

ADOLESCENT SCREENING FOR GENERALISED ANXIETY DISORDER IN A WARD OF GOKARNESHWOR MUNICIPALITY

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ABSTRACT

Adolescence is a transition period from childhood to adulthood when rapid changes in psychological functioning takes place. Neglect on mental health during this period can have a long term consequence in life. Generalized Anxiety Disorder (GAD), a common psychological problem in adolescents can be screened in community using simple set of questionnaires which would enable hidden cases in community to be identified and brought under medical attention at an early stage. With the aim of screening for Generalized Anxiety Disorder in ward 4 of Gokarneshwor municipality adolescents aged 12 to 19 were interviewed using a simple screening tool of GAD7 questionnaire. Systematic Random sampling was applied for selection of subjects. Based on score obtained they were categorized as having no, mild, moderate or severe anxiety. Data collected was analyzed using SPSS software and descriptive statistics was applied to find association between anxiety and social factors. P value less than 0.05 was considered significant. Out of 420 adolescents screened by GAD7 questionnaire, 18.8% (n= 79) were suffering from mild anxiety and 3% (n=14) were suffering from moderate and severe anxiety which required psychiatric consultation. There was significant association between anxiety and poverty. The association between anxiety and the level of class attended was also significant.

KEYWORDS

Adolescents,
Generalized Anxiety Disorder,
Gokarneshwor

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INTRODUCTION

The term adolescence has been defined as including those aged between 10 and 19 years of which age group up to 14 years is termed as early adolescence.^{1,2} Adolescents comprise of around 20 percent of the total population of Nepal.³ Adolescent health related outcomes can be affected by gender, education or income of family they live in.⁴ Adolescents with Generalized Anxiety Disorder suffer from excessive worries that interfere with academic and social functioning. Evidence shows continuity between anxiety disorders in youth and adulthood.⁵ A W.H.O. report on mental health status of Adolescents in South East Asia estimated around 170 thousand adolescent in Nepal aged between 13 to 17 years having features of anxiety which is 5% of the total population of that age group in Nepal.⁶ However the latest Annual report published by Department of Health services, Government of Nepal has recorded only 19 cases of various types of Anxiety disorders in age group 5-14 years and 59 such cases in age group 15-19 years.⁷ Screening for anxiety disorders in the community using simple tools enable the undiagnosed cases to be identified at an early stage followed by call for medical intervention. GAD 7 questionnaire with seven questions and scoring system is designed to screen for Generalized Anxiety Disorder and has been validated in many countries on adolescents above 11 years.^{8,9}

MATERIALS AND METHODS

After getting ethical approval from Institutional Review Committee of Nepal Medical College, a descriptive study was carried out from August 2017 to April 2018 in Gokarneshwor - 4, one of the 9 wards in Gokarneshwor

municipality. Consent was taken from the ward office. The sample size which was 30 % of assumed population of adolescents in the ward was fixed on the following basis:

Total population of the ward = 7000 according to the ward secretary

As adolescents comprise 20% of the total population 3 assumed population of adolescents in the ward is $20/100 \times 7000 = 1400$ and 30% of 1400 = 420 (sample size)

Four medical students were trained on using GAD7 questionnaire which was translated into Nepali language. Pretesting was done on 10 % of the sample size.

After taking informed consent from adolescents and their parents, the participants were interviewed by the trained students who went to each house and interviewed the third adolescent based on principle of systematic random sampling. If any adolescent refused to participate then the trained interviewers moved on to the next adolescent of the ward. Adolescents and their parents were also asked if the adolescent was under psychiatric medication at that time and such cases were excluded from the study.

Data entry and descriptive analysis was done using SPSS 24. Those with mild anxiety as shown by the screening tool were counseled how to deal with the condition or seek medical help if the condition worsens. Families

The screening questionnaire is shown below:

Over the last 2 weeks, how often have you been bothered by any of the following problems?

