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Abstract

If consumer participation is to be translated from rhetoric into reality, the attitudes of health professionals need to be addressed. Educational strategies can play an important role, but measures of attitudes are needed to determine the effectiveness of these strategies. This paper seeks to establish the Mental Health Consumer Participation Questionnaire (MHCPQ) on psychometric grounds, and explore attitude levels. Overall, the 150 nursing students who participated saw consumer participation in a favourable light, although this varied with the nature and extent of involvement. Psychometric properties, attitude structure, and attitude differences are reported. The MHCPQ displays good face validity and can be further developed and used in mental health-care settings.

Keywords

health, psychometric, consumer, analysis, participation, questionnaire, mental

Disciplines

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FEATURE ARTICLE

A psychometric analysis of the Mental Health Consumer Participation Questionnaire

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ABSTRACT: *If consumer participation is to be translated from rhetoric into reality, the attitudes of health professionals need to be addressed. Educational strategies can play an important role, but measures of attitudes are needed to determine the effectiveness of these strategies. This paper seeks to establish the Mental Health Consumer Participation Questionnaire (MHCPQ) on psychometric grounds, and explore attitude levels. Overall, the 150 nursing students who participated saw consumer participation in a favourable light, although this varied with the nature and extent of involvement. Psychometric properties, attitude structure, and attitude differences are reported. The MHCPQ displays good face validity and can be further developed and used in mental health-care settings.*

KEY WORDS: *attitudes, consumer participation, mental health, mental health consumer participation questionnaire, nursing education, psychometric properties.*

INTRODUCTION

The reform in national mental health policy occurring in Australia since the early 1990s has been accompanied with an increasing expectation that consumers of mental health services be given the opportunity to contribute to the planning, development, delivery, and implementation of these services (Commonwealth of Australia 1992; 1997; 1998; 2003; 2009). A review of the literature suggests a number of barriers to the realization of this policy directive for a number of reasons, including resistance on the part of mental health professionals (Browne *et al.* 2008; Goodwin & Happell 2006; Happell 2008a; Lammers & Happell 2003; 2004; McAllister & Walsh 2004; McCann *et al.* 2008; Middleton *et al.* 2004).

The concept of consumer participation by definition challenges the traditional relationship between service

providers and service users. Mental health professionals need to regard consumer knowledge and experience within a context of greater equality. Furthermore, they are required to overcome their own discriminatory attitudes about the capacity of consumers to participate, and not dismiss the views of consumers because of concerns about their mental health status (Bertram & Stickley 2005; Happell 2008b; McAllister & Walsh 2004).

Mental health nurses constitute the largest professional group within the mental health-care system and tend to be the professional group providing the greatest proportion of direct care (O'Brien 2001; Shanley *et al.* 2003; Shattell *et al.* 2007). Acceptance of and support for increased participation by nurses is therefore likely to be crucial to its success (Cleary *et al.* 2006; Goodwin & Happell 2008; Kidd *et al.* 2007; Lammers & Happell 2003). The available evidence suggests that nurses have differing opinions about consumer participation. Support for the concept in principle was often tempered by identified limitations, including staffing levels, time, and other resources, and structural issues, such as the layout of the inpatient unit (Goodwin & Happell 2008; Lammers & Happell 2003; McCann *et al.* 2008).

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The involvement of consumers in the education of health professionals in order to reduce stigma and discrimination was a strong recommendation of an Australian Commonwealth Government-funded project (Deakin Human Services Australia 1999). The literature provides a number of examples of consumers being actively involved in these educational initiatives (Cowling *et al.* 2006; Happell *et al.* 2002; 2003; Happell & Roper 2002; 2003; 2009; Warne & McAndrew 2007). However, a qualitative study of consumers' experiences of this involvement (Meehan & Glover 2007) suggests that a number of barriers exist, including tokenistic attention to the consumer content, consumer content as an add-on rather than integral part, and being expected to give so much of themselves without support.

In addition, the extent to which the outcomes of these roles has been evaluated is limited (Happell *et al.* 2002; 2003; Happell & Roper 2002; 2003; Meehan & Glover 2007). Additional research is required to enhance our understanding of consumer roles in the education of mental health professionals, in particular, to avoid this becoming tokenistic (Happell & Roper 2009). Understanding student attitudes is an important part of this research task.

