PREVALENCE OF DEPRESSION AMONG RURAL SCHOOL-GOING ADOLESCENTS (13-19 YEARS) IN VIJAYAPURA DISTRICT

By

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Dissertation submitted to

BLDE (Deemed to be University) Vijayapur, Karnataka

In partial fulfillment of the requirements for the degree of

DOCTOR OF MEDICINE IN

COMMUNITY MEDICINE

Under the guidance of

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PROFESSOR

DEPARTMENT OF COMMUNITY MEDICINE

BLDE (Deemed to be University)

SHRI B.M.PATIL MEDICAL COLLEGE

HOSPITAL & RESEARCH CENTRE, VIJAYAPUR

KARNATAKA

2020

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LIST OF ABBREVIATIONS

WHO	World Health Organisation
COVID	Corona Virus Disease
UNICEF	United Nations International Children's Emergency Fund
NCRB	National Crime Records Bureau
BC	Before Christ
BCE	Before Common Era
MDD	Major depressive disorder
DSM	Diagnostic and Statistical Manual of Mental Disorders
DALY	Disability-adjusted life year
ICD 11	International Classification of Diseases.
SDQ	Strengths and Difficulties Questionnaire
TSQ	Trauma Screening Questionnaire
DAWBA	The Development and Wellbeing Assessment

LIST OF ABBREVIATIONS

PHQ-9	Patient health questionnaire 9
ADHD	Attention-deficit/hyperactivity disorder
MINI Kid	Mini-International Neuropsychiatric Interview for Children and Adolescent
BDI	Beck Depression Inventory
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
RKSK	Rashtriya Kishore Swasthya Karyakram
OR	Odds Ratio
BMI	Body mass index
SES	Socio economic status
SPSS	Statistical Package for The Social Sciences.

ABSTRACT

Introduction:

Though India has the largest adolescent population, one in seven adolescents suffer from depression symptoms. Depression in adolescents is often unrecognized because these age group children hesitate to express their feelings and are reticent to seek psychiatric help. During COVID-19 lockdown and school closures most adolescents went through a phase of loneliness which is a potential antecedent of depressive disorders that might have occurred due to a perceived deficit in their meaningful social relationships. Moreover COVID-19 Pandemic had created serious concerns in terms of adolescent's education and nutrition especially in rural areas.

Apart from the above cited concerns, a study on the prevalence and risk factors of mental health of rural adolescents is of at most importance as there are only a handful of studies on adolescent mental health in rural areas of northern Karnataka.

Objectives

1. To assess the prevalence of Depression among rural school-going adolescents in Vijayapura district.
2. To explore the risk factors (socio-demographic and cultural) associated with adolescent Depression in the study population

Materials & Methodology:

It is a cross sectional study carried out in schools of Ukkali village, Vijayapura among adolescents aged 13 – 19 years. All adolescents who fulfilled inclusion criteria were taken for the study. Face to face interviews were conducted using semi structured questionnaires (regarding socio demographic data, personal habits, family and school environment) and a validated PHQ-9 questionnaire (to assess severity of depression). Those with higher scores in PHQ-9 were given counselling and treatment services by specialist doctors.

Statistical Analysis:

Data was compiled in excel sheet and analyzed using SPSS version 20. Descriptive data was analyzed as frequencies, percentages and diagrams. Statistical association with depression and other independent variables were assessed using chi square test and logistic regression analysis.

Results:

Total 410 students participated in the study out of which 8.7% students had depression as assessed with PHQ- 9 questionnaire, 8.3% students had mild depression, and 0.4% had moderate – moderately severe depression. On logistic regression analysis, it was found that determinants like having siblings, getting a proper sleep daily, living with parents, having a calm home

atmosphere without any conflicts among family members, and living with family members who doesn't have a history of substance use were found to have a protective impact against depression (OR < 1) and was statistically significant ($p < 0.05$).

Conclusion:

Our study results indicate the need to bring up mental health screening camps at all schools, counselling and training services to parents and teachers to better understand the emotions adolescents undergo, and how to deal with it.

