

FEATURE ARTICLE

The impact of face-to-face mental health consumer-led teaching on occupational therapy student empathy levels: Two group comparison design

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Abstract

Introduction: Australian and New Zealand accreditation standards for occupational therapy courses mandate consumer involvement in the design, delivery, and evaluation of courses. Consumer involvement in medical, dental, and nursing education has been evidenced as a factor for increasing student empathy. To date, there has been no known research on the impact of mental health consumer involvement on occupational therapy students' empathy. The aim of this study was to investigate if occupational therapy students who receive teaching from a mental health consumer demonstrate higher levels of empathy compared with students who receive teaching delivered by occupational therapy academics.

Methods: Pre-post, quasi experimental, two group comparison design was used to measure second-year student empathy pre and post a consumer-led teaching tutorial. Students ($N = 217$) were randomised into two groups across three university campuses: 'teaching as usual group' (control) or 'consumer-led' group (experimental group). The Jefferson Scale of Empathy was used to measure student empathy.

Results: $N = 138$ matched scales were returned. Little difference in empathy scales was detected between groups. The 'consumer-led' group increased for the empathy scale by 3.4(95% CI: 0.7,6.1, $p = 0.014$) but was not statistically significant compared to 1.3(95% CI: -1.0,3.5, $p = 0.267$) for the control group. Both groups scored highly on empathy.

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Conclusion: This study found that occupational therapy students had pre-existing high levels of empathy. The challenge for future research is to identify appropriate ways to measure the impact of mental health consumer involvement on occupational therapy curriculum and students.

KEYWORDS

consumer participation, empathy, mental health and recovery, occupational therapy education

1 | INTRODUCTION

The Recovery approach is central to current Australian mental health policy and commits to a philosophy of respect and partnership with consumers and their families (Ridley et al., 2017). Occupational therapists are important contributors to the mental health workforce in Australia providing services in accordance with the Australian National Framework for Recovery-Oriented Mental Health Services (Australian Health Ministers' Advisory Council, 2013). As a profession, occupational therapy aims to facilitate participation in meaningful occupations to enable mental health 'Recovery' (Davidson, 2009) and includes empathy as a core element of its guiding philosophy of 'client (person)-centred' practice (Jamieson et al., 2006; Whalley Hammell, 2013).

Empathy in health professionals has been prioritised by 'consumers' of mental health services as an essential professional attribute for achieving effective partnerships in recovery-oriented mental health services (Arblaster et al., 2015). Given the emphasis on empathy from both the profession and consumers of 'Recovery' services, it is essential that occupational therapy students demonstrate high levels of empathy to become effective mental health practitioners. Consumer involvement in the education and development of student health professionals has been suggested as a method for developing student empathy (Ferri et al., 2019).

The Australian Occupational Therapy Council, the governing body responsible for overseeing the quality and standard of occupational therapy education, has mandated standards for consumer involvement in occupational therapy courses (Occupational Therapy Council; Occupational Therapy Council Australian and New Zealand, 2018). Specifically, Standard 3.10 requires '*The perspectives of consumers/service users/clients inform the design, delivery and evaluation of the program*'. Despite this requirement, there is little high-quality evidence to guide effective involvement of consumers within occupational therapy education, and the role of consumers in enhancing the development of empathy in occupational therapy students has not been thoroughly explored.

Key Points

- Consumer partnered education is a required and valued expectation of occupational therapy education
- Further research is required on the methods for studying the impact of consumer partnered education to determine efficacy
- Sustainable, high level consumer partnered involvement may include high-quality co-designed teaching materials

1.1 | Therapeutic use of empathy

Empathy is a multifaceted concept which is difficult to define (Fields et al., 2011), but many definitions include both a cognitive and affective component. It has been proposed that 'cognitive' empathy is where we take the perspective of the other and/or interpret verbal and non-verbal cues to learn what they are thinking or feeling, whereas 'affective' empathy describes how we are able to connect to another's experience by drawing on our own experience in a way that may evoke similar feelings (Jamieson et al., 2006). Empathy has also been described as a human quality that involves an active process of connecting with others to understand and feel along with them (Jamieson et al., 2006).

