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Schizophrenias' Quality of Life and Emotional Intelligence in Songklanagarind Hospital

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Abstract:

Objective: To estimate the level of quality of life (QoL), emotional intelligence (EI) and the association between QoL and EI in schizophrenia

Material and Method: A cross-sectional study was conducted at the outpatient department of Songklanagarind Hospital from; May to November, 2016. A total of 96 participants were interviewed. Demographic data and medical history were collected. QoL and EI were assessed using the WHO QOL BREF (Best available techniques REFerence document) Thai version and the Thai EI Screening Test for ages of 18-60. The results were analyzed by descriptive statistics and multiple logistic regression.

Results: Our subjects were predominantly single males. Sixty-seven point seven percent of the participants were poor to moderate QoL while only two factors significantly related to their poor to moderate QoL; difficulties from psychiatric conditions and a lower level of life satisfaction. Fifty-seven point four to eighty-seven point two percent of the participants were generally within normal EI in every subscale. Moreover, there was statistical significance for positive relationships between EI with QoL in schizophrenia.

Conclusion: The high prevalence of schizophrenia was a moderate QoL. A positive relationship of individual subscales of EI towards QoL was substantially found.

Keywords: emotional intelligence, quality of life, schizophrenia

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Introduction

A Schizophrenia refers to a major psychotic disorder defined in the fifth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-5)[1] as well as in the International Classification of Diseases (ICD-10).[2] Schizophrenia commonly occurs in younger adults and is considered a chronic disease, which has lifetime prevalence rates ranging from 0.6-1.9%.[3] According to long-term courses, people with schizophrenia have often received several impacts on their life quality, over the course of their daily lives.

According to the World Health Oganization (WHO) definition, Quality of Life (QoL) is an individuals' perception of their position in life, in the context of the culture and the value systems in which they live. It also has a relationship towards their goals, expectations, standards and concerns.[4] The health-related QoL is highly prevalent, and accordingly, fairly marked in people with schizophrenia. Furthermore, this accounts for 49.0% of the patients, who are clinically and severely impaired regarding their general life quality. There are previous evidences showing that being schizophrenia is directly related to QoL.[5]

Some patients, who experienced anxiety and depressive symptoms as well as medical side effects of antipsychotic drugs, were often unemployed. This in turn, lead them to have both negative feelings as well as overall attitudes towards such antipsychotics. These consequences further lead to negative influences on their QoL[6] or poor to moderate QoL percentages.[7]

Although, even with proper control, of both positive and negative symptoms along with the management of depression in schizophrenia being conducted, higher anxiety ratings were associated with a lesser satisfaction rating in the global QoL. This in turn, had a direct consequence on their daily activities, families, their health and social relationships.[8] Additionally, people with schizophrenia often suffer from the attached stigma and discrimination of the disease, which then develops into an inability to maintain social relationships, contributes to the impairment of proper social functioning[9] as well as causing difficulty in the self-management the of illness.[10] As a consequence, it seems that not only co-morbidity with drug side effects could cause poorer QoL outcomes, but also the social factors, which are governed by emotional intelligence.[11] Therefore, it is of importance to be more concerned with the QoL of people with schizophrenia in terms of their emotional ability.

A fundamental, interpersonal phenomenon, empathy comes into play in virtually all social interactions, so difficulties in experiencing empathy may lead to social dysfunctions, including those that are characterized as severe mental illnesses such as; schizophrenia and autism.[12,13]

People with schizophrenia not only struggle to correctly identify emotions, but also have difficulties in spontaneously simulating another person's subjective world. This in turn might not enable them to be able to respond adequately in terms of their own emotional experience.[14] The emotional experiences are defined as; the ability to identify, use, understand and manage emotions with a component of social cognition that can be identified as Emotional Intelligence (EI).[15,16] EI instruments were developed for assessing emotional status and identifying emotional strengths and difficulties.[17] By investigating the EI it may well demonstrate that people with schizophrenia could have significant impairments in different EI aspects,[11,18] hence, with a better understanding of these impairments we might reduce the QoL in people with schizophrenia.

The holistic approach is a key management approach in the continuity of health care, particularly in mental health such as; in those suffering from chronic

disorders, like schizophrenia, thus, taking into account the knowledgeable gap of QoL and its relationship with EI is very important in a Thai context, and as of yet this has still to be determined. If EI has some association with the life quality of people with schizophrenia, by emphasizing this - clinical management through emotional base - could be a further implication in psychiatric services with the aim of improving the QoL. Consequently, the objectives of this study were to estimate the level of QoL, EI, as well as, the association between QoL and EI in schizophrenia.

