Original Article

Quality of Life among adolescents studying in Bengali and English medium schools of Siliguri subdivision, Darjeeling district, West Bengal

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Abstract

Background: Quality of life (QoL) is a very subjective construct that cannot be directly measured. It needs to be converted to valid and reliable indicators of its component dimensions and domains to be quantified and measured objectively. Quality of life studies of adults have progressed over time now but literature regarding adolescents remains scarce. **Objectives:** To assess the QoL among adolescents studying in Bengali and English medium schools and explore the factors related to its variations. **Material and methods:** A cross-sectional descriptive study is conducted by pre-tested and pre-designed self-administered anonymous questionnaire (WHO-QOL BREF) which is divided in four domains. **Result:** It was found that the students from the Bengali medium school had better quality of life than their counterparts in the English medium school with respect to all the four domains. It was also revealed that students in their late adolescence and female gender had better quality of life. **Conclusion:** The findings of the study suggests that including exposure to the mother tongue may help students to express themselves freely and keep them grounded to their culture.

Key words: quality of life, adolescents, school, WHO QOL

Introduction

Quality of life (QoL) is a term that most people are familiar with, regardless of whether or not they can define it. However, its meaning can have very different implications to different people. The concept of "quality of life" is much widespread than standard of living or material living conditions; it also takes into account working environments, the amount of social integration, health and education, whether people are fragile socio-economically or physically etc. [1]

According to the World Health Organisation (WHO), QoL is defined as „an individual‟s perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns‟.[2]

Historically, QOL measurement as a social-level concern has been approached from two broad viewpoints: objective and subjective. An objective approach focused on external, quantifiable conditions of a particular culture or geographic area such as income levels, quality and available housing, crime rates, divorce rates, access to medical services, school attendance, life expectancy, and suicide rates. Whereas a subjective approach argued measuring QOL in an exclusively objective sense, and instead, suggested subjective indicators (e.g., sense of community, satisfaction with life, sense of safety, relationships with family, etc.) should take precedent and complement more traditional, objective QOL indicators.[3]

While quality of life research in adults has evolved over recent years, quality of life in adolescents has not been comprehensively researched. Adolescence, a transitional stage between dependent childhood and

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independent adulthood, is often regarded as the stage for accelerated future development.[4] Identifying adolescents‟ perceptions of their quality of life and health issues is of major importance to understand how they think, reason, and understand. This higher-level thinking which allows them to think about their future, evaluate other alternatives, and set personal goals.[5,6]

There exists a large number of generic questionnaires that assess QoL in adolescents. The World Health Organization Quality of Life (WHOQOL BREF) is an international cross-culturally comparable quality of life assessment instrument which assesses the subjective perceptions in the context of their culture and value systems, and their personal goals, standards and apprehensions.[7]

Since the WHO Ottawa Charter of 1986, the school has been identified as an appropriate setting for health promotion where children and adolescents can be approached for their opinions, attitudes, behaviors, knowledge and feelings about their opinion of health. The WHO identified that a health-promoting school can be characterized as a school constantly strengthening its capacity as a healthy setting for living, learning and working.[8] One of the stated purposes of the Global School Health Initiative launched by WHO was to create a healthy environment in the schools that respects a person‟s well-being and dignity and provides multiple opportunities for success.[9] Therefore, it becomes imperative to study the quality of life of school students which can be helpful to both the parents and the school authorities.

Table1. Distribution of study subjects by their socio-demographic characteristics

	Medium		
	Bengali	English	Total
Age group			
Early adolescence (10-13 years)	24 (22.2)	11 (10.2)	35 (16.2)
Mid adolescence (14-16 years)	74 (68.5)	93 (86.1)	167 (77.3)
Late adolescence (17-19 years)	10 (9.3)	4 (3.7)	14 (6.5)
Gender			
Female	54 (50.0)	54 (50.0)	108 (50)
Male	54 (50.0)	54 (50.0)	108 (50)
Religion			
Hindu	93 (86.1)	82 (75.9)	175 (81.0)
Christian	7 (6.5)	16 (14.8)	23 (10.6)
Muslim	4 (3.7)	2 (1.9)	6 (2.8)
Buddhist	4 (3.7)	8 (7.4)	12 (5.6)
Socioeconomic status			
I	10 (9.3)	53 (49.1)	63 (29.2)
II	20 (18.5)	31 (28.7)	51 (23.6)
III	27 (25.0)	12 (11.1)	39 (18.1)
IV	35 (32.4)	11 (10.2)	46 (21.3)
V	16 (14.8)	1 (0.9)	17 (7.9)
Currently ill			
Yes	7 (6.5)	10 (9.3)	17 (7.9)
No	101 (93.5)	98 (90.7)	199 (92.1)
Total	**108 (100)**	**108 (100)**	**216 (100)**

No such previous studies have been conducted in the current setting and there is lack of adequate data regarding this topic in the study population. The present study attempts to investigate the quality of life of adolescent school students and comparisons between the students of Bangla and English medium school in North Bengal, India.

