DO STUDENTS TRAINING TO BE HEALTH CARE WORKERS HAVE COMPASSIONATE ATTRIBUTES?

ABSTRACT

Aim: This research was developed to measure to what extent health-care students began their training with compassionate attributes.

Background: Compassion can be defined as an awareness of others and desire to help, using a non-judgmental approach (Wispe, 1991). Having compassionate health-care workers makes clients feel valued and has always been the expectation of clients and their families. The significance of compassion in health care cannot be underestimated, as highlighted in research from a number of different health disciplines (Bramley & Matti, 2014; Hall, 2013; Radley & Figley, 2007).

Research methods: In 2016, a total of 146 students enrolled in the first semester of nursing, midwifery and social work at the Waikato Institute of Technology (Wintec) in Hamilton, participated in the research. The researchers used a self-administered “compassion to others” psychometric scale to measure compassionate attributes (Pommier, 2010). Data were analysed using the SPSS and ANOVA for descriptive statistics and predictive information.

Findings: The results indicated that beginning nursing, midwifery and social work students showed compassionate attributes, eg kindness and common humanity. The mean compassion score for nursing was 82.31 (SD=13.92), midwifery 83.91 (SD=9.56) and social work 85.75 (SD=7.81). These differences were not considered statistically significant.

Conclusions: This research found that at entry level, health-care students demonstrate compassion. This information could be used by educators to strengthen and maintain compassion attributes by maintaining and reinforcing the values, hopes and aspirations that brought the students into the profession.

KEYWORDS

Compassion, healthcare students, survey, measure.

INTRODUCTION

In 2015, the researchers undertook a pilot study (n=84) to test the “Compassion Scale” (Pommier, 2011) in the New Zealand setting for reliability and validity. The results showed this instrument demonstrated a high level of reliability and validity in the New Zealand context (Dannenfeldt, Vick, & Shaw, 2015). One of the areas highlighted in the pilot study was the need to include demographic data to determine whether there were any particular trends in the areas of health course chosen, ethnicity, gender or age, and the perceived level of compassion. In consultation with the senior Māori advisor at the Waikato Institute of Technology (Wintec), the bicultural suitability of the questions was established. Following the successful pilot study in 2015, this research explored the unanswered demographic questions. It was a similar study to the earlier one, with the same instrument, but using a larger cohort of participants.

BACKGROUND

The word compassion comes from the Latin root “passio”, to suffer, and the Latin prefix “com”, together, literally meaning to suffer together (Kundera, 1999). Current literature in this area describes compassion as noticing and responding to feelings of others (Kanov et al, 2006). Compassion can be conceptualised as an awareness of others and a desire to help, using a non-judgmental approach. Of equal importance is being able to deal with another person’s distress without internalising it (Wispe, 1991).
Compassion can be associated with the great religious and spiritual traditions of the world (Armstrong, 2011). Historically, developing compassion was equated with personal suffering. The Christian theologian Thomas Aquinas is reported to have said, “No one becomes compassionate unless he suffers” (cited in Barasch, 2005, p13). Possibly the most well-known advocate of compassion for others is the Dalai Lama (Lama & Jinpa, 1995), who is reported saying that inner peace and well-being come from the development of love, compassion and caring for others. Influenced by the writings of the Dalai Lama, Neff (2003a) has developed the concept of self-compassion and has produced the Self-Compassion Scale (Neff, 2003b). The idea behind the scale is that compassion involves three positive constructs – kindness, common humanity and mindfulness. These constructs have opposing negative constructs, which are self-judgment, isolation and over-identification. Individuals may have various combinations of these constructs, and they may not necessarily be all positive or all negative. Having self-compassion is linked to forgiveness and less personal distress (Neff, 2003a) and non-judgmental understanding of one’s own pain (Wasyliw, Mackinnin, & MacLellan, 2012). The Self-Compassion Scale (Neff, 2003b) measures these elements of compassion as they apply to the individual’s experiences of suffering.