Despite the various interpretations of empathy, it is commonly accepted that empathy is an essential requirement for person-centred practice (Rogers, 1975). Empathy has been shown to strengthen the therapeutic relationship and improve satisfaction for both the client and the health professional, in turn facilitating better therapeutic outcomes (Petrucci et al., 2016). Thus, to be truly recovery focussed in practice, an occupational therapy student must develop a deep understanding of the challenges of living as a person who experiences mental health issues.

1.2 | Measuring empathy

The Jefferson Scale of Empathy (JSE) is one of the most used measures of empathy in health professional education and health practice. The original measure was developed for use with medical students and entitled the Jefferson Scale of Physician Empathy (Hojat, 2016). The measure was later modified for use with practicing physicians and other health professionals, and all health professional students other than medical students. Currently, three versions of the scale are available: one version for use with medical students (JSE-S); a second version for use with practicing physicians and health professionals (JSE-HP); and a third version for use with all health professional students other than medical students (JSE-HPS) (Hojat, 2016). The HP-version focusses on health professionals' empathetic behaviour in their interactions with patients/clients. The S and HPS versions focus on students' orientation or attitudes towards empathy in patient/client practice (Hojat, 2016). For example, questions from the JSE-HPS include '*Healthcare providers' understanding of the emotional status of the patients, as well as that of their families, is one important component of the healthcare provider-patient relationship*' and '*Empathy is a therapeutic skill without which a healthcare provider's success is limited*'.

1.3 | Occupational therapy student empathy

A recent large cross-sectional study at one Australian university reported on empathy in 600 students from a range of health disciplines, including occupational therapy students (Williams et al., 2017). This study utilised the newly developed Jefferson Scale of Empathy-Health Professional Student (JSE-HPS) version to examine empathy scores and to determine any differences between discipline groups. The occupational therapy student empathy scores on the JSE-HPS were consistent with earlier studies (Brown et al., 2010) and were similar to that of paramedic students, but they demonstrated a higher level of empathy compared with their nursing student peers (Williams et al., 2017).

Brown et al. (2010) used a cross-sectional study to examine empathy levels of Australian occupational therapy students towards five specific diagnostic groups (stroke, cerebral palsy, traumatic brain injury depression, and substance misuse). Using the Jefferson Scale of Physician Empathy (JSPE), 92 occupational therapy students were surveyed and found to have high levels of empathy to all but one of the medical diagnoses.

Substance misuse was found to evoke a low response of empathy from students. The authors raised the possibility that students hold stereotypical images of 'alcoholics' and 'addicts' which has the potential to pervade professional reasoning through blaming patients for ongoing symptoms or poor prognosis (Brown et al., 2010).

Other studies support the finding that occupational therapy students hold stereotypical or negative views towards people with mental illness, but to a lesser extent than students from other disciplines. Masedo et al. (2021) undertook a multicentre study on stigma towards people with mental illness with 927 final year students from health sciences courses in six universities from Chile and Spain. Medical and nursing students showed more negative attitudes than psychology and occupational therapy students in several stigma-related themes: likelihood of recovery for people with mental illness, dangerousness of people with mental illness, comfortability when speaking with someone with a mental illness, willingness to disclose personal experience of mental illness to friends, and discriminatory behaviour such as name calling. These studies have identified that occupational therapy students may achieve higher empathy levels when compared to some other health professions, but that empathy may be less developed in relation to stigmatised health conditions.

1.4 | Consumer involvement in higher education

It has become widely accepted that contact with people with a lived experience of mental health issues provides an opportunity for challenging stigma and negative attitudes towards mental illness (O'Reilly et al., 2011) and for developing empathy (Unwin et al., 2018). For example, in a qualitative study conducted by Unwin et al. (2018) with students studying social work ($n = 8$), mental health nursing ($n = 6$), and social welfare ($n = 8$) courses, service user and carer involvement in the classroom was found to be a more effective mode of developing empathy in comparison to lectures or texts. These educational methods supported students to become aware of their own personal prejudices, with some students experiencing modifications in attitudes and perceptions.