Aims and objectives

1. To assess the quality of life of school going adolescents in Siliguri using World Health Organization Quality of Life (WHOQOL-BREF).
2. To explore the various factors associated with the QoL of these students.

Materials and methods

Study type & design: A cross-sectional descriptive study was conducted at two schools situated in rural areas of Siliguri.

Study period: May 2015 to June 2015

Study setting: Siliguri, being situated at the confluence of North East and West Bengal, has a perfect blend of diversity and culture. Two schools, one English medium (Alphonsa School) and one Bengali medium (Narasingha Vidyapith), situated in Siliguri were selected for the study.

Study population: All adolescents studying in the respective schools were selected as the study population.Exclusion criteriawere-absent on the days of data collection,,unwilling to give consent and having any serious illness

Sample size: Assuming an estimated mean quality of life score as 50% and applying formula for sample size as

- $n= Z_{\alpha}^{2}P(1-P)/ D^{2}$, where n is the sample size,
- Zα is the standard normal variate at α=0.05 level is 1.96,
- P is the proportion of mean quality of life score as 50% (0.5), Q = 1-P = 0.5, and
- D is the absolute precision = 0.1, the sample size came out to be 96. After adjusting for a 10% non-response rate, the minimum sample size required was calculated to be 106 for each school.

Sampling technique: A sampling frame of students was prepared from the list of eligible students enrolled in the school register and students from each school were randomly selected from the sampling frame.

Data collection tools:

A pre-tested pre-designed self-administered anonymous questionnaire consisting of the following parts was used to collect data.A socio-demographic questionnaire to obtain information on age, gender, parents‟ occupation, education, type of family, monthly income. etc. ; and WHOQOL-BREF questionnaire based on a brief version of the World Health Organization Quality of Life Instrument (WHOQOL-BREF).The WHOQOL-BREF is an international cross-culturally comparable quality of life assessment instrument. It has been validated in different languages for both developed and developing countries and it is a generic QOL instrument developed by WHO, and is composed of 26 items. The response options range from 1 (very dissatisfied/very poor) to 5 (very satisfied/very good). It emphasizes the subjective responses rather than the objective life conditions, with assessments made over four weeks. The questionnaire includes four domains: physical (pain and discomfort, energy and fatigue, sleep and rest, activities of daily living, dependence on medication or treatments and ability to work); psychological (positive feelings, thinking, learning, memory and concentration, self-esteem, body image and appearance, negative feelings, spirituality, religiousness and personal beliefs); social relationships (personal relationships, social support and sexual activity); environment (physical security and safety in the home environment, financial resources, health care and social; availability and quality; opportunity to acquire new information and skills, participation and opportunity for recreation /leisure; physical environment: pollution, noise, traffic, climate and transportation).[10] One question in Social domain “Are you satisfied with your sex life?” was replaced by “Are you satisfied with the respect you receive from others?” as done for Indian adolescents by Agnihotri et al.[11] The scores was transformed into a linear scale between 0 and 100, with 0 being the least favorable and 100 being the most favorable.

Data collection technique: After explaining the objectives of the study and receiving their prior consent, students were asked to fill up the questionnaire in either Bengali or English. The Quality of life was evaluated on the basis of WHOQOLBREF score.

Plan for data analysis: After collecting all data, data entry was done in Microsoft Excel. Data was organised and presented by applying principles of descriptive statistics. Categorical data was analysed using Chi square test and continuous variables was analysed using t-test and ANOVA, wherever applicable. Appropriate statistical software was used for analysis.

Ethical considerations: Prior consent form was taken from the Institutional Ethics Committee before conducting the study. A consent form was used to take the informed consent of the subjects before interviewing them. Anonymity and confidentiality was ensured.