Applying Neff’s (2003b) concepts of self-compassion, but instead focusing on compassion to others, Pommier (2011), found that women had higher levels of compassion to others. This finding was replicated in a study by Sousa et al (2017), in which women scored higher in all the positive constructs associated with compassion to others. Being compassionate has often been associated with being female and having “compassionate love” (Sprecher, Fehr & Zimmerman, 2007). Gender was also feature in research looking at empathy, compassion and ‘burnout’ (Hojat et al, 2002). Hojat et al looked at these constructs in medical professionals, and found gender differences. The authors suggested that women were better at picking up emotional signals. In addition, a concept included in the “Compassion to Self” and “Compassion to Others” scale is common humanity (Neff, 2003a; Pommier, 2011) and this understanding tends to be associated with an older age group (Ardelt, 2000, 2010). However, there is a potential relationship between age and gender.

Studies of gender-role characteristics found that as men aged, they developed more nurturing roles (Coumoyer & Mahalik 1995).

Men have been found to typically have higher levels of self-compassion than women, regardless of their cultural background (Birkett, 2014; Neff, Pisitsungkagarn & Hsieh, 2008). Both these American studies recruited Asian participants as their comparison group. The Asian participants came from countries (Taiwan, Thailand and China) that have historically had a Buddhist culture which identifies strongly with self-compassion, limiting the generalisability of the findings. Later research found no difference between ethnicity and self-compassion (Lockard, Hayes, Neff & Locke, 2014). Kelly, Vimalakanthan and Miller (2014) looked at whether health-care workers acted compassionately when working with people with obesity issues, and noted social judgments appeared significantly less important to individuals who identified with collectivist cultures, compared to people from individualistic cultures such as European. The authors also suggested that treating clients compassionately encouraged the client’s self-compassion and led to a more positive body image.

As well as the influence of gender, age and cultural differences, there is accumulating evidence of the link between compassion and positive psychology. Positive psychology focuses on a person’s strengths and values, leading to increased physical well-being (Youngson, 2014). Youngson surmises that when health-care workers incorporate positive emotions such as compassion into their own being and worldview, they become “better versions of themselves”. In turn, they are able to provide more compassionate care to their clients (Youngson, 2012). Compassion is widely recognised as a fundamental dimension of nursing care (Bramley & Matti, 2014; Von Dietze & Or, 2000). Similarly, care and compassion are at the centre of the midwifery vision and are qualities that families expect from these health professionals (Hall, 2013). Likewise, social workers are guided primarily by compassion for humanity and improving societal conditions (Radley & Figley, 2007). All of these professions are characterised by their practitioners acting compassionately towards others. Despite this, the practice of compassion receives little mention in New Zealand, in social work, midwifery or nursing competency framework documents (Aotearoa New Zealand Association for Social Workers, 2014; Midwifery Council of New Zealand, 2010; Nursing Council of New Zealand, 2012). This is interesting, considering that the quality of the relationship or connection the practitioner has with their client lies at the heart of these professions.

With New Zealand’s ageing population and the increasing need for capacity in the health-care workforce (National Nursing Organisations, 2014), attracting and retaining people who show compassion to work in the health professions is of growing importance. People who have compassionate attributes are found to have increased job satisfaction and retention (Way & Tracy, 2012). The significance of compassion cannot be underestimated as a core attribute of health care (Bramley & Matti, 2014). An enquiry into the failings of a National Health Services Foundation Trust in the United Kingdom recommended – as well as stronger health-care leadership – the need for improved support for compassionate and committed care in the workforce (Francis, 2013). Anecdotally, one of the most common reasons cited by students studying health or social practice in Waikato Institute of Technology (Wintec) undergraduate programmes, is a desire to help others – in essence, to show compassion. In today’s world, health professionals need not only to be technically competent, but also able to demonstrate compassion and empathy in their practice (Department of Health, 2008).