Consequently, it is now considered good practice to involve mental health consumers in health professional education to encourage students' understanding of the lived experience, support the development of communication skills, and aid in challenging negative stereotypes and beliefs required for developing empathy (Beresford &

Boxall, 2012; Duffy et al., 2013; Happell & Roper, 2003; Logan et al., 2018; O'Reilly et al., 2011; Robinson & Webber, 2013).

Despite the drivers to involve consumers in health education, most studies of the benefits of including consumer perspectives have focussed on student perceptions, attitudes, and knowledge (Arblaster et al., 2015; Robinson & Webber, 2013) with greater emphasis on process rather than outcomes or long-term maintenance of outcomes (Happell et al., 2014). Consistently, initiatives to involve consumers in educational roles are reported as 'one off' events (Towle et al., 2010), whereby consumers are invited to share their story as guest lecturers and tutors. By contrast, there is now an international movement to advocate for consumer or lived experience academics (Byrne et al., 2013) and to embed the lived experience of mental health consumers within the education of relevant health professional curricula (Dorozenko et al., 2016) and to assess the outcomes of consumer involvement.

This paper explores the role of consumers in developing empathy in occupational therapy students at an Australian university. The research team consisted of mental health consumer educators and occupational therapy academics. The term consumer is used in this paper to describe people who have a lived experience of mental health services, but the authors acknowledge that a range of other terms may be used synonymously such as expert by experience and service user (Happell et al., 2019). The aim of this study was to measure the impact of a face-to-face mental health consumer led teaching initiative on levels of occupational therapy student empathy.

Research question:

Do students who receive teaching from a mental health consumer on how to conduct recovery-focussed practices demonstrate higher levels of empathy than students who receive teaching as usual from an occupational therapy tutor?

2 | METHODS

2.1 | Study design

The pre-post, quasi experimental, two group comparison design was used. Ethical approval was granted by the Human Ethics Research Committee at the Australian Catholic University (2019-95E). Participants e-mail addresses were removed from survey responses through the survey tool. No participant information was identifiable.

2.2 | Participants

A convenience sample of occupational therapy students in the second year of their four-year degree were recruited to this study. Students were enrolled in a unit of study dedicated to occupational therapy practice in mental health at one of three campuses at an Australian university.

2.2.1 | Inclusion and exclusion criteria

Only students who participated in the teaching intervention and provided consent were eligible to participate in the survey. Students who did not participate in the teaching intervention or who did not provide consent were not able to continue to complete the survey.

2.2.2 | Recruitment

Prior to the start of the semester, students received a message on their electronic learning platform with an explanatory statement informing them of the study. During regular timetabled tutorials in week two of the 12-week semester, students were invited, by a staff member outside the usual teaching team, to participate in the study. Students were directed to their student e-mail where they could access the online survey. The survey opened with a further explanatory statement followed by the option to consent to participate in the study.

2.3 | Group allocation

All enrolled students had access to a non-compulsory, introductory 2 h lecture delivered by a mental health consumer in week one of the semester. Students had the option to attend in person or live stream the lecture. Across the three campuses, there were a total of eight tutorial groups which were evenly assigned to one of two study groups. Groups were assigned based on availability of consumer tutors. Tutorials in the 'experimental group' had the tutorial delivered solely by a mental health consumer. The consumer was introduced to the tutorial by their usual occupational therapy tutor, then the occupational therapy tutor left the room, and the consumer delivered the tutorial. Consumers were advised of the contact details of occupational therapy educators and could use their mobile phones at any stage to contact for support. Tutorials in the 'control group' were delivered by the usual occupational therapy tutor for the unit of study. Both the experimental