- | | |
|---|--|
| 1 | Feeling nervous? |
| 2 | Not being able to control worrying? |
| 3 | Worrying too much about different things? |
| 4 | Trouble relaxing? |
| 5 | Being so restless that it is hard to sit still? |
| 6 | Becoming easily annoyed or irritable? |
| 7 | Feeling afraid as if something awful might happen? |

Score for 7 questions - Not at all = 0, Several days = 1, More than half the days = 2, Nearly every day = 3

Out of total of 21, Scores of 5, 10, and 15 are taken as the cut-off points for mild, moderate and severe anxiety, respectively. Score more than 10 requires psychological counseling.

of those labeled as moderate to severe anxiety were called for psychological counseling. For assessment of economic status poverty was defined as living below 2 US dollars per person per day (threshold set by World Bank in studies related to poverty)

RESULTS

Table 1: The socio demographic profile of the participants is shown below (N=420)

Age	12 - 14	48%
	15 - 19	52%
Gender	Male	60%
	Female	40%
Caste	Brahmin/Chettri	38%
	Tamang	24%
	Newars	22%
	Others	16%
Education	Primary & Lower Secondary	44%
	Secondary or higher	56%

Out of total adolescents screened for Generalized Anxiety Disorder using GAD7 questionnaire, 14(3%) needed to be referred for psychiatric consultation. Features of those requiring referral is shown below (Table 2). Eighty one percent of the subjects (341) had scores which did not put them under any category of anxiety by GAD 7.

Table 2: Subjects requiring referral to Psychiatric OPD (N=14)

1. Gender	
Male	6
Female	8
2. Education	
Lower Secondary level or below	2
Secondary level or higher	12
Total	14

It was shown that anxiety of any kind based on GAD7 score (>5) was strongly associated with level of education and poverty (Table 3). Anxiety was more common in adolescents studying in higher classes. Data on economic status could only be taken from 89 percent of the total participants (374) and it was shown that anxiety was more in those who were living below poverty line. There was no association between anxiety and gender of the subjects.

Table 3: Association between Anxiety and Social factors

	Anxiety(GAD 7 score> 5)	No anxiety(GAD 7 score < =5)	P- value
1. Level of education			
Primary and lower secondary	23	162	0.003
Secondary and higher	56	179	
2. Poverty			
Yes	40	72	0.000001
No	36	226	

DISCUSSION

Different studies on anxiety disorder in adolescence have shown prevalence from 15 to 30 percent.¹⁰ In this study 18.8% of the subjects showed features of anxiety, ranging from mild to severe of which 3 % required psychological consultation. In adolescence even mild anxiety can limit social, emotional and cognitive development into adulthood. Therefore early and effective treatment is essential. However adolescents are unlikely to seek professional treatment for their problems, increasing their chance of serious long term problems. Self help approaches like psycho education through texts, media, group meetings or exercises may provide important alternative for adolescents.¹¹ Though this study has not shown association between gender and anxiety other studies have shown that anxiety disorders occur more frequently among females with female: male ratio reaching up to 3:1 in adolescence.¹²

This study has shown significant association between anxiety and level of class attended (p= 0.003). It can be seen from Table 2 that out of 14 adolescents who were advised for Psychological counseling 12, i.e. almost 86 percent, were studying in secondary level or higher. Significant association between the class attended and anxiety has also been shown in a study done in Catania, Italy where prevalence of self reported anxiety was 7.9% and 15.9% in middle and high school respectively, which is more than two times higher in high schools.¹³ Studies have shown that Mindfulness Based Interventions were effective in treating anxiety disorders in adolescents.¹⁴ At present Mindfulness based Interventions which includes meditation and yoga technique are being applied in schools to prevent mental disorders in students as well for their personality development.¹⁵

This study also has shown strong association between low economic status of family and anxiety in

adolescents ($p = 0.000001$). A study done in Brisbane, Australia has also shown that the more frequently the child was exposed to poverty, the greater was the risk of anxiety in adolescence.¹⁶ However results from the 2001–2004 National Health and Nutrition Examination Survey (NHANES) study done in U.S. showed that children from low-income households had a lower prevalence of anxiety disorders than their wealthier counterparts.¹⁷ In another study done in Norwegian children aged 10 – 13 it was found that children in the low socioeconomic status group had a higher prevalence of problems performing in front of others which is a feature of social anxiety.¹⁸ In a systematic review study of 55 studies, 52 indicated an inverse relationship between socioeconomic status and mental health problems in adolescents and suggested the need for individual-level early childhood interventions as well as a reduction in socioeconomic inequalities at a

societal level to improve mental health in childhood and adolescence.¹⁹ A study done in adolescent students in Central Development region of Nepal has shown that 17 % suffered from psycho social dysfunction.²⁰ Hence early detection of mental problems like anxiety disorders followed by multidimensional approach is likely to reduce burden of mental disease in future.

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