It is vital to determine at the start of their training in health care whether compassionate and empathic students have been recruited. Patients are reported as believing compassion in health-care students was partially innate and originated from the heart (Sinclair et al, 2016). Consequently, measuring compassion is difficult. Sprecher and Fehr (2005) developed a compassionate love scale specifically to measure prosocial behaviours (behaviour intended to help others), intimate relationships and relationships with people in general. A shorter scale using this research had a positive correlation with vocational identity, faith, and empathy (Hwang, Plante, & Lackey, 2008). However, using the term “love” in these studies was felt to be problematic; as Pommier (2011) reported, using the term “compassion” would have a stronger association with social connectedness than “compassionate love” would. Pommier (2011) developed a short self-report psychometric scale to measure compassion for others using the constructs established by Neff (2003b) in her Compassion to Self scale. The researchers for
this study believed this tool would be suitable to measure compassion in entry-level students enrolled in social work, nursing and midwifery programmes, to ascertain whether they began training with compassionate attributes.

**METHODOLOGY**

**Hypotheses**

- Students starting health-care studies at Wintec have compassionate attributes.
- There is no discipline-based variance in compassion scores between the three cohorts.

**Sample and population**

The availability of first-year students studying nursing, midwifery and social work led to this cohort being used as a convenience sample (n=262) to participate in this research. Participants were introduced to the purpose of the research project during lectures and were asked to complete the Compassion Scale (Pommier, 2011) questionnaire voluntarily, in their free time. No incentives were offered. Approval from the Wintec Human Ethics in Research Group was obtained before starting to collect data.

**Data collection instrument**

Quantitative data was collected using the Compassion Scale developed by Pommier in her doctoral dissertation (Pommier, 2011). A Likert-type scale (1-5) was used for scoring the responses.

The instrument (Pommier, 2011) contains 24 statements, grouped into six constructs: kindness vs indifference; common humanity vs separation; and mindfulness vs disengagement. The three positive constructs are kindness, common humanity and mindfulness. “Kindness” is defined as being warm and considerate of other people, without being judgmental. “Common humanity” is the recognition of the mutual experience of being human and the need to connect with people. Finally, “mindfulness” is paying attention to the thoughts, feelings and experiences of the present moment without either over-identification with or disengagement from the pain of others.

The negative constructs (Pommier, 2011) are indifference, separation and disengagement. “Indifference” means the individual’s attention is focused on the safety of self, in preference to considering the distress of others. “Separation” is being detached and remote from others. The definition of “disengagement” is that the individual is able to consciously block out the suffering of others.

**Data collection procedure and statistical analysis method**

The students were informed that the participant information and questionnaires were on Moodle – the online learning platform used by Wintec. Students linked to Qualtrics, an anonymous online survey instrument which was used to collect data. When participants entered the Qualtrics site, they were required to give consent before starting the survey. The data were collected during one week in May 2016, and analysed using SPSS (IBM, 2013), ANOVA and MANOVA, allowing comparisons to be made between the cohorts for descriptive statistics and predictive information.

**RESULTS AND FINDINGS**

A total of 174 participants from the population of 262 students in the first year of health-care study consented to do the survey. Participants who had left more than 25 percent of the questions incomplete were eliminated from the study. The final number of participants included in the data analysis was n=146, an overall response rate of 55.7 percent. (See Figure 1, below left.)

Data from the 146 participants were analysed using the software SPSS (IBM, 2013). SPSS is a program widely used in the social sciences, and provides a range of descriptive statistics as well as predictive information. Data were further analysed using ANOVA and MANOVA, allowing further comparisons to be made between the cohorts.

The participants came from three student cohorts – nursing, midwifery and social work – with the biggest cohort being the nursing students. Of the 150 first-year nursing students, 76 completed the questionnaire, a response rate of 50.6 percent. The response rate for the midwifery students was 75.8 percent and 46.0 percent for the social work students.

The students’ scores for the constructs (dependent variables) and the fixed factors (age, gender and ethnicity) were analysed in ANOVA and the results are outlined in the tables and figures. There were only seven male respondents and this did not allow inferences to be made about the possible influence of gender on compassion (see Table 1, above).

The largest proportion of respondents was young, 58.2 percent between the ages of 18 and 25 years (Graph 2). Only four students were over the age of 46 years.

The age distribution of the respondents in this study reflects the overall first year student cohort in the Centre for...
The ANOVA results do not show any statistically significant results related to age on the Compassion Score. The highest Compassion Score (total score = 64.64) was recorded for the young age group (18-25 years) while for the over-46 age group, the Compassion Score was 65.63.