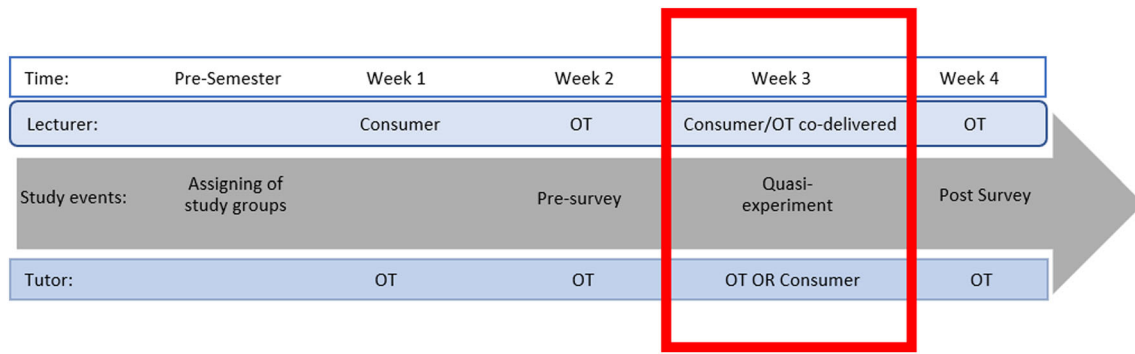


FIGURE 1 Study timeline

and control groups were delivered the same co-designed teaching materials. Although this was a convenience sample, using the standard deviation of 14 from Williams et al. (2017), the final sample size of 138 can detect the difference between groups of half a standard deviation or seven points with 80% power and a significance level of 0.05.

2.4 | Co-designed teaching materials

The tutorial was delivered in week three of a 12-week semester (see Figure 1). The teaching team (same as research team) consisted of three occupational therapy educators (one on each of the three campuses) and three mental health consumers (one per campus). Prior to the start of semester, the team met (total of 2 h) to co-design tutorial activities aimed at supporting skills and capabilities for implementing Person-Centred Care Planning (PCCP) (Tondora et al., 2014). The PCCP is a published tool that supports health professionals to move away from an illness-based model of care to a recovery-oriented, authentic partnership between consumer and health professional. Consumer educators were paid casual academic rates, funded through an in-house teaching development grant, for time spent on design and delivery of the project, interpretation of findings, and the writing of this paper. The team had a productive relationship, having worked together for the previous eight semesters. Consumer educators prioritised what aspects of PCCP should be more heavily weighted in the allocation of tutorial time. Co-produced videos (written and featuring consumer educator, DP) from a previous funded project were also considered to align with learning outcomes by the team and embedded in the tutorial. The final version of the 2-h tutorial guide consisted of (1) identifying strengths and using communication skills to identify someone's personal strengths; (2) recovery language, alternatives for

negative/deficit phrases commonly used in mental health practices; (3) watching videos that highlight recovery-oriented communication styles compared to traditional approaches to care planning sessions; and (4) goal setting using identified strengths as a foundation to set meaningful goals.

2.5 | Outcome measure

2.5.1 | Jefferson Scale of Empathy-Health Professional Student (adapted)

Consistent with previous research into occupational therapy student empathy, the Jefferson Scale of Empathy-HPS version was administered before and after the intervention/tutorial (2 weeks apart). The scale has been found to have good reliability and validity with Australian health professional students (Williams et al., 2013, 2017). The attribute of empathy is defined by the JSE-HPS as a largely cognitive function required to be able to consider the perspective of the recipient of services from the health professional and have capacity to communicate this understanding (Fields et al., 2011). Administration procedures indicate that questions can be aligned to one of three subscales or factors: *perspective taking*, *compassionate care*, and *walking in the consumer's shoes*.

The project team were granted permission from the JSE-HPS licence holders to make minor modifications to the scale. The terms 'health professional student', 'patient', and 'surgery' were replaced with 'occupational therapy student', 'consumer', and 'mental health service/psychiatric'. The scale is a 20-item Likert scale with a range of strongly agree = 1 through to strongly disagree = 7. Scores from the scale range from 20 through to a maximum of 140. A higher score on the JSE-HPS reflects a higher level of empathy (Ferri et al., 2019).

2.6 | Procedures

The JSE-HPS was administered as an online questionnaire using RedCap (Harris et al., 2009). Note that age and gender were not asked to ensure students were not identifiable. The preintervention survey was administered during the week two tutorials via an emailed link. Students were provided with time in the tutorial to complete the survey whilst their usual tutor was outside the room. This provided an opportunity for students to decline to participate in the study without fear it would prejudice their academic performance in the unit. The same procedures for administering the online survey were repeated in week four. The individual email link from RedCap ensured that students' scores were matched to their week 2 scores.