Material and Method

Ethical consideration

The study was approved by the Ethics Committee of the Faculty of Medicine, Prince of Songkhla University, which adheres to the provisions of the Declaration of Helsinki (REC: 58-345-03-1(2)). All of the participants gave their informed consent before being interviewed.

Study design and setting

A cross-sectional study was conducted from May to November, 2016 at the out-patient department in Songklanagarind Hospital, which is a tertiary-care center located in Southern Thailand.

Sampling methods

The target population were people with schizophrenia aged between 18 and 60 years, who had clinical remission (no history of admission within 6 months) and were able to understand the questionnaire and communicate well. The authors excluded any persons, who refused to join the research. The participants were informed regarding their ability of refusal to fill out the questionnaire at anytime during the interviewing process if they felt uncomfortable or wanted to resign from the study for any reason.

The R program was used to calculate the sample size for this survey (given delta=0.1 and alpha=0.05). According to the literature reviewed, moderate QoL was as high as 49.0%,[5] so the resulting sample size required was at least 96 patients. Following that, the authors asked the patients to complete the questionnaires by convenience sampling at that department.

Instruments

The independent variables were demographic information alongside medical history, while the dependent variables were the WHO Quality of Life-BREF (WHOQOL-BREF) Thai version score and Thai Emotional Intelligence Screening Test (TEIST) for ages 18-60. The medical history included underlying disease and psychiatric co-morbidity, duration of disease, administrative history and substance abuse (such as cigarette, amphetamine). Furthermore, subjective experiences were asked with the aim of evaluating with both QoL and EI, for example; do you suffer from psychiatric conditions, do you have adverse effects from psychiatric medication prescribed, do you satisfying with presently overall life status in terms of QoL and do you have any life stressors).

The WHOQOL-BREF instrument is an abbreviated generic QoL Scale developed through the WHO, this test is available in 19 different languages (including Thai)[4] and it reveals an internal consistency (Cronbach's alpha coefficient=0.841) in addition to a validity at 0.652, compared with the WHOQOL-100 Thai version.[19] The minimum QoL score is 26, with a maximum score of 130 (poor 26-20, moderate 61-95, good 96-130). This measurement can be divided into 4 domains; physical health, psychological health, social relationships and environmental health. In order to find the associating factors related to QoL, the QoL was divided into two groups these being: The poor to moderate group and the good group.

As for EI, there is the TEIST Test for ages 18-60, which was developed by the Bureau of Mental Health Technical Development.[17] The three measured scales were; (1) The virtue: emotional self-control, empathy and responsibility (2) The competence: self-motivation, problem-solving and interpersonal relationship (3) The happiness: self-regard, life satisfaction and peace. The reliability coefficient of the whole set of tests as well as the three main structures were cronbach=0.85, 0.75, 0.76 and 0.81; split-half (odd-even) reliability=0.84, 0.83, 0.86 and 0.71 respectively. The differentiation between a; normal or abnormal EI, was dependant on the ranging score, which is explained in the developed TEIST article.[20]

Statistical analysis

All case record forms were checked for completeness and consistency. Data entry were via the use of EpiData software. Descriptive statistics were analyzed whereby, categorical variables will be presented as frequencies and percentages, while continuous variables will be presented as means with standard deviations.

The data input was via the use of Epidata 3.1, and analyzed using the R software, version 2.14.2, 2012 (R Development Core Team, 2012). Estimating level of QoL and EI were tested on discrimination index as frequencies with percentages and means with standard deviations in both WHOQOL-BREF (Best available techniques REFerence document) Thai version score and TEIST for ages 18-60. The associated factors such as; demographic characteristics and QoL, were analyzed to provide crude odd ratios for association by univariate analysis. Then multiple logistic regression utilizing a backward-stepwise method was conducted for its association. For association between QoL and EI, a linear regression analysis was conducted to predict the subscales of EI with QoL in schizophrenia. Statistical significance refers to p-value of <0.05.

Results

Demographic data

Ninety-six participants were male (53.1%), with only 2 participants not responding in the EI part. The mean age was 39.6±10.4 years with the greatest proportion ranging from the ages of; 26-40. Single status (75.0%) and those of the Buddhism religion (77.1%) were the majority figures. As for level of education, those above Bachelor degree (36.5%) made up the highest percentage amongst the participant group. Around two-fifths of the participants (41.7%) were unemployed or housewives. Additionally, almost half of the participants (44.8%) had no salary, whereby just over 30.0% of the participants had a household income of less than 10,000 Baht/month (Table 1).