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INTRODUCTION

The origin of the term adolescents is from a Latin word adolescere; meaning grow in to maturity. At this phase of human development all adolescents experience changes physically and mentally which marks the transition from childhood to adulthood[1]. According to WHO; age group 10-19 years for both sexes are considered as period of adolescence[2]. This period in life marks a pivotal time for the children as they begin to interact with the world in newer ways, i.e., by taking chances, learning new skills and experiencing unfamiliar emotions. Adolescents venture beyond their families to create powerful peer connections and they search out for ways to standout to find their place in society and to make a difference in their world[3]. In this phase, an adolescent experiences several biological, cognitive, social, and psychological changes in a short span of time[4].

The world is home to 1.3 billion adolescents, making up 16 percent of world's total population[5]. India, being the second most populous country in the world, has the largest adolescent population (253 million). They constitute 20% of the total population of India[6,7]. This 20% of adolescents will contribute to 250 million working population by 2030, which is an enormous demographic dividend. Therefore, they will be an asset to the country, contributing to its growth and development. Expecting such advancement, the physical and mental health of adolescents should be considered with at most importance[8].

Since COVID-19 struck the world as a public health emergency, the adolescents had experienced a dynamic disruption to their day to day lives. They experienced social isolation, as well as school closures, quarantines, elevated family stress, and less peer connections, which led to psychological hardship and mental health issues among children and adolescents[9]. But merely the tip of a mental health iceberg was revealed by the pandemic, which was ignored for far too long[10]. Globally more than 13% of adolescents aged 10–19 years live with a diagnosed mental disorder which represents a total of 89 million adolescent boys and 77 million adolescent girls[11].

Mental health problems are responsible for **16%** of the global burden of disease and injury in adolescents aged 10-19 years, yet these remain underdiagnosed and undertreated[12]. Approximately 7.3% of adolescents (13–17 years old) in India are reported to have psychiatric illness according to the National Mental Health Survey of India (2015–2016)[8]. The prevalence rates of psychiatric disorders show an increase from 1% to 2% in childhood to around 10%–20% by late adolescence, almost similar to adults[4]. As per UNICEF one out of seven adolescents 15 to 24 years old in India, often feel depressed or has little interest in doing things. A survey by UNICEF and Gallup (2021) conducted in 21 countries among 20,000 children and adults, found that the young in India seem reluctant to seek help for mental stress. Also, only 41% of Indians aged 15 to 24 think that receiving assistance for mental health issues is a good decision when

compared to an average of 83% across 21 nations[13].

As per WHO, depression in 10-14 years and 15-19 years are estimated to be around 1.1% and 2.8% respectively[14]. The signs of Depression can play out in different ways, and this will be difficult for adolescents, their parents, or teachers to understand and accept the sudden changes in their behavior and existence of depression as mental health problem. Signs of Depression in youth manifest like: dropping grades, sudden loss of interest in things which were previously enjoyable, boredom, irritability, anger, difficulty in maintaining relationships, dangerous self-injurious behavior, persistent aches or pain, and easy fatigability. These are missed routinely thinking as behavioral problem of the youth leading to undiagnosed and untreated depression. Depression is a treatable illness, and untreated Depression may lead to long-term physical or mental health problems and possibly even suicide[15].

One of the major factors contributing to disability worldwide is depression, and suicide is the third leading cause of death in 15-19 years old adolescents.[12] According to the National Crime Records Bureau (NCRB) data 2020, 11,396 children lost life by suicide, 18 per cent rise from 9,613 of such deaths in 2019. Everyday an average 31 children lost life by committing suicide in India[16].

An increased awareness and understanding about what is depression and how it can be prevented and treated, will help to erase the stigma associated with the condition, and promotes more people to seek help[17]. In rural areas, where the

awareness about mental health problems and depression among children and adolescents are low compounded by myths, beliefs and stigma, it becomes imperative to understand the mental health status of these adolescents. Adolescent depression post COVID 19 lockdown is an underexplored area, especially in rural areas of North Karnataka. This study aims at assessing the prevalence of Depression in school-going adolescents and its associated risk factors in Vijayapura district, Karnataka. By understanding the prevalence of depression and its risk factors the study contributes towards planning preventive strategies and formulating appropriate interventions.

OBJECTIVES OF THE STUDY

1. To assess the prevalence of Depression among rural school-going adolescents in Vijayapura district.
2. To explore the risk factors (socio-demographic and cultural) associated with adolescent Depression in the study population.