The Mental Health Consumer Participation Questionnaire (MHCPQ) is a recently developed measure of nursing student attitudes and opinions towards service user participation (Happell *et al.* 2002; 2003). Thus far, questionnaire responses have been used to explore post-graduate student orientations to: (i) consumer involvement in management in mental health services; (ii) consumer involvement in treatment; (iii) consumer involvement in mental health-care planning; and (iv) consumer academic position (Happell *et al.* 2002; 2003). While the tool has proved useful for these initial enquiries, its psychometric properties, such as structure and composition, have yet to be examined.

The MHCPQ was used in a recent undergraduate mental health nursing education evaluation at a university in regional Queensland (Australia), thus providing an opportunity to address this research problem. Research questions were centred on sources of attitude differences, and whether there were changes in attitudes measured just before and immediately after the student placement. In this context, it was critical to evaluate the MHCPQ, as well as its potential for other consumer participation research, where surveys of this kind are in short supply.

The purposes of the current paper are to establish, for the first time, the psychometric properties of the MHCPQ and to ascertain students' initial attitudes

towards consumers. It focuses exclusively on the first stage of data from the education programme evaluation.

METHODS

Participants

Participants were third-year nursing students currently enrolled in a Bachelor of Nursing (BN) and undertaking the only dedicated mental health course in the BN programme. There were 157 participants for stage one of the programme evaluation. Participants' backgrounds are summarized in Table 1. The Table shows that females represented most of the sample, and almost half of the participants were between 18 and 29 years of age. Approximately one-quarter of participants were doing a mental health placement, and approximately 85% reported not having previously completed a mental health placement.

Instrument

The MHCPQ has two parts. The first consists of 24 statements on consumer participation, where participants are required to rate each. As a prompt, 'mental health consumer' is described and given context as 'a person who is currently using or in the past has used mental health services as either an in-patient or out-patient. You may know them as patients'. Shortly afterwards, respondents are asked to indicate 'the response which most accurately represents your views'. The initial response format for this measure was a five-point semantic differential scale

TABLE 1: Participant backgrounds (n = 157)

Demographic variable	Percentage
Sex	
Female	92.4
Male	5.7
Missing	1.9
Age	
18–29	47.8
30–39	26.1
40–49	16.6
50 or older	7.6
Missing	1.9
Type of placement	
Mental health	24.2
Other	63.1
Missing	12.7
Mental health placement	
Had before	10.8
Did not have	85.4
Missing	3.8

(Happell *et al.* 2002). This was changed to a seven-point Likert-type scale in the current study to permit more differentiation in ratings. The scale labels are 'strongly disagree' for a rating of 1, and 'strongly agree' for a rating of 7.

Procedure

Students were recruited into the study during a face-to-face teaching session. A verbal explanation of the study was provided, and a plain language statement was distributed with the questionnaire. This task was undertaken by staff who had no involvement in the study. Students were asked to complete the MHCPQ and place it in a sealed envelope before returning it to the designated person.

Ethical issues

This study received ethics approval from the host university. Students were informed that participation in the research was voluntary. They were advised that they could return an empty questionnaire if they preferred this to a more obvious refusal. Information about the study was provided both verbally and in writing. Informed consent was evidenced by the return of the completed questionnaire. The questionnaires were stored in a locked filing cabinet and were only accessible to the research team.

RESULTS

All analyses were conducted using PASW statistics 18 (SPSS, Chicago, IL, USA).

Descriptive statistics

Three participants did not complete any items of the MHCQ and were excluded. Based on a cut-off of 30% or more missing values per participation, four participants were excluded, leaving a sample of 150. For the remaining participants, at an item level, the response rate ranged from 98.3% to 100%. Missing values were replaced by the item-specific average rating.

When inspecting frequency distributions for the overall set of items, it was clear that participants were favourable about consumer participation in their own immediate care, while there seemed to be ambivalence overall concerning their participation in decision making on mental health staff and resourcing. Statements receiving a trend towards the 'strongly agree' end included the following: 'Consumers should always be involved in the evaluation and diagnosis of their presenting problems', 'Consumers should have the opportunity for genuine

input into the planning of their own treatment', and 'Medications should be explained in detail to consumers in ways that they can understand as they are fully informed and can make choices'.