Results:

The present study was conducted among 216 subjects, of which 108 each belonged to English and Bengali medium schools. The mean age of the respondents was 14.63 ± 1.25 years. Table 1.1 shows that the majority of the respondents belonged to mid adolescent age group, followed by early adolescent and then late adolescent. Males and females were in an equal proportion in both the schools. More than two-

thirds of the study subjects belonged to Hindu families. A very few adolescents belonged to families practicing Islam, Christianity and Buddhism. Higher proportions of students studying in English medium school, belonged to families with higher socio-economic classes I (49.1%) and II (28.7%), whereas in Bengali medium school, most of the students

Table 2. Predictors of different domains of WHO QOL BREF among study population.(N=216)

	Physical Domain	Psychological Domain	Social Relations Domain	Environment Domain
Age				
Early adolescence	69.69 ± 10.73	66.07 ± 12.09	78.81 ± 16.09	62.59 ± 11.78
Mid adolescence	67.39 ± 13.40	62.97 ± 13.46	75.30 ± 15.19	60.89 ± 13.41
Late adolescence	72.96 ± 14.13	69.35 ± 13.34	73.81 ± 19.84	70.09 ± 12.66
F value, p value	**1.479, 0.230**	**2.061, 0.030**	**0.844, 0.431**	**3.258, 0.040**
Gender				
Female	68.65 ± 11.97	61.69 ± 12.81	76.85 ± 16.09	60.79 ± 12.59
Male	67.59 ± 14.15	66.09 ± 13.50	74.69 ± 15.20	62.73 ± 13.88
T value, p value	**0.593, 0.554**	**2.456, 0.015**	**1.015, 0.311**	**1.075, 0.284**
Religion				
Hindu	68.37 ± 13.52	64.52 ± 13.06	76.67 ± 15.58	62.39 ± 13.11
Muslim	66.67 ± 14.75	60.42 ± 18.21	65.28 ± 13.35	63.54 ± 11.64
Christian	65.53 ± 11.12	57.61 ± 14.25	69.93 ± 16.04	56.11 ± 15.41
Buddhist	70.24 ± 9.43	68.40 ± 9.48	79.17 ± 13.99	62.50 ± 10.15
F value, p value	**0.448,0.72**	**2.486,0.04**	**2.393,0.04**	**1.585,0.19**
Socio-economic status				
I	67.91 ± 13.11	61.44 ± 13.94	74.87 ± 16.83	64.24 ± 14.59
II	67.86 ± 13.68	62.01 ± 12.71	74.35 ± 13.93	62.44 ± 12.49
III	70.42 ± 11.76	69.44 ± 12.18	78.63 ± 12.94	61.14 ± 10.36
IV	68.71 ± 13.02	65.22 ± 12.98	75.00 ± 18.26	60.05 ± 14.33
V	62.82 ± 14.18	62.25 ± 13.38	78.92 ± 14.47	56.62 ± 12.40
F value, p value	**1.033, 0.39**	**2.750, 0.03**	**0.680, 0.61**	**1.446, 0.22**
Currently ill				
Yes	65.55 ±15.25	63.97 ±17.55	66.18 ±13.65	61.76 ±14.21
No	68.34 ±12.91	63.88 ±12.94	76.59 ±15.56	61.76 ±13.21
T value, p value	0.845, 0.399	0.026, 0.99	*2.671, 0.007*	0.001, 0.99
Medium				
Bengali	69.81±12.45	66.90±11.82	78.78±14.38	62.12±11.98
English	66.44±13.54	60.88±14.07	72.76±16.34	61.40±14.47
T test, p value	***1.906, 0.048***	***3.404, 0.001***	***2.874, 0.004***	0.400, 0.689

belonged to families with lower socio-economic classes. When the students were enquired about whether they were considered themselves sick, a mere 7.9% replied in the affirmative while the majority stated that they felt they were not sick.

Table 2 shows that, except for social relations, the mean scores of quality of life was higher in late adolescence with respect to all the three other domains. Females had a significantly higher score with respect to the psychological domain than males. Males had higher scores in physical and social domain whereas females had a higher environmental domain score; though none of the differences are statistically significant.

Religion was not significantly associated with the mean differences in scores of physical and environment domain, whereas students belonging to families practicing Buddhism had significantly higher scores in psychological and social relations domains of quality of life. Socioeconomic class was not a significant determinant of the scores in physical, social and environmental domains. Only in case of psychological domain, students belonging to social class III had significantly higher scores. Self reported illness by the study subject contributed significantly to the difference in the scores of social domain of quality of life as compared to the other domains.