REVIEW OF LITERATURE

History of Depression as Mental health problem

The term depression was derived from the Latin verb deprimere, "to press down" which denotes a sensation of heaviness that one may feel when afflicted by a sustained sad mood[18]. In 400 BCE, the Greek physician Hippocrates proposed that imbalance in body fluids (humours) are responsible for personality traits and mental illnesses. He classified mental illnesses as mania, melancholia (depression), and phrenitis (brain fever). Hippocrates associated melancholia to excessive black bile in the spleen and his ideas of treatment included bloodletting, bathing, exercise, and dieting[19].

From the early to mid-Christian period (400-1000 CE) mental illnesses were seen as spiritual conditions in which the stricken individuals were considered to be possessed by the devil, demons, or witches, which have the capacity to infect others. Those afflicted individuals underwent exorcisms carried out by the priests, whilst the extreme cases were drowned or burned by the mobs. During the rising Islamic civilisation in 700CE- 900CE a much more humane description and management of depression and other mental illnesses began to be practiced[19]. One of the greatest Islamic physicians Al Razi established the first psychiatric ward in Baghdad, Iraq in 705CE- the first psychiatric hospital in the world, where mental disorders were treated by using psychotherapy and drug treatments[20].

In 16th century many places in Italy and Europe witnessed witch hunts and executions of the mentally ill individuals. Late into the 18th century, aggression was considered as a cause and sufferers were motivated to exercise, listen to music, make dietary modifications, and to talk about their problems with friends, family, or a physician. A famous German psychiatrist Emil Krapelin, in 1895, dissociated depression from schizophrenia and put forward medical intervention to treat melancholy [19,21].

By 19th century the term depression replaced the older term Melanocholia. Electroshock therapy (without anesthesia) was introduced by 1930s, which induces seizure lasting 20 to 90 seconds. Also, in the 1940s an Australian psychiatrist, J.F.J. Cade, introduced lithium to treat psychosis and the manic stages. In 1970s, clinicians in United States introduced the term major depressive disorder (MDD) and it officially became a part of the DSM-III in 1980. The current edition of the diagnostic manual is the DSM-5[19,21].

The psychiatrists believe that depression is due to a combination of multiple causes including biological, psychological, and social factors. But unfortunately, the researchers suggests that the causes of depression are much more complex and they are still working to learn more about the causes of disease condition. Currently, the mental health professionals often recommend a treatment approach for depression which includes medications, psychotherapies, and lifestyle modifications[21].

Neurological development in Adolescents

Adolescence is a "second sensitive developmental period" after early childhood, as in this phase occurs some neurodevelopmental changes which makes adolescence a period of both vulnerability and opportunity[22]. During the first few months and years of life, the human brain undergoes a dramatic rise in the number of connections. As the child approaches adolescence, the number gradually declines to adult levels. Whereas, the amount of myelin, which protects axonal conduction fibers in the brain and speeds up the electrical impulses increase with age. Likewise, the brain areas involved in higher-level mental functions (such as language, decision-making, and high-level social understanding) continue to mature during adolescence but those areas which is involved in basic sensory processing tend to mature before puberty. A major reason for adolescent behaviors such as risk taking, reward seeking and exploration is believed to be due to the early maturation of the reward-responsive brain regions (such as subcortical brain regions) and the later maturation of brain regions (such as prefrontal cortex) involved in thoughtful, effortful control of behavior. Adolescence may thus be a time of increased flexibility in learning and adjusting to new circumstances[23].

Mental health & Adolescents

Adolescents are vulnerable to mental health issues because they are unable to comprehend the entirety of the situation[24]. Major causes of adolescent mental illness are depression, anxiety, psychotic disorders and behavioral disorders which if left untreated leads to drug abuse and suicides[25].

Adolescent's mental health may be more negatively impacted by risk factors if they are exposed to more of them. A desire for increased autonomy, discovery of sexual identity, the quality of their family life, and interactions with peers are all the elements that will contribute to stress during adolescence. Other contributing factors include, adolescents from minority sexual backgrounds or other discriminated groups, child marriage, and adolescents who suffer from chronic medical illness, autism spectrum disorder, an intellectual disability or other neurological conditions. Violence (including harsh parenting, bullying, sexual violence, etc.), socio-economic problems, and substance abuse have clear association with detrimental mental health[14].