Statements where there was a marked spread in opinion included the following: 'Consumers should be encouraged to contribute to the writing of their own notes and records', 'Consumers are already given sufficient opportunity to participate in the care they receive', 'Consumers should be involved in the planning and delivery of all staff education and professional development sessions', 'A consumer academic should be a member of staff in all psychiatric nursing courses', and 'Consumers use mental health services because they need help and therefore shouldn't be burdened with how these services are being provided'.

Principal components analysis

Principal components analysis (PCA) was adopted to examine item composition and refine the measure through item reduction. There was a sufficient number of participants to meet the requirement for the PCA of at least five cases for every variable (Hair *et al.* 2006). Bartlett's test of sphericity was significant $\chi^2(276) = 962.49$ ($P < 0.001$), suggesting adequacy of the data for the PCA. The Kaiser–Meyer–Olkin measure of sampling adequacy was 0.76, also suggesting suitability for the PCA. As part of deciding how many components to retain, the Cattell scree plot, eigenvalue greater-than-one rule and parallel test were utilized (Hair *et al.* 2006).

The scree plot suggested seven components, the eigenvalue rule indicated seven components, and there were three components based on the parallel test. The eigenvalues for the seven component solution were 4.74, 2.44, 2.41, 1.53, 1.24, 1.17, and 1.04. Given the overall range based on the three sources of information (3–7), and the primary interest in the conceptual interpretability of item groupings, PCA solutions, ranging from two to eight components, were examined. For each extraction, component rotation was conducted to foster interpretability of the components.

Given the psychological nature of the construct measured (i.e. attitudes), where components were expected to be at least slightly correlated, oblique rotation was chosen (cf. Hair *et al.* 2006), where oblimin (with Kaiser normalization) and promax rotations were examined. Pattern coefficients were drawn on to interpret each solution. The three-component solution submitted to oblimin rotation was the most interpretable of the solutions examined. Retention of items was based on a number of sources of information, including the conceptual consistency of item

TABLE 2: *Item component loadings, communalities (h^2), and internal consistency reliabilities (n = 150)*

Item no.	Statement	C ₁	C ₂	C ₃	h^2
23	Consumers do not understand the language and complexities of mental health services, which makes it difficult for them to have meaningful input	-0.69	0.07	-0.22	0.54
22	Increased consumer involvement in mental health services would probably increase the stress levels for service providers	-0.64	0.10	-0.08	0.41
24	Consumers do not have enough self-confidence to become involved in the planning and delivery of mental health services	-0.62	0.02	-0.04	0.39
18	Consumers use mental health services because they need help and therefore shouldn't be burdened with how these services are being provided	-0.62	0.11	0.17	0.37
19	Mental health services would not change significantly if consumers were employed by the services	-0.55	-0.25	0.16	0.43
9	The medications used in mental health are very complex and consumers should only have limited input into deciding the most appropriate medications to be used	-0.54	0.05	-0.14	0.32
16	Mental health services work as well as they can and we shouldn't use valuable resources trying to change them	-0.51	-0.18	0.14	0.33
14	People with mental illness can't handle too much responsibility	-0.45	-0.11	-0.06	0.25
3	Consumer input should be central in the planning of mental health services	-0.00	0.85	-0.01	0.72
2	Consumers should be actively involved in identifying the goals for their treatment	0.06	0.84	-0.11	0.73
4	Consumers should always be involved in the evaluation and diagnosis of their presenting problems	-0.11	0.70	0.23	0.54
1	Mental health consumer involvement and participation should be fully supported by all mental health services	-0.06	0.70	-0.07	0.47
6	Consumers should have the opportunity for genuine input into the planning of their own treatment	0.22	0.64	0.16	0.56
10	Consumers should be involved in the planning and delivery of all staff education and professional development sessions	-0.07	0.00	0.80	0.63
5	Consumers should be involved in the process for the hiring of all new staff of mental health services	0.00	-0.05	0.79	0.62
7	Consumers should be encouraged to contribute to the writing of their own notes and records	0.08	0.08	0.70	0.52
11	A consumer academic should be a member of staff in all psychiatric nursing courses	0.06	0.05	0.60	0.38
Cronbach's alpha coefficient:		0.73	0.80	0.73	

Note: Component loadings higher than 0.3 are in bold. Components were labelled as follows: C1, consumer capacity; C2, consumer involvement; C3, consumer as staff.

clusters, component loadings, communalities, and cross-loadings (Hair *et al.* 2006; Worthington & Whittaker 2006). A value of 0.45 was chosen as a general signal for a 'fair' size item loading (c.f. Comrey & Lee, 1992), and over 0.30 for cross-loading items (c.f. Harper, 2007).

