

Self-reported health-related quality of life of mental health service users with serious mental illness in New Zealand

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ABSTRACT

INTRODUCTION: Although people with serious mental illness (SMI) have a high prevalence of physical illness, health-related quality of life (HQoL) has not been sufficiently explored.

AIM: To explore the self-reported HQoL of mental health service users in New Zealand.

METHODS: Responses on the Medical Outcomes Study 36 Item Short Form (SF-36) measure of HQoL from 404 adult mental health service users in a metropolitan district health board area in New Zealand were analysed and compared to a representative sample of the general population.

RESULTS: Mental health service users scored significantly lower on all eight domains of the SF-36 than the general population, the largest difference being in the role limitation—emotional domain.

DISCUSSION: Being female, younger than 25, obese or overweight, or of New Zealand European/Other ethnicity were associated with poorer functioning on multiple HQoL domains. Future studies should seek to understand the factors contributing to perceptions of HQoL of mental health service users in New Zealand.

KEYWORDS: Mental illness; mental health; New Zealand; quality of life; self report

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Introduction

People with enduring serious mental illness (SMI) experience erosion of functioning in day-to-day life.¹ Lower life expectancy and poor physical health in this group² is attributable to poor self-care, lifestyle choices (e.g. smoking, sedentary lifestyle, poor nutrition) and the side effects of psychotropic medication (e.g. weight gain).³

Despite the high prevalence of physical illness among people with SMI, their physical symptoms are often overlooked, and their physical health poorly monitored in both primary and secondary services.¹ Studies have repeatedly shown that satisfaction and subjective quality of life are also lower among mental health service users if physical ill health is untreated.⁴

Health-related quality of life (HQoL) is a complex, multidimensional construct that encompasses individuals' subjective level of functioning and well-being in physical, mental, and social domains of life. Since it can vary based on individual perceptions, HQoL requires subjective evaluation by service users.⁴ Such subjective HQoL information could lead to improved assessment, treatment, recovery, and relapse prevention.⁵ However, self-reported HQoL, especially of people experiencing mental illness, has not been sufficiently explored and reported.⁶

The aim of this study was to describe the perceptions of people living with SMI regarding their HQoL. A further goal was to investigate how the HQoL of people living with SMI compared to that of a representative cross-section of the population in New Zealand (NZ).

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Table 1. Mental health service user survey (N=404) and corresponding New Zealand Health Survey (N=12 488) participant sociodemographic characteristics and health indicators

Sociodemographic characteristic	Mental health service users n (%)	New Zealand Health Survey population n (%)
Gender		
Male	164 (40.6)	5273 (42.2)
Female	224 (55.4)	7215 (57.8)
Unknown	16 (4.0)	–
Age		
Mean (95% CI)	41.2 (39.9–42.4)	–
Under 25 years old	47 (11.6)	1663 (13.3)
25 years and older	341 (84.4)	10 825 (86.7)
Unknown	16 (4.0)	–
Age of first contact with mental health services		
Mean (95% CI)	29.3 (28.0–30.5)	–
Under 25 years old	159 (39.4)	–
25 years and older	194 (48.0)	–
Unknown	51 (12.6)	–
Ethnicity		
NZ European/Other	248 (61.4)	8593 (68.8)
Māori	37 (9.2)	3160 (25.3)
Pacific	41 (10.1)	1033 (8.3)
Asian	21 (5.2)	1513 (12.1)
Multiple ethnicities*	37 (9.2)	–
Unknown	20 (5.0)	–
Qualifications		
None	88 (21.8)	–
Any qualifications	294 (72.8)	–
Unknown	22 (5.4)	–
Employment		
In paid employment	106 (26.2)	–
Not in paid employment	274 (67.8)	–
Unknown	24 (5.9)	–
Living situation		
Live alone	58 (14.4)	–
Live with others	296 (73.3)	–
Unknown	50 (12.4)	–
Body mass index		
Mean (95% CI)	29.2 (28.2–30.1)	27.4 (27.3–27.5)
Under 25 years old	99 (24.5)	(37.4)
25 years and older	175 (43.3)	(62.7)
Unknown	130 (32.2)	–
Smoking		
Smoker	165 (40.8)	(19.9)
Non-smoker	232 (57.4)	(80.1)
Unknown	7 (1.7)	–

* 'Multiple ethnicities' includes: Māori/NZ European, Pacific/NZ European, Asian/NZ European, Māori/Pacific, Māori/Pacific/NZ European, and Māori/Asian/NZ European.