Medical history

According to the underlying disease, approximately one-third of the participants (29.2%) had underlying diseases. For instance; an allergy (28.6%), diabetes mellitus (17.9%) and hypertension (14.3%), while those having psychiatric co-morbidity stood at just ten percent, (10.4%) which included; depression and an obsessive-compulsive disorder. Over half of the participants had experienced admittance into a hospital, with the mean being 2.3±1.9 times. About one-fourth of them (24.0%) had problems with either sleep or (73.9%), work (34.8%) coupled with daily life activities (34.8%). Approximately one-third of the participants (32.3%) were distinguished as having side effects from medical treatment within the past two weeks. These being; hypersomnia (54.8%), weight gain, (41.9%) or dizziness or headaches (29.0%). As for the investigating of satisfaction with QoL, the combined medium to high level presented the major proportion, which was 96.4%. Furthermore, daily life stressors were found, (28.1%) which were related with health (48.1%), work (40.7%) and family (37.0%) (Table 1).

Table 1 Demographic characteristics and medical history (n=96)

Demographic characteristics and medical history	Number (%)
Sex	
Male	51 (53.1)
Female	45 (46.9)
Age (years)	
18-25	11 (11.5)
26-40	44 (45.8)
41-60	41 (42.7)
Marital status	
Single	72 (75.0)
Married	20 (20.8)
Separated/widowed/divorced	4 (4.2)
Religion	
Buddhism	74 (77.1)
Others; Islam, Christ, no religion	22 (22.9)
Highest level of education	
Primary school	9 (9.4)
Junior high school	12 (12.5)
Senior high school	31 (32.3)
Vocational school certificate	9 (9.4)
Above bachelor degree	35 (36.5)
Current occupation	
Employee	6 (6.2)
Merchant/personal business	20 (20.8)
Government employee/state enterprise officer	8 (8.3)
Private company officer	1 (1.0)
Agriculture	15 (15.6)
Unemployed/housewife	40 (41.7)
Student	6 (6.2)
Household income (Baht/month)	
≤5,000	12 (12.5)
5,001-10,000	17 (17.7)
>10,000	24 (25.0)
No salary	43 (44.8)

Table 1 (continued)

Demographic characteristics and medical history	Number (%)
Address (Province)	
Songkhla	50 (52.1)
Other southern provinces	44 (45.8)
Others; Bangkok, Suphanburi	2 (2.1)
Underlying disease	
No	68 (70.8)
Yes	28 (29.2)
Psychiatric co-morbidity	
Never	86 (89.6)
Ever	10 (10.4)
Duration of disease (years)	
≤1	11 (11.5)
2-5	25 (26.0)
6-9	8 (8.3)
10-15	26 (27.1)
>15	26 (27.1)
Administrative history	
Never	34 (35.4)
Ever	62 (64.6)
Difficulties from psychiatric conditions within 2 weeks	
No	73 (76.0)
Yes	23 (24.0)
Adverse effects from psychiatric medications within 2 weeks	
No	65 (67.7)
Yes	31 (32.3)
Substance abuse within 2 months	
No	85 (88.5)
Yes	11 (11.5)
Level of satisfying with QoL	
Not at all	5 (5.2)
Low	6 (6.2)
Medium	44 (45.8)
High	39 (40.6)
Extremely high	2 (2.1)
Daily life stressors	
No	69 (71.9)
Yes	27 (28.1)

QoL=quality of life, S.D.=standard deviation

QoL in schizophrenia and its domains

The estimation of QoL in schizophrenia, the majority were within the moderate level, including both individual domains and total score. The environment domain presented the highest percentage (67.7%) among its comparisons. Interestingly, participants (39.1%) had a poor QoL related with the social relationship domain. Nonetheless, as for investigating the social relationship of QoL with its emotional quotient, there was no statistical significance between those of poor, moderate through to good relationships with EI (p-value>0.05). Moreover, all figures of QoL domains; the physical, the psychological and the environment domains were at a relatively similar level, about 21.2 to 27.5, whereas the highest proportion was with the environment, approximately 27.5±3.9 (Table 2).

EI and its scales with subscales

With reference to the EI, most of the participants were within the normal range of each subscale, predominantly in empathy (87.2%), self-motivation (79.8%) and peace (78.7%), whereas the participants, having an abnormal EI, had the greatest number being in; life satisfaction, emotional control and responsibility, these being approximately 42.6, 41.5 and 37.2%, respectively. Furthermore, there was the highest value of mean, approximately at 19.5±3.1, which was found in the responsibility subscale. The other subscales were very close in figure, about 16.0 to 17.9, only the self-regard (11.2±2.1) was outstandingly lower than those within this range (Table 3).