2.7 | Statistical analysis

The Statistical Package for Social Sciences (SPSS version 27) (IBM Corp, 2020) was used for analysis of the JSE-HPS scores. Empathy scales were described using mean and standard deviation. Linear regression was then used to assess differences between groups at follow-up with adjustment for baseline scores and campus. A linear mixed model was used to investigate correlation between students at the same campus site. Residuals of models were assessed for assumptions (linearity, homoscedasticity, and normality) using descriptive statistics and plots. Results were bootstrapped, and 95% confidence intervals and p values were reported. Bias Corrected and accelerated bootstrap intervals with 5000 samples were used. A sensitivity analysis was performed when outliers were present with the results presented with and without outliers. Change scores were created to examine change within groups; 95% CI was reported without p values.

2.7.1 | Confirmatory factor analysis

The JSE-HPS was fit using the theoretical three-factor model provided by the authors in a Confirmatory Factor Analysis (CFA). Model fit was judged using a number of indicators including Chi-square statistics, comparative fit index (CFI), and root-mean-square error of approximation (RMSEA), where good fit is seen as $RMSEA < 0.08$ and $CFI = < 0.9$. Internal consistency of factors was described using composite reliability (CR) (> 0.7 reliable). Convergent and discriminant validity was used to indicate how individual items correlate with their latent factors. This was explored using average shared variance extracted (AVE) and maximum shared variance (MSV).

Convergent validity can be judged by $AVE > 0.5$, and discriminant validity can be determined by $MSV < AVE$. The statistical program R (R Core Team, 2017) was used to produce plots and analysis for CFA.

3 | RESULTS

3.1 | Participants

Of a total of 217 students enrolled across the three campuses, 138 students (64%) completed the baseline and follow-up JSE-HPS. Seven students did not complete the JSE-HPS at either time point. The intervention group had 81 students, whereas the comparison group consisted of 57 students. No patterns could be found in the missing data with no relationship found to campus site (χ^2 , $df = 1$, $p = 0.875$) or baseline scores ($p = 0.461$), with non-completers having a marginally lower total JSE-HPS (mean:113.3, $SD = 14.7$, $N = 44$) scores than completers (mean:115.2, $SD = 12.2$, $N = 138$). Therefore, missing data were not imputed, and a complete case analysis was performed when comparing JSE-HPS scores between groups.

3.2 | Intervention group versus control group descriptive statistics

There were no differences in empathy scores between groups (Table 1). One student scored low on the JSE-HPS at baseline in the intervention group and high on all scales at follow-up.

3.3 | Jefferson Scale of Empathy Health Professional Student baseline and follow-up scores

To examine correlation of student scores within campus sites, linear mixed models were used to incorporate campus as a random effect. These models indicated no correlation could be estimated, meaning no clustering effect was observed. Therefore, the simpler fixed effects linear regression model with an assumption of independence was found to be appropriate. The fixed effect models showed no differences between campus sites for JSE-HPS scores at either baseline or follow-up; however, the models were adjusted for campus as it was a part of the study design. Mean JSE-HPS scores were similar between comparison and interventions groups at baseline for the total score (MD -2.2, CI -6.5, 2.1; $p = 0.317$) and the sub-scales of *perspective taking*, (MD -1.4, CI -3.8, 0.9,

TABLE 1 Descriptive statistics for JSE-HPS

JSE-HPS scale			Baseline		Follow-up	
Variable	Group	N	Mean	SD	Mean	SD
Total	intervention	81	114.2	13.5	117.6	10.0
	control	57	116.6	9.9	117.9	10.2
Subscales						
Perspective taking	intervention	81	58.1	7.7	60.3	6.1
	control	57	59.6	5.9	60.1	5.7
Compassion care	intervention	81	46.6	7.0	48	5.2
	control	57	47	4.8	48	4.8
Walking in consumer's shoes	intervention	81	9.5	2.5	9.2	2.8
	control	57	10.0	2.3	9.8	2.3