Methods

Study setting and participants

This study aimed to survey 500 mental health service users aged 18–65 years in one district health board (DHB) in Auckland, New Zealand. Service users attending adult, early intervention, forensic and culturally specific Māori and Pacific community mental health services were invited to take part. Māori comprise 14.6% and Pacific people 6.9% of the general population.⁷

Participant information sheets and surveys were distributed by clinical teams. Questionnaire completion was accepted as consent. Questionnaires were self-completed or completed with support from staff as needed. Completed questionnaires were returned using pre-paid envelopes or drop-boxes in services. All participants were eligible to enter a prize draw for one of five \$500 gift vouchers.

The number of people eligible to participate was difficult to determine. However, a maximum of 543 questionnaires were distributed, with a 52% response (n=280). To improve participation, a further postal survey was conducted, highlighting that some people may have already completed the survey, to avoid such people filling out the questionnaire twice. Fourteen percent (n=124 of 880) were returned, indicating an overall response rate of approximately 28% (n=404 of 1423).

Ethics approval was obtained from the Ministry of Health Northern Region Ethics Committee (Ref. NTX/09/44/EXP).

Instrument

The Medical Outcomes Study 36-Item Short Form (SF-36)⁸ was used to assess participants' HQoL. This addresses eight health domains: physical functioning, role limitation—physical, bodily pain, general health, vitality, social functioning, role limitation—emotional, and mental health. A high score in each domain indicates higher HQoL. The instrument is reliable and valid in measuring HQoL in people with SMI.⁹ The SF-36 was selected to ensure comparability with a national population-based health survey.¹⁰ Sociodemographic variables, body mass index (BMI) and smoking status were also collected.

WHAT GAP THIS FILLS

What we already know: Mental health service users internationally have been reported to have poorer quality of life than the general population. Poorer physical health is associated with reduced health status, satisfaction and quality of life among people with serious mental illness.

What this study adds: Mental health service users in New Zealand have poorer health-related quality of life (HQoL) than the general population, consistent with international findings. Being female, younger than 25 years, overweight or obese are associated with poorer HQoL for mental health service users. Cultural identity influences HQoL for mental health service users, though this finding requires further investigation.

Data analysis

All survey data were entered into the SPSS version 13.0. To compare the differences in scores on the eight health domains for sociodemographic variables, BMI and smoking status, *t*-tests for independent samples were used. One-way ANOVA tests with Bonferroni correction were used for ethnic comparisons for the domains.

Results

Sample description

Table 1 shows the sociodemographic characteristics and health indicators of the surveyed sample (N=404). These are compared, as far as is possible, with the demographic characteristics of respondents to the NZ Health Survey (N=12 488).¹⁰

The participants ranged in age from 18 to 70 years, with the majority being 25 years old and older. A majority of respondents were female and of NZ European/Other ethnicity. The sociodemographic characteristics of the participants were comparable with those who responded to the NZ Health Survey, except with Māori service users, who were under-represented in the current sample. The mean BMI of the study sample was lower than that of the respondents to the NZ Health Survey (though this may have been influenced by missing data), while the prevalence of smokers was double.

Significant self-rated perceptions of HQoL by demographic variables

Table 2 summarises the statistically significant self-rated perceptions of HQoL by demographic variables.

Physical functioning

For physical functioning, respondents aged under 25 years of age scored significantly higher than those 25 years and older [$t(383)=2.15$; $p=0.03$]. Smokers scored significantly lower than current non-smokers [$t(392)=-2.95$, $p=0.003$]. Those with a BMI of 25 and over had a significantly lower score than the participants whose BMI was under 25 [$t(271)=-2.4$; $p=0.02$].

Role limitation—physical score

The role limitation—physical score relates to limitations in daily activities because of physical problems. Participants who reported their first contact with mental health services below the age of 25 scored significantly higher than those whose first contact was at 25 years or older [$t(337)=2.6$; $p=0.01$]. Those not in paid work scored lower on this domain than those in paid employment [$t(201)=-2.43$; $p=0.02$].

Bodily pain

Participants with a BMI under 25 scored significantly higher than those with a BMI of 25 and above [$t(270)=2.03$; $p=0.04$].

Vitality score

Gender was the only variable of interest on this domain, with males scoring significantly higher than females [$t(364)=3.81$; $p<0.001$].

Social functioning

Males also scored significantly higher than females on the social functioning domain [$t(386)=2.08$; $p=0.04$]. Those under 25 years of age had a significantly lower score than those 25 years and older ($t(65)=-2.27$, $p=0.03$).

