

# SCREENING FOR DEPRESSION IN ADOLESCENTS IN GOKARNESHWOR MUNICIPALITY-4, KATHMANDU

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## ABSTRACT

Depression which is characterized by hopelessness and loss of interest in social activities is common during adolescence. However it is often unrecognized and the burden is even more in low income countries. It also increases the risk of suicide in future. Hence in a developing country like Nepal it is important that such cases are detected at the early stage preventing further worsening of the condition. A simple set of questionnaires like Patient Health Questionnaire (PHQ) 9 can be used to screen for depression. Using this questionnaire screening for depression was carried out in adolescents of Gokarneshwor municipality, ward 4. Four hundred and twenty participants were selected by the process of systematic random sampling. Based on answers to nine questions score was given and adolescents categorized as having no, mild, moderate or severe depression. The PHQ 9 score suggested that 13.1% were suffering from depression, out of which 23.6% from moderate to severe depression which required psychiatric consultation. Out of those shown to have some form of depression 40.0% said they had thought of self harm in last 2 weeks. Late adolescence was significantly associated with depression. Thoughts related to self harm were also six times more in late adolescent age group than the early adolescent age group.

## KEYWORDS

Adolescence, Depression, Gokarneshwor-4

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## INTRODUCTION

Thirty years ago, depression was predominantly seen as adult disorder. Adolescent low mood was seen as a part of normal teenage mood swings. However various developmental studies in youth have shown that adolescent depressive disorders is associated with range of adverse outcomes including social and educational impairments as well as physical and mental problems later in life.<sup>1</sup> Adolescence has been defined by WHO as period between age 10 to 19 years. This is transition period from childhood to adulthood where rapid change in psychological functioning takes place.<sup>2</sup> As changes take place in this period adolescents are highly susceptible to mental disorders than at other times of life.<sup>3</sup> Depression, a common mental disorder in adolescence, is highly unrecognized and the burden is even higher in low and middle income countries.<sup>4</sup> The Patient Health Questionnaire- 9(PHQ-9) consisting of 9 items was developed as screening instrument for depression.<sup>5</sup> PHQ-9 can be used as depression screener for adolescents more than 11 years.<sup>6</sup> Adolescent depression increases the risk of depression in adulthood.<sup>7</sup> Studies have also shown association between depression and suicidal thoughts.<sup>8,9</sup> Hence it is very important that depression is identified at early stage and treatment is advised so that future harm is minimized including reduction in suicide attempts.

## 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 Ward 4, one of the 9 wards in Gokarneshwor municipality. Consent was taken from the ward office. The sample size which was 28 % of assumed population of adolescents in the ward was fixed on the following basis:

Total population of the ward=7508 (as per Gokarneshwor Municipality, fiscal year 2075/76). As adolescents comprise 20% of the total population<sup>10</sup> assumed population of adolescents in the ward is  $20/100 \times 7508 = 1502$  and 28% of 1502=420 (sample size). Four medical students were trained on using PHQ9 questionnaire for screening and this 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 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 version 16. The level of significance was set at 0.05. Those with mild depression as shown by the screening tool were made aware about the condition and seek medical help if the condition persisted for weeks. Families of those labeled as moderate to severe depression were requested to take the subjects for psychological counseling.

The standard questionnaire PHQ 9 used for screening depression with the scores are given below.

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

1. Little interest in doing things
2. Feeling hopeless
3. Trouble sleeping/excess sleeping
4. Feeling tired
5. Poor appetite/overeating
6. Feeling bad about having let yourself or family down
7. Speaking slowly that other people could have noticed/being restless
8. Trouble concentrating
9. Thoughts of dying or hurting yourself in some way

(Not at all=0, Several days=1, More than half the days=2, Nearly every day=3, Maximum Score=27)  
Score 10 or more=moderate or severe depression

## RESULTS

Table-1: Socio-demographic profile of the subjects (n=420)

<b>Gender</b>	Male	60.0%
	Female	40.0%
<b>Age (years)</b>	12-14	48.3%
	15-19	51.7%
<b>Caste</b>	<i>Brahmin/Chhetri</i>	37.2%
	<i>Tamang</i>	24.8%
	<i>Newar</i>	21.6%
	Others	16.4%

Prevalence of any form of depression (PHQ 9 score >5) was 13.1 % (55 out of 420) and 11.9% in males and almost 14.9% in females. Though, it is higher in females there was no significant association between gender and depression (Table-2). However, those screened as having depression was significantly higher in late adolescence i.e. age group 15-19 compared to those in early adolescence (Table-2).