TABLE 2 Mean follow-up scores and differences between groups for JSE-HPS^{a,b}

JSE-HPS scale	Group	N	Follow-up mean (95% CI)	Change from baseline (95% CI)	Group mean difference (95% CI)	p value
Total	intervention	81	118.1 (116.0, 120.1)	2.9 (0.9, 5.1)	1.2 (−1.8, 3.9)	0.442
	control	57	116.9 (114.5, 119.5)	1.7 (−0.7, 4.6)		
Subscales						
Perspective taking	intervention	81	60.7 (59.4, 61.9)	1.9 (0.6, 3.4)	1.1 (−0.8, 2.9)	0.225
	control	57	59.5 (58.1, 61.0)	0.8 (−0.7, 2.5)		
Compassion care	intervention	81	48.1 (47.0, 49.1)	1.3 (0.1, 2.5)	0.3 (−1.2, 1.8)	0.647
	control	57	47.7 (46.5, 48.9)	0.9 (−0.3, 2.3)		
Walking in consumer's shoes	intervention	81	9.4 (8.8, 9.9)	−0.3 (−0.8, 0.2)	−0.3 (−1.1, 0.4)	0.398
	control	57	9.7 (9.1, 10.3)	0.0 (−0.6, 0.7)		

^aModels were adjusted for baseline scores and campus.

^bBootstrapped 95% confidence intervals and *p* values.

p = 0.257), *compassionate care* (MD −0.2, CI −2.1, 1.7; *p* = 0.885), and *walking in the consumer's shoes* (MD −0.7–1.6, 0.2; *p* = 0.129). Owing to the outlier within the data, the assumption of normality and equal variances was not met; therefore, all JSE-HPS comparisons were bootstrapped. Bootstrapping does not require a normal distribution, only a representative sample, as participants baseline scores that were missing at follow-up had a similar standard deviation to the intervention group, and the outlier was included in analysis.

Follow-up scores were adjusted for baseline, as well as campus, to reduce the effect of the outlier and to account for regression to the mean effects. The mean difference between comparison and intervention groups was similar for JSE-HPS scores at follow-up (Table 2). There was marginal improvement in total JSE-HPS scores in both groups; however, a three-point change would not be seen as a clinically meaningful improvement. A

sensitivity analysis removing the outlier from the intervention group showed similar results to leaving it in, with raw baseline intervention scores for total JSE-HPS increasing to 115.2. After adjustment by baseline and campus, total JSE-HPS group mean difference at follow-up remained small 1.1 (−1.6, 3.7; *p* = 0.413).

3.4 | Confirmatory factor analysis

Although not a primary aim for the study, further examination of the JSE-HPS version was completed to explore validity. Scores for 182 participants who responded at baseline were used to examine construct validity of the JSE-HPS scale. The CFA showed poor fit with RMSEA = 0.081 and CFI = 0.870 (Figure 2). Good reliability was observed for *perspective taking* (CR:0.863, AVE:0.429, MSV:0.57), *compassionate care* (CR = 0.796,