Role limitation—emotional

The role limitation—emotional score relates to limitations in daily activities because of emotional problems. Gender was the only socio-demographic variable associated with this domain. Men had a significantly higher score than women [$t(376)=-3.07$; $p=0.002$].

Mental health

Participants 25 years of age and older scored significantly higher than those under 25 years on the mental health domain [$t(384)=1.97$; $p=0.05$].

General health

No statistically significant differences were found.

Comparisons by ethnicity

Physical functioning

There was a significant difference in the scores on physical functioning between the four main ethnicities [$F(3, 340)=5.08$; $p=0.002$]. Bonferroni-corrected comparisons revealed that New Zealand European/Other and Asian ethnicities scored significantly higher than their Māori counterparts.

Bodily pain

The difference in scores for bodily pain between the four main ethnicities was also significant [$F(3, 342)=3.25$; $p=0.02$]. Bonferroni correction showed Pacific respondents scored significantly higher than those in the New Zealand European/Other ethnic category.

General health

Scores on general health were significantly different for the four main ethnicities [$F(3, 328)=6.68$; $p<0.001$]. Bonferroni correction showed New Zealand European/Other respondents had a significantly lower score than Pacific respondents.

Table 2. Statistically significant means of SF-36 domain scores by sociodemographic variables

Sociodemographic variable	SF-36 domain						
	PF Mean (SD)	RP Mean (SD)	BP Mean (SD)	VT Mean (SD)	SF Mean (SD)	RE Mean (SD)	MH Mean (SD)
Gender							
Male				53 (23)	60 (29)	53 (42)	
Female				43 (24)	53 (31)	39 (42)	
Age							
Under 25 years	79 (25)				48 (36)		49 (26)
25 years and older	70 (28)				57 (31)		57 (24)
Age of first contact with mental health services							
Under 25 years		62 (40)					
25 years and older		51 (43)					
Employment							
In paid employment		64 (39)					
Not in paid employment		53 (42)					
Body mass index							
Under 25 years	78 (24)		71(26)				
25 years and older	77 (26)		64 (29)				
Smoking							
Smoker	66 (29)						
Non-smoker	74 (27)						

PF Physical functioning
 RP Role limitation—physical
 BP Bodily pain
 GH General health
 VT Vitality
 SF Social functioning
 RE Role limitation—emotional
 MH Mental health

Vitality

Significant differences between the four main ethnicities were also found for scores on vitality [$F(3, 341)=12.48$; $p<0.001$]. Participants of New Zealand European/Other origin had a significantly lower score than the three remaining ethnicities.

Social functioning

Significant differences between ethnicities were found for scores on social functioning [$F(3, 343)=4.28$; $p=0.006$]. Bonferroni correction showed New Zealand European/Other respondents scored significantly lower than Pacific respondents.

Role limitation—emotional

The four ethnicities also differed on role limitation—emotional score [$F(3, 335)=5.49$; $p=0.001$]. The only significant difference was found between New Zealand European/Other and Pacific respondents, with the latter having a higher score.

Mental health

Although significant differences between the four main ethnicities scores were found [$F(3, 342)=11.22$, $p<0.001$], Bonferroni correction revealed only the New Zealand European/Other respondents to have a significantly lower score on mental health than Pacific respondents.

Comparisons with respondents to the New Zealand Health Survey

Compared to the NZ Health Survey population, mental health service users reported a lower HQoL on all eight SF-36 domains (see Figure 1). The biggest differences between the two samples were found in the scores on the role limitation—emotional domain.

Discussion

In this study, mental health service users reported a poorer HQoL than respondents to the NZ Health Survey. This finding is consistent with other studies involving individuals diagnosed with mental illness.^{11,12} The lowest scores reported in this study were on the role limitation—emotional domain of the SF-36. This is consistent with a study comparing people with a diagnosis of schizophrenia with those with no history of psychiatric illness.¹²