Poorly-performing items, conceptually or on these technical criteria, were only removed no more than one at a time, with the solution re-examined after each refinement. Overall, seven items were removed (for details of rationale for refinement of each component, please contact authors). After refinement, the three components accounted for 22.62%, 13.67%, and 12.13% of item variance, respectively, with a cumulative variance of 48.42% accounted for. Table 2 presents the final set of items, their component loadings, communalities, and internal consistency levels. Inspection of Table 2 shows that item communalities ranged from 0.25 to 0.63, and component loadings ranged from 0.45 to 0.85.

Defining scales

The item clusters reflect clear themes and were further interpreted on the basis of areas of participation explored by Happell *et al.* (2002). The item grouping 9, 14, 16, 18, 19, 22, 23, and 24 was labelled as 'consumer capacity'. These items all share in common the issue of consumer capacity for input and 'making a difference' to the quality of mental health services. In terms of locus of participation, statements mostly reflect consumer involvement in mental health service management.

Other participation domains contained in this scale include mental health-care planning (item 24) and consumer involvement in treatment (item 9). Consumer involvement in own treatment and services ('consumer involvement' for short) was the label allocated for items 1, 2, 3, 4, and 6. This scale reflects attitudes concerning active and valuable involvement of the consumer that is

likewise supported by staff. Participation domains here include mental health-care planning (item 3), involvement in treatment (items 2, 4, and 6), and mental health service management (item 1). 'Consumer as staff', for items 5, 7, 10, and 11, represents attitudes towards consumers when more formally recognized as participants, for instance, having input as staff and in staff processes. This scale covers mental health-care planning (item 10), mental health service management (item 5), involvement in treatment (item 7), and consumer academic position (item 11).

While there is clear pattern differentiation (i.e. discriminant validity) between the scales if one considers the component loadings in Table 2, based on content, there is a subtle difference between consumer involvement and the consumer as staff. While both refer to enhanced consumer involvement, the consumer involvement scale has more emphasis on input at the individual treatment level, while the consumer as staff scale places emphasis on consumer participation in the actual processes themselves at a formal level, from self-management (writing own notes and records) to decision making on health-care services (i.e. planning and delivery, staff recruitment, and a formally recognized role in psychiatric nursing courses).

Attitude levels

Scale scores were based on the average rating for each set of items. Table 3 presents the scale means and standard deviations (SD). Table 3 shows that, on the whole, participants were tending towards strong agreement with statements about consumer involvement in their own treatment and mental health-care services more generally, with an average of 5.96. It shows that attitudes on consumer capacity were also positive, in that there was an average of 3.32, signifying that participants tended to disagree with negatively-worded statements.

Participants were in general less inclined to endorse inclusion of consumers as staff or have input into staff-related decisions, as the mean response was 3.43 out of a possible 7. However, as indicated by comparing the standard deviations in Table 3, the variety of opinion was relatively higher than for scores on the other two scales.

TABLE 3: Means and standard deviations (SD) for the three subscales ($n = 150$)

Subscale	Mean	SD
Consumer capacity	3.32	0.80
Consumer involvement	5.96	0.81
Consumer as staff	3.43	1.17

Note: Score range of 1–7.

Interscale associations

Based on Pearson product–moment correlations, consumer capacity was significantly associated to both consumer involvement ($r = -0.27$, $P < 0.01$) and consumer as staff ($r = -0.17$, $P < 0.05$). Given the negative wording of the consumer capacity items, these correlations suggest that more positive attitudes towards consumer capacity was associated with more positive attitudes to consumer involvement and consumer as staff. While the correlation coefficient between consumer involvement and consumer as staff was not statistically significant ($r = 0.16$, $P > 0.05$), the trend was in the same direction.