Associating factor related to QoL

From univariate analysis, the difficulties of psychiatric conditions and satisfaction with QoL, had a p-value of 0.007 and <0.001, respectively. After adjustment, with other associating factors, the participants having any psychiatric impact had a 6.5 greater value in the poor to moderate QoL when compared with those who did not have an impact (95% confidence interval (CI)= 1.3-31.5). In addition, the satisfaction with QoL, with a below medium level, had a greater effect on the poor to moderate QoL and accounted for 5.7 times greater when comparing with those above the high level group (95% CI=2.1-15.1) (Table 4).

Table 2 Quality of life in schizophrenia and its domains (n=96)

QoL domains	Mean (S.D.)	Poor Number (%)	Moderate Number (%)	Good Number (%)
Physical	24.5 (3.8)	1 (1.0)	60 (62.5)	35 (36.5)
Psychological	21.2 (3.7)	2 (2.1)	52 (54.2)	42 (43.8)
Social relationships	7.8 (2.5)	36 (39.1)	51 (55.4)	5 (5.4)
Environment	27.5 (3.9)	2 (2.1)	65 (67.7)	29 (30.2)
Total score	87.6 (12.6)	1 (1.0)	64 (66.7)	31 (32.3)

QoL=quality of life, S.D.=standard deviation

Table 3 Emotional intelligence and its scales with subscales (n=94)

Scales with subscales	Mean (S.D.)	Normal Number (%)	Abnormal Number (%)
Virtue			
Emotional self-control	17.8 (3.0)	55 (58.5)	39 (41.5)
Empathy	17.5 (2.6)	82 (87.2)	12 (12.8)
Responsibility	19.5 (3.1)	59 (62.8)	35 (37.2)
Competence			
Self-motivation	17.3 (3.1)	75 (79.8)	19 (20.2)
Problem-solving	17.3 (3.1)	67 (71.3)	27 (28.7)
Interpersonal relationship	16.0 (2.9)	60 (63.8)	34 (36.2)
Happiness			
Self-regard	11.2 (2.1)	73 (77.7)	21 (22.3)
Life satisfaction	17.7 (3.6)	54 (57.4)	40 (42.6)
Peace	17.9 (3.2)	74 (78.7)	20 (21.3)

S.D.=standardized deviation

Table 4 Associating factor related to poor to moderate quality of life

Associating factor	Crude OR (95% CI)	Adjusted OR (95% CI)	P-value LR-test
Difficulties from psychiatric conditions			0.007
No	1	1	
Yes	6.9 (1.5-31.8)	6.5 (1.3-31.5)	
Level of satisfying with QoL			<0.001
High to extremely high	1	1	
Not at all to medium	5.9 (2.3-15.2)	5.7 (2.1-15.1)	

CI=confidence interval, LR=likelihood-ratio, OR=odd ratio, QoL=quality of life

The association between EI with QoL in schizophrenia

The prediction of the subscales of EI to QoL in schizophrenia were analyzed with a linear regression analysis. There were statistically significant associations of scores between QoL and all subscales of EI (p-value< 0.05). According to the happiness scale, which provided a higher number of beta coefficient compared with other subscales, it can be interpreted that the average score of increase in one score of the self-regard, life

satisfaction and peace can statistically expect to elevate QoL, which accounted for 3.0, 2.0 and 2.0, respectively. Subsequently, the others subscales can be interpreted in a similar way (Table 5).

Discussion

Ninety-six people with schizophrenia were chronic and comfortably interviewed. First of all, this study sought to determine the prevalence of schizophrenia having a moderate QoL, which was 64 participants (66.7%) with a total mean score at 87.6±12.6. This result was considered in line with previous research, in where schizophrenia was to have found to have a poor to moderate QoL.[7,21] Previous studies found the association between the lower score of QoL with psychological and social relationships.[22] The social domain was concordance within our study whereas, participants had a poor QoL. The consequences of schizophrenia have long been known in regards to its disturbances in the cognitive and affective empathic processes.