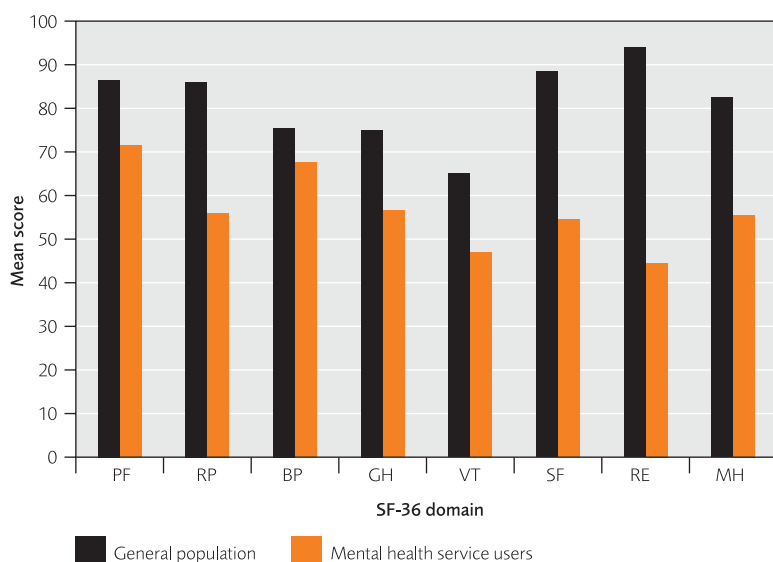
There is international evidence that people who are overweight or obese experience reduced HQoL.¹³ Being overweight was correlated with impaired physical, but not psychological, HQoL, in a nationally representative sample in Japan.¹⁴ Similarly, participants in this study who were overweight, reported impaired physical, not psychological, domains in the measures of HQoL.

Women with SMI scored significantly lower than men with SMI on three out of the eight SF-36 domains, which was consistent with the trend in the general population of NZ Health Survey respondents. Earlier studies have also found gender differences in HQoL in a variety of populations, including those with SMI.¹⁵

Participants with SMI under 25 years of age scored significantly lower than those 25 years and older on both the social functioning and mental health domains. A similar trend was noted in the national Health Survey. In NZ, diagnosed mental disorders (including SMI) are more prevalent among youth (16–24 years) than adults.¹⁶ Youth also have a higher prevalence of suicidal ideation and suicide attempts.¹⁰ Although the rate of access to mental health services for NZ youth has improved, difficulty accessing services, lack of early intervention and poor inter-service collaboration remain problematic. These issues need to be further addressed in order to achieve recovery from mental illness and satisfactory quality of life for youth.¹⁶

In the present study of people with SMI, New Zealand European/Other and Asian ethnicities scored significantly higher than Māori on the physical functioning domain. In the NZ population, Māori have higher mortality, obesity and smoking rates, and a higher prevalence of chronic physical health conditions, when compared to non-Māori.¹⁷ However, findings related to ethnicity from using the SF-36 are problematic. It has been argued that the two-dimensional emphasis on mental and physical health in the SF-36, which is based on Western European cultures, may not be relevant in Māori and Pacific cultures with a holistic view of wellbeing.¹⁸ For these reasons, the findings regarding Māori should be interpreted with caution.

Figure 1. General population (respondents to the New Zealand Health Survey) and mental health service user health status (SF-36)



PF Physical functioning
 RP Role limitation—physical
 BP Bodily pain
 GH General health
 VT Vitality
 SF Social functioning
 RE Role limitation—emotional
 MH Mental health

HQoL of Pacific service users was high on all domains of the SF-36 in this study. Nationally, Pacific peoples have the lowest rates of mental health service use, despite similarities in the prevalence of SMI (prevalence of SMI for Pacific people at 5.8% versus the prevalence of the total population at 6.4%).¹⁹ It is therefore possible that the high SF-36 scores among the Pacific service users in this study reflect an inability to capture the views of Pacific peoples with more severe mental illness who do not use mental health services.

The finding that the New Zealand European/Other group had a significantly lower vitality score than all three other major ethnicities may also point to differences in cultural concepts of wellbeing. Future studies should explore qualitatively the potential impact of cultural differences in interpretation of HQoL.

This study has a number of limitations. Recruitment was driven by service user responsiveness rather than a representative sample being selected, because we wanted to encourage participation in this difficult to access population. The present study also suffers from potential response bias, as individuals who were more unwell may not have responded to the survey.

Reliance on self-report data may also reduce the validity of the findings. It has been argued that self-report measurement involving populations with SMI should be interpreted with caution, as impaired cognition, symptoms and recent life events may influence responses.²⁰ Finally, comparisons were made with the NZ Health Survey which was conducted two years previously in 2006/7.

Concluding comments

Being female, younger than 25 years, obese or overweight, and of New Zealand European/Other ethnicity were associated with poorer functioning on multiple HQoL domains in this study of mental health service users with SMI. Future studies should seek to understand the factors contributing to perceptions of HQoL of mental health service users in New Zealand.

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COMPETING INTERESTS

None declared.