The original data on ethnicity was collected in six categories, but as the number of respondents in each of the categories was very small, the categories were reduced to three general categories for data analysis purposes (see Figure 3, below). The significance of the findings for ethnicity was 0.47, which shows that the differences in Compassion Scores for the three categories of ethnicity were not statistically significant.

The majority of respondents were New Zealand European, while 14.4 percent identified as Māori or Pasifika. This reflects the population distribution in the Waikato region (Statistics New Zealand, 2013). The category “other” included mainly Chinese and Indian students, along with smaller numbers from other countries.

To achieve the research objective, a reliable and valid data-collection tool was selected (Pommier, 2011). For this research, both reliability and validity analyses were performed on the collected data. Once all items to be reverse-scored were processed, the Cronbach alpha coefficients were computed to gain an understanding of the internal consistency of the items in the composite scale, as well as the six constructs. These are quoted in Table 2, below.

The overall reliability was r=0.91, which indicates that the instrument is reliable in this context.

The standard descriptive statistics of central tendency (mean) and dispersion (variance and standard deviation) were used to describe the six constructs from the instrument (see Figure 4, next page).

The instrument was reliable. However, more work has to be done on construct validity (what the constructs are intended to measure). In this study, the convergent and factorial evidence demonstrated that these findings do not support the construct validity of the data-collection instrument.

The item intercorrelation results show that the convergent validity was low, never above 0.7. The reason for selecting a well-known instrument was that the reliability and validity issues had been addressed. This psychometric test had been found to be consistently high in studies across a wide variety of populations (Pommier, 2011).

The next part of the data analysis involved making inferences from the data about differences between the three cohorts. The mean scores for all constructs from the three cohorts were compared (see Table 3, next page).

These descriptive statistics indicated that the overall the social work students had the highest compassion score with smaller standard deviations. The individual construct with the lowest score was “separation”. The results showed a similar trend to the results from the pilot study conducted in 2015 (Dannenfeldt et al, 2015), where the nursing and social work students had mean scores of 93.84 and 99.6, with standard deviations of 11.52 and 9.84 respectively.

In summary, the above analyses do not reject, but accept the two hypotheses put forward at the beginning:

1) Students starting their health-care studies at Wintec have compassionate attributes.
2) There is no discipline-based variance in compassion score between nursing, midwifery and social-work students.

Because the construct validity results were inconclusive, the ANOVA was conducted to investigate the following hypotheses:
3) The compassion scores were similar for the different levels of student cohorts (original hypothesis).
4) The compassion scores for the different categories of ethnicity within the cohorts were similar (new test hypothesis).

Given the low probability values of 0.94 for ethnicity and 0.36 for cohort, neither hypotheses 3) nor 4) could be rejected.

Using a MANOVA allowed a comparison of multiple compassion score means (six constructs and the composite score) for the three cohorts. This showed that compassion scores differed significantly only on the indifference construct scale. However, the validity of this construct scale was low (ie the majority of inter-item correlations within the sub-scale were below 0.5).

The conclusion was that there was not a statistically significant difference in the total compassion scores for nurses, midwives and social workers. The social work students displayed marginally higher levels of compassion than their nursing and midwifery counterparts. The mean score for the nursing student cohort was 82.31 (SD = 13.92), while the mean score achieved by the social work students was 85.75 (SD = 7.81).

DISCUSSION

The aim of this research was to explore whether students starting health-care studies at Wintec have compassionate attributes. The results show they start these programmes with compassionate attributes. The hypothesis, that participants involved in studying health care at beginner level have compassionate attributes, was supported by the data obtained. No statistically significant difference was found between students entering the three disciplines surveyed, in terms of having compassionate attributes. This is reassuring and supports the goal of training compassionate health-care workers. This finding was also encouraging to patients believing compassion in learners was partially innate and originated from the heart (Sinclair et al, 2016).