**Table-2: Association between depression according to PHQ 9 questionnaire (Score>5) and demographic profiles (n=420)**

		Depression	No depression	n	P value
Age (years)	12-14	18	185	203	0.01
	15-19	37	180	217	
Gender	Male	30	222	252	0.38
	Female	25	143	168	
<b>Total</b>		55 (13.1%)	365 (86.9%)	420	

The number of adolescents who had experienced self harm or suicidal thoughts in last 2 weeks was also more than 6 times higher in late adolescent age group compared to early adolescent age group (Table-3).

**Table-3: Demographic profile of subjects with depression and thoughts of self harm (n=22)**

Age of Adolescent (years)	12-14	3	13.6%
	15-19	19	86.4%
Gender	Male	9	40.9%
	Female	13	59.1%

**Table-4: Age group and gender of subjects requiring referral to a psychiatrist (PHQ 9 score > 10) (n=13)**

Gender	Male	5	38.5%
	Female	8	61.5%
Ages	12-14	3	23.1%
	15-19	10	76.9%

Out of the total subjects suffering from any kind of depression as suggested by PHQ 9 score, 23.6% (13 out of 55) needed to be referred to a psychiatrist. Table-4 shows age and gender distribution of those requiring referral to a psychiatrist. The number of adolescents who needed psychiatric referral was 3 times more in late adolescent age group.

## DISCUSSION

This study has shown that on screening 13.1 % were shown to be having some form of depression (11.9% of total male subjects and 14.9% of total female subjects). Studies done in different communities of United States of America have shown prevalence of depression in children and adolescents ranging from 2.2% to 3.4%.<sup>11</sup> Another study done on students of South India showed prevalence of depression to be 22.5% in adolescence.<sup>12</sup> In this study those having depression according to PHQ 9 questionnaire was significantly more in late adolescent age group. The number of adolescents needing psychiatric consultation was also significantly higher in late adolescent age group. Studies done on adolescents

of Caribbean population have indicated that the age reporting highest prevalence of depression was 16 years, which is also an age of late adolescence.<sup>13</sup> Late adolescence involves process of maturation, academic performance expectations and changing social roles. In addition to this economic and psychosocial adversity in childhood and early adolescence can add to the risk of mental disorders manifesting during late adolescence. Worldwide the prevalence of mental disorders like depression increases markedly during late adolescence reaching peak during early adulthood which is age 20-24 years.<sup>14</sup>

In Caribbean population, female adolescence was significantly associated with the reporting of depression,<sup>13</sup> but there was no association between gender and depression in this study. Studies done on American adolescents has shown that suicide related behavior increases with age,<sup>15</sup> which is similar to the findings of our study where the number of subjects in late adolescence having thoughts of self harm and suicide was six times more than that of early adolescent age group. Suicide has been recognized as the leading cause of death among adolescents in Nepal.<sup>16</sup>

Adolescent depression is difficult to treat once it has developed. There is also connection between depression in adolescence and recurrence of the disorder in adulthood. Hence prevention measures against adolescence depression is cost effective and less distressing than treatment of depression in future. Intervention programs with family approach, rather than individual approach has been incorporated for prevention of depression in adolescents. The families were educated about depressive episodes and taught how to recognize and cope with the stress. There is evidence that prevention interventions can produce meaningful change in family, and that this change in family can have long-term, positive benefits on adolescents.<sup>17</sup>

Integrating mental health services into primary healthcare can also have effective role in preventing mental disorders in a community. This can be done by equipping primary health care workers with mental health skills as the health workers are easily accessible to individuals and the community. Stigma is also reduced when seeking mental healthcare from primary healthcare provider compared to specialized service providers because primary health services are not associated with any specific health conditions.<sup>18</sup> Training primary healthcare

providers on screening for common mental diseases like depression can have advantages like greater population coverage and efficient deployment of health care staff in low income settings.<sup>19</sup> In context to a low income country like Nepal all these measures can help in reducing the burden of mental disease in adolescence and adulthood.

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