scores below 3.5 is indicative of negative attitudes.

These differences found between the six health-related courses may be the result of how students from each of the disciplines view their role in healthcare, their level of exposure during clinical placements, and the vantage point their profession provides from which to view patients. The data provides sufficient evidence to show that there is a significant difference in views between the disciplines and, more importantly, that the views these students have impact on their attitudes and perceptions towards patients presenting with different medical conditions.

The findings from this study highlight a need to better educate undergraduate health students towards some medical conditions, e.g. substance abuse, as this may be an endpoint to an underlying medical condition like depression. The generally high reports of empathy in the data set lead to questions about how university-based curricula can best develop empathy in undergraduate students and how it should be used in their professional careers. Is a didactic session the best way to “educate” these students or would a variety of blended teaching and learning methods better meet the students’ different learning styles and skill needs? Further study is also needed to explore the extent to which clinical role models influence the development of attitudes and behaviours related to empathy in the clinical setting.

**CONCLUSION**

This study suggests a strong presence of empathy amongst students enrolled in undergraduate health-related courses. Female students were found to be more empathic than their
male peers whilst older students were more empathetic than younger students. There was little difference in reported empathy levels between the specific health-related courses that students were enrolled in or the year level of study.

The undergraduate health-related students as a group have a strong regard and positive attitude towards patients presenting with intellectual disability and acute mental illness conditions, but not for patients that fall into the substance abuse condition category. The results suggest that health professional students distinguish between patients with medical conditions perceived to be self-inflicted or a result of personal choices and that such patients are not as worthy of compassion and effort beyond standard professional expectations.

REFERENCES