Group differences

When comparing mean differences for groups, it is desirable to have a similar number of cases in each (Garson 2010); however, the numbers were uneven across the four age groups (see Table 1). Therefore, the latter three age groups (30–39 years, 40–49 years, and 50 years and over) were combined in order to compare to the younger age group (18–29 years). Based on an independent samples *t*-test, the younger group ($n = 76$, mean = 3.51, SD = 0.70) had more negative attitudes to consumer capacity than the older group ($n = 71$, mean = 3.12, SD = 0.86), $t(138) = 2.938$ ($P < 0.001$). For sex and mental health placement experience, numbers in each group were very uneven (see Table 1), and so it was difficult to draw inferences for these.

DISCUSSION

For the Commonwealth support of increased consumer participation (Commonwealth of Australia 1992; 1997; 1998; 2003; 2009) to be translated from policy to reality, there is a need to actively promote change in the attitudes of mental health professionals to viewing consumers in a more collegial way (Browne & Hemsley 2008; Browne *et al.* 2008; Goodwin & Happell 2006; Happell 2008a; McAllister & Walsh 2004; McCann *et al.* 2008; Middleton *et al.* 2004). Active consumer involvement in the education of health professionals has been identified as a major strategy in influencing the development of more positive attitudes (Cowling *et al.* 2006; Happell *et al.* 2002; 2003; Happell & Roper 2002; 2003; Meehan & Glover 2007; Warne & McAndrew 2007).

In order to effectively evaluate these initiatives, there needs to be an effective instrument. The purpose of the current study was to examine the attitudinal structure of the MHCQ (Happell *et al.* 2002; 2003), and gain an

insight into student attitude levels at the start of their third year of the BN programme.

When submitted to PCA, the MHCQ had a clear structure in the form of three sets of items, defined as consumer capacity, consumer involvement, and consumer as staff. A strength of the scales is that each represented a range of areas of consumer participation domains. At least three areas were represented by all the scales. Given the reasonable face validity of the MHCQ, there is potential for it to be used with other stakeholders in consumer participation, particularly health professionals providing mental health-care services. Further research is needed to determine how well the structure of the measure generalizes to other student cohorts and other relevant groups. The external and concurrent validity of the MHCQ also needs to be established. Avenues here include comparing MHCQ scores with similar attitude measures, and with actual service provider practices.

In terms of examining changes in attitudes, which was the current context of this study, there were issues with scale reliability. While internal consistency levels of all three scales were well above the minimum permitted for exploratory analyses (Cronbach's alpha of 0.6; Hair *et al.* 2006), it is desirable to have much higher scale reliabilities when examining attitude change. In addition, the study design did not allow for establishing test-retest reliability in the absence of an intervention. Overall, the measure can be used in a programme evaluation context, albeit with much caution when making inferences about attitude change.

The remainder of this paper discusses attitude levels, and as part of this, compares findings with Happell *et al.* (2002; 2003). The latter involved 25 postgraduate students. Although the response formats differ, comparison was possible, as they both required agreement ratings.

The current student cohort was clearly in favour of particular aspects of consumer involvement. For instance, among the 150 participants, there were zero 'disagreement' responses for the following statements: 'Consumers should be actively involved in identifying the goals for their treatment' and 'Consumer input should be central in the planning of mental health services'. This is consistent with Happell *et al.* (2002) where there were no cases of disagreement. In light of this, the item content might need to be refined in order to prevent ceiling effects. The results nevertheless suggest a strong endorsement of specific forms of participation.

The overall average for the scale 'consumer capacity' suggested slight agreement on consumer input in mental health service planning and management and own treatment. Based on component loadings, the most represen-

tative statement for this scale was: 'Consumers do not understand the language and complexities of mental health services, which makes it difficult for them to have meaningful input'. In Happell *et al.* (2002), 76% provided some level of disagreement with this statement.

Students were also generally favourable towards consumer involvement in mental health-care planning and management and involvement in treatment. The average rating for the consumer involvement scale was 5.96 on a possible range of one to seven. Again, this trend appears to be consistent with Happell *et al.* (2002).

While item 20 was not included in the final scales, its distribution is noteworthy. For this item, only 13.5% were either neutral or in disagreement with the following statement: 'Medications should be explained in detail to consumers in ways that they can understand so they are fully informed and can make choices'. The modal response was an extreme rating at the 'strongly agree' end. This is similar to the findings from previous research with postgraduate psychiatric nursing students (Happell *et al.* 2002), and suggests that these nursing students support the right of consumers to be provided with information, and importantly, also to have some decision-making opportunities in relation to their own care and treatment.

