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Empathy levels in undergraduate paramedic students: A three-year longitudinal study

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ABSTRACT

Empathetic behaviour is regarded as a positive trait amongst healthcare professionals and has been attributed to increased patient compliance, greater patient satisfaction, and greater diagnostic accuracy and reduced rates of clinical errors. In particular, paramedic students have typically displayed lower rates of empathy when compared to their healthcare counterparts. The objective of this study is to assess both the level of empathy and changes in empathy in undergraduate paramedic students over a 3-year period at a single tertiary institution. A cross sectional study employing a convenience sample of first, second and third year undergraduate paramedic students at Monash University. Student empathy scores where measured with the Jefferson Scale of Empathy–Health Profession Student version (JSE–HPS); a validated, self-reporting questionnaire. 552 students were enrolled in the study. The mean overall JSE–HPS score for the cohort was 108.60 (SD = 12.50). Female students displayed significantly higher empathy scores of 110.27 (SD = 11.62) compared to males at 105.36 (SD = 13.57). There was also a significant difference ($p = 0.03$) noted between the 2008 JSE–HPS score 106.32 (SD = 14.02), when compared to the 2009 cohort, 110.18 (SD = 12.91). Results from this study suggest that paramedic students display lower empathy than those reported by fellow healthcare students within the literature.

Introduction

Within the fields of both medicine and allied healthcare, approaching patient care with a heightened level of empathetic behaviour has been shown to achieve greater positive outcomes (Ahrweiler et al., 2014; Del Canale et al., 2012; Hemmerdinger et al., 2007; Hojat et al., 2011; Yu, 2009). Such benefits include an increase in patient compliance and greater patient satisfaction through achieving a more humanistic relationship between patient and healthcare provider (Boyle et al., 2010; Brown, 2011; Hojat, 2005; Williams et al., 2012). For the medical professional too, heightened empathetic behaviour can enable greater diagnostic accuracy and minimise the rate of clinical errors and lapses in professional behaviour (Boyle et al., 2010; Hojat, 2003).

Despite the presence of such overwhelming support for the benefits of an empathetic approach, there remains no universally agreed upon definition in relation to its implementation in patient care (Ahrweiler et al., 2014). Much of the literature supports the belief that both cognitive and emotional empathy approaches (Regehr et al., 2002) are multi-faceted and differentiated from sympathy through the identification of other's feelings whilst limiting personal involvement and maintain clinical neutrality (Derntl et al., 2010; Dyrbye et al., 2012; Dziobek et al., 2008; Fields et al., 2011; Ziółkowska-Rudowicz and Kładna, 2010). When used in relation to the healthcare context, empathy has frequently been described as a "predominately cognitive attribute (rather than emotional) that involves an understanding (rather than feeling) of experiences, concerns and perspectives of the patient, combined with the capacity to communicate this understanding" (Hojat, 2007). Specific to the out-of-hospital setting (Regehr et al., 2002) reiterates a cognitive approach to empathy in which paramedics can develop an internal frame of reference where they can both consider the consequences of actions on the welfare of others and continue to work in the best interest of patients. An example of such positive empathetic behaviour is often found in cases of Sudden Infant Death Syndrome patients for example where appropriate displays of empathy by paramedics have been found to have been of substantial importance and comfort for parents throughout the grieving process (Nordby and Nøhr, 2008). Similarly

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too, paramedics are typically a patient's first point of contact in a medical crisis. The empathy displayed by paramedics, despite being over a short duration and often in highly emotional environments (Wahlin, 1995), is often affirming of how that patient will perceive other medical professionals throughout their exposure to a variety of health services (Williams et al., 2011).

Despite the compelling evidence highlighting the importance of empathy in patient care, current literature suggests that undergraduate health students of today not only display less empathy than previous generations (Konrath, 2011), but also fail to acknowledge the importance of the skill (Fields et al., 2011). Similarly too, empathy has been shown to decline through the course of tertiary study amongst a variety of healthcare students (Hojat et al., 2009). In a 2011 study, (Nunes et al., 2011) identified a statistically significant decline in empathy scores in medical, nursing and dental students through the progression of their studies. In this instance it was suggested that such a decline in empathy can be both associated with the 'settling in' effect of beginning a new course and a change from idealism to realism, as well as being an adaptive response to increased responsibilities and workload. This has particularly been the case amongst paramedic students, with previous studies highlighting lower medical regard and empathy for specific stigmatised patient groups (Boyle et al., 2010; Williams et al., 2012, 2011, 2013, 2014a).