Because of these disturbances, individuals with schizophrenia have difficulty in anticipating others' emotional responses, particularly in complex social situations[23] and this leads to the afflicted to suffer a lower QoL. To extend the different symptoms of schizophrenia, associated with social QoL, there was a study explaining that patients, who have negative symptoms mediated a positive relation of affective empathy on social QoL. On the contrary the positive symptoms did not play an important role in the link between affective empathy and social QoL.[24]

As to their medical history, it was revealed in this research, that most of the participants were chronic and had been admitted into a hospital at some point. Some participants had had a negative impact from both psychiatric conditions and subsequent treatment within two weeks. Once we had applied univariate analysis with

Table 5 The association between emotional intelligence with quality of life in schizophrenia (n=94)

Scales with subscales	Beta coefficient	95% CI	P-value
Virtue			
Emotional self-control	1.7	0.9-2.5	<0.001
Empathy	1.1	0.1-2.1	<0.05
Responsibility	1.8	1.1-2.6	<0.001
Competence			
Self-motivation	1.9	1.1-2.7	<0.001
Problem-solving	1.4	0.6-2.2	<0.001
Interpersonal relationship	2.0	1.2-2.8	<0.001
Happiness			
Self-regard	3.0	1.9-4.1	<0.001
Life satisfaction	2.0	1.4-2.6	<0.001
Peace	2.0	1.3-2.8	<0.001

CI=confidence interval

associating factors, related to poor to moderate QoL, only two factors were significant these being; (1) The difficulties from psychiatric conditions indicated a higher effect on the poor to moderate QoL than those that were not affected by these conditions. (2) Participants satisfying with QoL under the medium level were supposed to have poor to moderate QoL more so than those with a high level. By considering these results, it is generally asserted that the sequelae of schizophrenic symptoms have negative effects to the QoL,[6,7] and general life satisfaction is closely associated with QoL. This was particular true as to the psychological well-being and psychopathology.[25]

Secondly, people with schizophrenia were generally within normal EI. The predominant prevalence of normal EI among other subscales was virtue (empathy), while happiness (life satisfaction) was the highest prevalence among the participants, whose scores were out of the normal range. This empathy result was not in accordance with typical schizophrenia, which results in an inadequate, emotional response due to deficit in theory of mind.[13,14] The inconsistent result of empathy led the authors to rethink, that a deeper assessment on the ability to infer thoughts and feelings of other people was an important matter for people with schizophrenia. Moreover, social interaction, which is the main part of emotional recognition and has a negative impact on the life of those suffering from schizophrenia, was needed to understand the empathy factor of schizophrenia.[28]

Lastly, as to the association between EI with QoL in schizophrenia assessment, every subscale of the EI illustrated statistically significant positive links by the linear regression analysis. The happiness domain seemed to have a greater effect on average when comparing to the other subscales once increasing the score of self-regard, life satisfaction and peace. As with previous studies, EI dimensions were better predictors of mental health than that of physical health.[26] Additionally, there were significant positive associations of EI towards QoL.[27]

One strength of this study was that it deeply considered prevalence QoL and EI being limited in the number of severe mental illnesses, especially in schizophrenia. Moreover, the relationship between QoL and EI revealed positive relationships of its association. This could help clinicians to develop better, continuity care in order to improve life quality, simply by showing concern towards emotional approaches.

Nonetheless, this study still had limitations. (1) The cognitive impairment might cause recall bias while filling out the questionnaire (2) Some participants presented a mild form of communicative disturbances, which could have an effect towards their understanding and responses. (3) The results were from quantitative information that could not provide additional aspects of social and emotional functioning related to QoL.

Consequently, it is noteworthy to assess how the authors can completely explain the relationship in the process of mixed method qualitative and quantitative study by collecting more information from relatives, or using a different technique of interview to explore a better way to exact more data.

Considering the results analyzed, there are several ways to improve the QoL of schizophrenia. For instance, taking clinical aspects (difficulties arising from a psychiatric condition or adverse effects) with life satisfaction into account and focusing on improving social skills along with self-regard in part of the happiness domain. By doing this, it would provide for a higher QoL in schizophrenia. On top of that, the authors suggested, through the data analysis, that emotional development should be enhanced in clinical management.[28] Furthermore, life style modifications such as; new psychosocial approaches, focusing on physical

activities, weight and smoking management would help people with schizophrenia to improve their QoL.[29]

Conclusion

The current study found the medium to high prevalence of schizophrenia having a moderate QoL, which was similar to previous studies, while the prevalence of abnormal EI was lower than the normal group in all subscales. The positive relationships of individual subscales of EI towards QoL were found. Additionally, difficulties from psychiatric conditions and lower levels of life satisfaction significantly related to a poor to moderate QoL. Further studies, with a declaratively understanding of the relationship between EI and QoL, utilizing a mixed qualitative and quantitative study with collected information from relatives, which uses new interview techniques should be designed to explore more important data. Emotional training is helpful in clinical management.

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