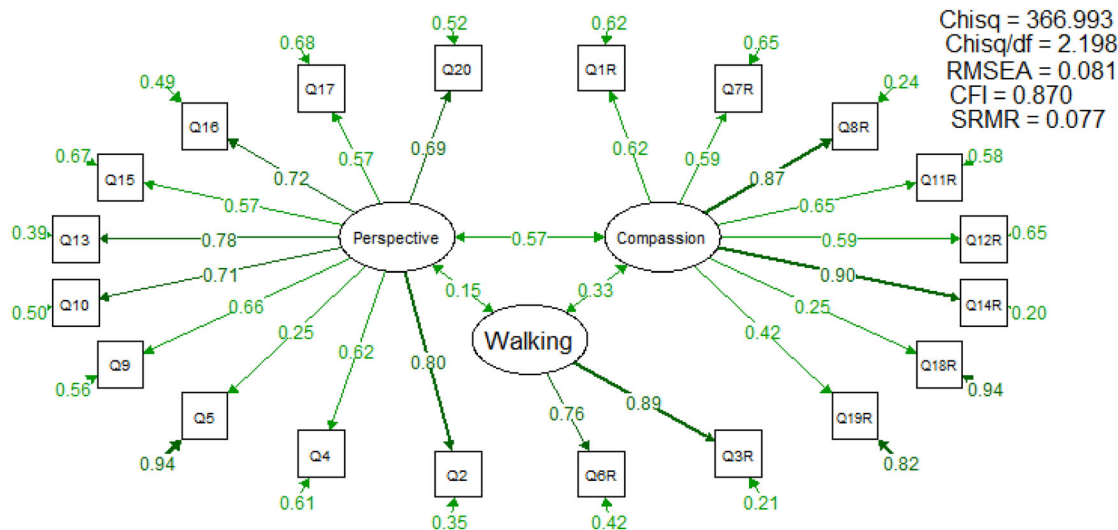


FIGURE 2 Confirmatory Factor Analysis of Jefferson Scale of Empathy-Health Profession Student. Footnote: Standardised variances (outside), loadings, and factor correlations are shown

AVE:0.412, MSV:0.57), and walking in the consumer's shoes (CR = 0.809, AVE:0.684); however, compassionate care and perspective taking lacked convergent (AVE < 0.5) and discriminant validity (MSV > AVE). This indicated that items within these factors did not correlate well with each other and may correlate better to other factors.

4 | DISCUSSION

The teaching intervention described in this study is an example of 'gold-standard' consumer involvement in health professional higher education (Regan de Bere & Nunn, 2016). This standard of involvement was achieved through co-design of the teaching materials and direct delivery of mental health curriculum by mental health consumers. The significance of this involvement is reflected in a recent occupational therapy education benchmarking study that highlighted how current consumer involvement is typically restricted to a level of 'tell my story' (Scanlan et al., 2020). For this study, we hypothesised that direct delivery of curriculum by consumers would result in increased mean scores of JSE-HPS (adapted) postintervention. Mean scores marginally increased for both groups; however, this was not found to be either clinically or statistically significant. Findings from this study would suggest that the direct delivery of curriculum by a consumer did not significantly impact occupational therapy student empathy levels in this instance. Several factors may have contributed to this outcome.

The first factor impacting the lack of significant change in empathy scores could be attributed to the high levels of baseline empathy. Students in this study were in their second year of a four-year degree programme, and teaching in the earlier semesters may have contributed to their empathy levels. The high baseline empathy scores are also consistent with previous studies (Brown et al., 2010; Williams et al., 2017) of occupational therapy student empathy, confirming that students self-selecting into the occupational therapy profession achieve consistently higher scores of empathy.

A key feature of the teaching intervention was the co-design of teaching materials and the re-positioning of the mental health consumer to the role of primary educator, a recognised strategy for shifting the power imbalance for consumers (Regan de Bere & Nunn, 2016). Both the intervention and control groups received consumer delivered lectures in week one and co-produced lecture and tutorial learning materials in week 3, with the only variable being the tutor who delivered the week 3 tutorial. In effect, the teaching intervention group received a higher 'dosage' of direct consumer involvement. It is possible that this 'extra dose' of consumer involvement may support the development of other forms of student 'Recovery' capabilities such as influencing student attitudes towards mental illness and stigma. Previous research has proposed that personal contact with mental health consumers was an important factor in influencing pharmacy students' shift in attitudes and stigma towards people with mental illness (O'Reilly et al., 2011). As identified earlier, occupational therapy students have been found to hold negative attitudes and stigma towards people with

mental health conditions (Masedo et al., 2021). Exploring the impact of consumer involvement in changing negative attitudes and stigma towards people with mental health conditions may be more relevant for occupational therapy students than empathy. Additionally, future investigation designs may seek to measure the impact of consumer involvement on consumer identified prioritised student capabilities such as therapeutic relationship and trauma responses (Arblaster et al., 2018).