Whilst being a personal trait, empathy is also a tangible skill and learned behaviour (Kliszcz et al., 2006). As such, it is believed that empathetic approaches of healthcare students can be improved through intervention with appropriate teaching styles (Dereboy et al., 2005; Nunes et al., 2011). When taught within a tertiary curriculum, empathy studies typically occur during studies relating to professional behaviour such as the use of verbal and non-verbal communication skills and establishing rapport with patient (Batt-Rawden et al., 2013; Boyle et al., 2010). An integrated approach to empathy studies involving role play and simulation is rarely utilised in health professions, despite its use displaying a direct increase in empathetic regard (Brunero, 2010; Williams et al., 2014b). Such evidence however is important in recognising that both tertiary institutions and professional industries can play significant roles in developing empathy amongst paramedic undergraduates (Williams et al., 2014a). Whether empathy has been formally integrated and aligned with learning activities or assessment in national paramedic programs is less clear. The objective of this study was to assess both the level of empathy and changes in empathy in undergraduate paramedic students over a 3-year period at a single tertiary institution.

Methods

Study design

A cross sectional study employing a paper-based questionnaire with convenience sampling of undergraduate student paramedics from a large Australian University.

Population and setting

The study was conducted within the Department of Community Emergency Health and Paramedic Practice at the Peninsula Campus of Monash University, Victoria, Australia. Monash University delivers both a Bachelor of Emergency Health (Paramedic) (BEH-P) and a double degree offering both a Bachelor of Nursing/Bachelor of Emergency Health (BN/BEH). These programs are nationally accredited and are pathways to attaining employment within an Ambulance Service in Australia or internationally. All undergraduate paramedic and double degree nursing/paramedic students were invited to participate in the study, with the only inclusion criteria being that students were currently enrolled in either of the aforementioned courses. Enrolment in the study occurred annually during Semester one (March) between 2008 and 2010.

Instrumentation

Student empathy levels were measured using a standardised self-reporting instrument: the Jefferson Scale of Physician Empathy—Health Profession Student Version (JSPE—HPS). Originally developed for physicians and medical students (Hojat, 2001, 2007), the scale has been validated and shown to be a reliable tool in numerous health professions (Fields, 2004; Hojat et al., 2002a,b; Sherman and Cramer, 2005). The JSPE—HPS has been specifically modified for administration to students with promising results supporting the use of this modified version amongst a variety of healthcare professions (Fields et al., 2011).

The JSPE—HPS itself is a 20-item questionnaire, 10 of which are negativity worded and reverse scored. Delivered using a 7-point Likert scale for each item students are provided with a statement to which they must choose an option between strongly disagree and strongly agree. Possible scores range from 20 to 140, with higher student scores indicative of a greater behavioural tendency toward empathetic engagements during patient care episodes (Hojat et al., 2002a,b).

Analysis method

The Statistical Package for Social Sciences (SPSS; Version 19.0) was used for data storage, tabulation, and the generation of descriptive statistics. Means were used to describe the descriptive data and an independent samples t-test and Analysis of Variance (ANOVA) were used to determine if any differences existed between gender, year of study, and age groups. All tests were two tailed unless otherwise stated, results are considered statistically significant if the p value is < 0.05.

Ethics approval

Ethics approval was granted by the Monash University Human Research Ethics Committee (CF08/0330). At the conclusion of a lecture students were provided with the questionnaire and explanatory statement and were informed that participation in the study was voluntary. A department staff member not affiliated with the study facilitated the process and distribution of the questionnaires, which included both the JSPE—HPS and some brief demographic questions. Consent was implied by the voluntary completion and submission of each questionnaire.

Results

Participant demographics

Between 2008 and 2010, 552 students were enrolled into the study which reflects a response rate of 35.8%. 69% of these students were female and, whilst being disproportionate to the 30% of males, is consistent with enrolment statistics for the course. The majority of the students were aged in their late teens and early 20s. 77% of students were aged under 25 years old and only 5% of students aged greater than 31 years old. Second year students made up the largest group participating in the study at 43%. Across each year of the data selection there was no significant difference in the number of students enrolled in the study. The full demographic distributions and cross-tabulation are displayed in Tables 1 and 2.