In contrast to consumer involvement and capacity, students were ambivalent about consumer as staff, with the scale average of 3.43, just below a 'neutral' stance. This ambivalence is best illustrated by the raw distribution of ratings for the statement: 'A consumer academic should be a member of staff in all psychiatric nursing courses'. Figure 1 presents the frequency distribution of responses for this statement. Here, the most common response was midway between 'strongly disagree' and 'strongly agree', and almost perfect symmetry of responses around it. While other items that assume a consumer academic role were not included in the final scales, it is noteworthy that responses to these also indicated ambivalence.

On the whole, students demonstrated favourable attitudes; however, they greatly varied on the prospect of more formal consumer participation arrangements. This overall pattern of the locus of readiness to participation is consistent with Happell *et al.* (2002; 2003), despite the latter involving a much smaller sample, a cohort of postgraduate students, and a metropolitan setting in a different state of Australia. While consumer participation attitude research is in its early stages, the consistent findings between states could reflect a general cultural shift in power balance and culture. Notably, this shift drops short of a full endorsement of formalized consumer participation. As Happell *et al.* (2002, p. 249) states: '... while

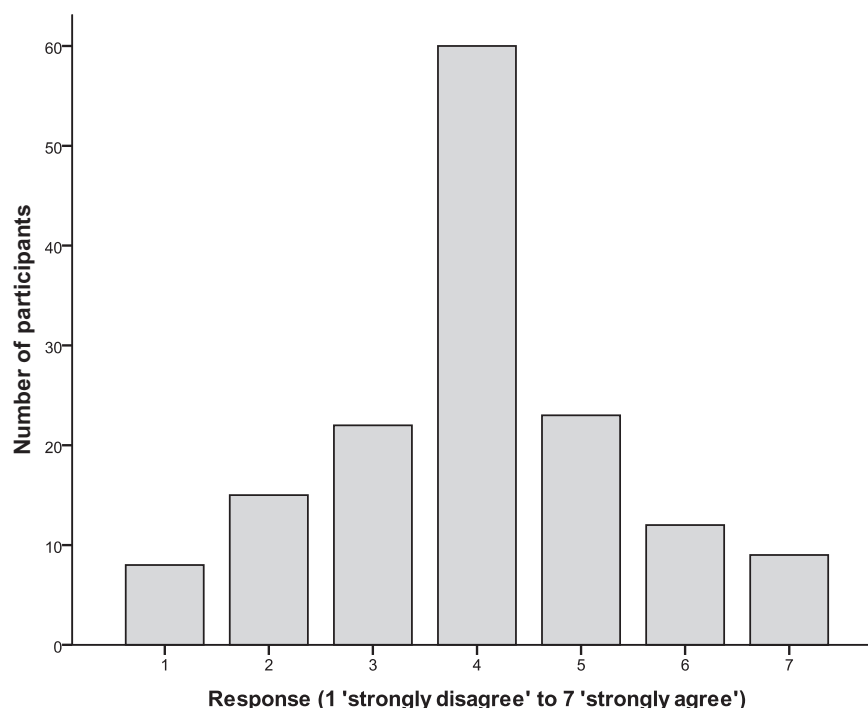


FIG. 1: Frequency distribution for the statement: 'A consumer academic should be a member of staff in all psychiatric nursing courses' (item 11).

students have a positive attitude towards consumer participation . . . there are some reservations regarding what this means to them'.

In terms of the role of student background in consumer participation attitudes, it was found that older students were more open to the concept of consumer participation, particularly on the capacity of consumers to take up this new development in mental health-care settings.

CONCLUSION

The MHCPQ has adequate psychometric properties, making it applicable to research nursing attitudes towards consumer participation in mental health care. This includes evaluating the effectiveness of initiatives aimed at increasing consumer participation. The measure has three scales: consumer capacity, consumer involvement in processes, and consumer as staff. Students were generally inclined to consumer capacity and consumer involvement in processes, but not so favourable to consumer as staff. The older students had more readiness to consumer capacity than younger students. The MHCPQ provides a useful instrument for measuring attitudes of health professionals towards consumer participation in care at the individual and systemic levels.

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