Learning from the lived experience is a requirement for occupational therapy education; therefore, a sustainable and high-quality approach to consumer involvement in curricula is required. The teaching intervention under investigation in this study could be adapted to a co-delivered format (staff teaching alongside consumers) for co-designed materials. The collaborative classroom partnership could then model communication styles that promote a 'shared dialogue' and model 'open, honest, and respectful' exchanges (Arblaster et al., 2018, p. 592). This adaptation would not reduce the 'gold-standard' nature of involvement of this teaching intervention as the 'division of labour' would remain shared between the educators and consumers (Regan de Bere & Nunn, 2016, p. 87).

CFA was used to interrogate the validity of the JSE-HPS based on the changes made to terms used in items that aimed to reflect a mental health specific practice context. It has also provided useful information to guide further development of the tool for a student allied health, mental health population. The authors of the JSE-HPS version reported marginally good fit (RMSEA = 0.05, Adjusted Goodness of Fit Index = 0.93, and Tucker-Lewis Index = 0.89) for their three-factor solution (Hojat & LaNoue, 2014) and were confirmed in medical students from Iran (Shariat & Habibi, 2013). It was translated into Italian in student nurses by Montanari et al. (2015), who found that, although the three-factor had marginally good fit (CFI = 0.92 and RMSEA = 0.03), the exploratory factor analysis found several cross-loaded items (16, 2, 20, 10, and 13) and item 18 not loading; the authors removed these items and refit the CFA which then showed a good fit (CFI = 0.96 and RMSEA = 0.02). An Australian study of paramedic students by Williams et al. (2013) performed an EFA and found a two-factor solution (17 items) representing *perspective taking and compassionate care*. The initial CFA, showed poor fit (CFI = 0.91 and RMSEA = 0.074); however, fit improved was shown with the correlation of four error terms (CFI = 0.96 and RMSEA = 0.046).

To our knowledge this is the first study exploring the validation of the JSE-HPS scale in an occupational therapy student population. We found the scale had poor fit with CFI = 0.870 and RMSEA = 0.081. Items 5, 18, and

19 were found to have the lowest loading. Rewording of items, such as item 19 'I do not enjoy reading non-medical literature or the arts', is considered essential to be able to adapt the JSE-HP to students from disciplines outside medicine. It is possible the stability of *walking in the consumer's shoes* factor scores could be attributed to 'poor fit'. Results from the CFA (Figure 2) indicate that other items be added to this two-item factor so it can more reliably measure this construct. We have reported the results with the original scale to enable comparisons with other studies. However, we recommend further work validating this scale with Delphi expert panels to consider rewording and adding or removing items that are more relevant to occupational therapy students.

4.1 | Limitations

Because of the constraints of consumer availability on each campus, academics and consumers were not randomly assigned. The non-compulsory, introductory (week one), consumer lecture was live streamed to campus lecture theatres where students were in attendance as well as being accessed by students off campus, making it difficult to determine the number of students who were exposed to the initial 'dose' of consumer involvement. Baseline measures were administered after this lecture, and it is possible that this may have been a factor in the baseline scores. The JSE-HPS scale used in this study was adapted by substituting terms to better align with the 'Recovery' approach (Davidson, 2009) taken in the curriculum but remain largely unaltered from the published version.

5 | CONCLUSION

Given the importance placed on empathy as a professional attribute by mental health consumers (Arblaster et al., 2015) and recognised by accrediting bodies, this study confirms that occupational therapy students possess high levels of empathy, a necessary workforce characteristic for being effective members of the Australian National Framework for Recovery-Oriented Mental Health Services (Australian Health Ministers' Advisory Council, 2013). Contributions of consumers as co-collaborators in the education of occupational therapy students whilst highly valued requires further investigation to fully understand the impact of this vital role. Further development of the JSE-HPS version may assist future studies in understanding empathy more fully in health professional students.

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CONFLICTS OF INTEREST

The authors have no conflict of interest to declare.

AUTHOR'S DECLARATION OF AUTHORSHIP CONTRIBUTION

All the authors are responsible for the reported research. They have all contributed to the research as stated in the manuscript. This includes participating in the concept and design, the gathering of data, and drafting or revising of the current manuscript. All authors have approved the manuscript as submitted.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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