Table 2 also shows that all the domains, the score for quality of life was higher among students belonging to Bengali medium school. For the physical, psychological and social relations domains, the score was significantly higher in the Bengali medium school.

Discussion :

The present study examined differences in perceived QoL among stents studying in Bengali and English medium schools. To date, most of the studies have focused their efforts on adults or among children with some disorder. In this context, the present study was done among students studying in two schools of Darjeeling district to examine difference in their perceived QoL.

Socio-demographic profile :

Majority of the study subjects belonged to 13 -16 years and males and females were in equal proportion. Most of them belonged to Hindu families, which was consistent with the population in Darjeeling district. Compared to other areas, there were quite a few Buddhist students which can again be explained due to the geographical area.

An interesting finding of the study was that the students studying in English medium school hailed from more affluent families than their counterparts studying in Bengali medium. This can be explained by the propensity of parents from higher socio-economic status sending their wards to English medium schools believing that the quality of education is better.

Age and quality of life

It is very important to understand age-related transition of quality of life during the adolescent period. Rapid changes in physical, emotional and psychological status take place during adolescence, with changing relationships with family and friends, formation of personal identity and values, and development of patterns of behaviors.[12] Better quality of life was found among the older age groups in the present study, which may be because older students are more likely to have increased autonomy over their behaviours and with whom they spend their time. On the other hand, parents are likely to have a stronger influence on health behaviours than peers among lower age groups, resulting in a lower quality of life.[13]

Gender:

Awareness of gender differences and similarities are of paramount importance during adolescence. Biological factors (including hormonal changes, physical changes associated with the development of secondary sexual characteristics and brain maturation and social expectations of what is regarded as male or female (gender roles) are relevant in this context. Similar to the present study, other studies showed that boys reported higher levels of HRQoL, namely physical and psychological well-being, and parents' relation and autonomy, than girls.[14,15]

This may be due to differences due to gender in the engagement of health-related behaviors, and it may be related to cultural and educational issues that assign different roles to men and women. All the same, we must consider the fact that boys and girls tend to differ in the opinion of these dimensions, which may be related to a higher vulnerability of female adolescents to express problems associated with internalizing disorders, such as anxiety, depression and interpersonal problems.[16]

Socioeconomic affluence

Social inequalities have been observed for most consequences, with higher family affluence in general being associated with better health outcomes, health behaviours and positive social contexts with respect to family, peers and school.[17] Young people from higher-affluence families have better communication with mothers and fathers, higher classmate support and more close friends. They also have higher apparent school achievement, but this is not methodically related to perceived school pressure and liking school.[18]

In the present study, students hailing from lower socio-economic backgrounds were reported to have a better quality of life than their more affluent peers, which may be likely due to the fact that those from lower affluence families are more likely to report having three or more friends.

Quality of life and illness

Chronic illnesses and medical conditions present millions of children and adolescents with significant stress that is associated with risk for emotional and behavioral problems and interferes with adherence to treatment regimens.[19]

A large number of studies have been done to evaluate the quality of life in disease specific conditions. Research has shown that QoL in children and adolescents with chronic physical illness is markedly lower than that of the general population.[20,21] A longitudinal study by Chen et al showed that adolescents with comorbid physical illness and mental disorder tend to experience a particularly large reduction in QOL by adulthood.[22] However, a study in Russia showed that most of the adolescents with chronic illnesses estimated their QoL toward the positive end of the respective disease-specific scale.[23]

Quality of life and language of instruction:

An English-medium education system is one that uses English as the primary medium of instruction. The languages schools use for instruction can have an impact on learning and academic achievement in general. Research suggests that many benefits can be gained by beginning primary education in the student's home language.[24] According to Qorro M, only the language which teachers and students understand can effectively function as the language of instruction. Only when teachers and students understand the language of instruction are they able to discuss, debate, ask and answer questions, ask for clarification and therefore construct and generate knowledge,. These are activities that are a pre-requisite to learning and whose level determines the quality of education. Thus, the language of instruction is an important factor in determining the quality of education, hence quality of life of students.[25]

Conclusion

The quality of life of students studying in the Bengali medium school was much better than those studying in the English medium school. This clearly dismisses the public conception that English medium schools are better in shaping an individual's persona. The findings of the study suggest that including exposure to the mother tongue may help students to express themselves freely and keep them grounded to their culture.

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