Younger students studying in Wintec programmes scored higher than students in the 26-45 years range. Although previous studies have suggested that mature health-care workers tend to demonstrate higher levels of compassion (Cournoyer & Mahalik 1995; Petrocchi, Ottaviani & Couyoumdjian, 2014), the current research found that young people in the 18-25 years range also scored highly in this area. This is positive result and the researchers believe, from previous research, that students will develop even higher levels of compassion as they age.

Information on the gender of participants in this study was insufficient to be statistically relevant. Gender differences were found in other studies using this instrument (Pommier, 2011; Sousa et al, 2017). In these studies, women scored higher for compassion. Generally, males are underrepresented in the nursing and midwifery sector, usually comprising no more than 9 percent of the nursing cohort (Ministry of Health, 2016; Nursing Council of New Zealand, 2011). The participants in the two studies that reported on males using this instrument (Pommier, 2011; Sousa et al, 2017) had used a cohort from the general public, and not health-care workers. Finding

**Table 3. Descriptive statistics for constructs per cohort**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Nurses Mean (± S.D)</th>
<th>Midwives Mean (± S.D)</th>
<th>Social workers Mean (± S.D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindness</td>
<td>85.85 (± 16.93)</td>
<td>87.87 (± 14.51)</td>
<td>93.26 (± 7.62)</td>
</tr>
<tr>
<td>Indifference</td>
<td>74.21 (±18.54)</td>
<td>80.53 (± 13.68)</td>
<td>84.34 (± 10.47)</td>
</tr>
<tr>
<td>Humanity</td>
<td>85.78 (± 12.16)</td>
<td>86.06 (± 13.10)</td>
<td>84.34 (± 14.16)</td>
</tr>
<tr>
<td>Separation</td>
<td>74.86 (± 18.34)</td>
<td>81.70 (± 12.73)</td>
<td>78.26 (± 16.82)</td>
</tr>
<tr>
<td>Mindfulness</td>
<td>81.05 (± 16.83)</td>
<td>84.25 (± 12.68)</td>
<td>88.26 (± 9.60)</td>
</tr>
<tr>
<td>Disengagement</td>
<td>81.05 (± 16.83)</td>
<td>84.25 (± 12.68)</td>
<td>88.26 (± 9.60)</td>
</tr>
<tr>
<td>Total</td>
<td>82.31 (± 13.92)</td>
<td>83.91 (± 9.56)</td>
<td>85.57 (± 7.81)</td>
</tr>
</tbody>
</table>

S.D = Standard Deviation
a significant gender balance of health-care workers would require a much larger sample.

A large number of international students are enrolled at Wintec. Previous research looking at ethnicity and compassion had conflicting results. Research conducted on Chinese communities is the United States, Taiwan and Thailand, found Asian men had high levels of self-compassion (Birkett, 2014; Neff et al., 2008) but later studies found no identifiable difference in levels of compassion between ethnicities (Lockard et al., 2014). Data on students’ ethnicity were collected to see if any differences in compassion levels were evident, but there were insufficient numbers to make any inference in this study.

CONCLUSIONS

The results indicate the methodology used for obtaining information about compassion was sound. However, the limited number of participants had an impact on the reliability of the findings in some of the demographic categories. Information on ethnicity and gender of participants was insufficient to be statistically relevant.

This study found that at entry level, health-care students demonstrate compassion. This information could be used by educators to strengthen and maintain students’ compassionate attributes by maintaining and reinforcing the values, hopes and aspirations that brought them into the profession. Levels of compassion should be monitored in all health-care related professions as a critical factor in maintaining and preserving this vital aspect of health-care delivery.

Further research is planned for 2017, using the same cohort after a year of study, to gauge whether teaching and clinical experience has altered their levels of compassion towards others. The long-term goal of this project is to determine what effects exposure to clinical practice, as well as education, have on the perception of compassion in health-care workers currently in clinical practice.

The researchers are aware that, with any self-report questionnaire, the accuracy of the responses hinges on the participants responding to the questions honestly. We are also aware that the reporting may be distorted by social desirability bias, which is defined by Passer and Smith (2009) as the tendency to respond in a socially acceptable manner, rather than according to how one truly feels or behaves.

REFERENCES


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