Adolescents and Prevalence of Depression

Globally, Depressive disorders in adolescents are the third cause of adolescent DALYs lost[26]. Increased prevalence of depression in post pubertal age can be explained by factors related to the marked biological and social changes characterizing this developmental period. Studies have shown that neuro physiologic changes are one among the cause of unbalanced responses to reward

and danger, and heightened feelings of stress and anxiety in adolescents[27].

As per DSM-5, major depressive disorders are defined by significant periods of either sad mood, loss of interest or pleasure, or changes in affect and emotions, cognition, and neuro-vegetative functions, lasting for at least two weeks with at least one of the two symptoms. The 2 main classification systems (DSM-5 and the ICD-11) define depression similarly, despite in the DSM-5 irritability rather than depressed mood is regarded as a core diagnostic symptom. Depression in adolescents is mostly unnoticed as the prevalence of irritability, unstable mood, over reactivity, and fluctuating symptoms in this age group are more when compared with adults. Also, depression is often unnoticed owing to a number of initial problems which seem more like behavioral and unexplained somatic symptoms, eating disorders, anxiety issues, refusal to attend school, drop in academic performance, and substance misuse[27].

Depressive disorders can lead to significant functional impairment, morbidity and mortality in children and adolescents. Nearly 35-50% of adolescents suffering from depression may attempt suicide[28]. The actual Suicide attempts far exceed the reported numbers of suicide attempts. For every recorded suicide, there are 20 suicide attempts and out of which 10% succeed[28].

- A study titled "A study of psychiatric morbidity among school going adolescents" by Pahwa M G *et al*. in 2018, aimed to determine the prevalence of psychiatric morbidity among adolescents and to compare its

distribution in the urban and rural areas. This cross-sectional study was done in one thousand adolescents aged 11 to 16 years from 8 schools (private and government schools) in urban and rural areas of Patiala district, Punjab. Schools were chosen by simple random sampling. Stratified cluster sampling was used by considering the type of school as strata and sections of each standard as clusters. The study was conducted as interview using self-designed sociodemographic questionnaire. Socioeconomic status scale used were Parekh's method for rural area, and Kuppuswamy's revised method for urban areas. SDQ (strength and difficulties questionnaire) was used to assess the psychiatric morbidity. SDQ parent version was filled by the parents. Students who had borderline or abnormal scores on the SDQ underwent further evaluation, including a mental state assessment, clinical interview, and thorough case history. Psychiatric illnesses were identified using the International Classification of Diseases-10 (ICD-10) criteria. Statistical analysis done using chi square test and T test. The overall prevalence of psychiatric disorders was higher among adolescents in the rural area (21.38%) when compared to urban area (19.43%). The prevalence ranges from 17.94% in the urban private schools and 20.96% in urban government schools to 20.61% in rural private schools and 22.17% in rural government schools. The study found that somatoform disorders (4.45%), conduct disorder (3.78%), dysthymia

(1.11%), and other mood disorders (0.89%) were significantly more common in rural adolescents than they were in urban counterparts, who also had higher rates of depression (3.88%), anxiety (3.67%), and hyperkinetic disorders (3.02%)[29].

- A study by Hanspal I *et al.* in 2017 conducted a cross sectional study to assess the prevalence of depression among rural school-going adolescents and its associated risk factors in Ramnagara District, Karnataka. 223 study participants aged 10-19 years were selected from three government schools. Patient Health Questionnaire-9 was used as a screening tool for depression. Family characteristics, academic achievement, and extracurricular activities were noted as depression risk factors. Association between depression and various socio-demographic variables, and other risk factors were estimated by chi square test and Fisher's test. Those variables which were found to have an association further underwent multivariate logistic regression. Prevalence of depression was 39% (28.3% mild depression, 7.2% moderate depression and 3.5% moderately severe depression as per PHQ-9). Factors which showed statistically significant association with depression were: Family with more than four members; having parents who fight frequently, having a family member suffering from serious illness, parents who pressurize more to perform well in exams, and not-participating in sports

events[17].

- A school based cross sectional study in Mangalore by Chakraborty T *et al.* in 2015 aimed to estimate prevalence of depression among adolescent students and to study factors associated with depression. One English medium school was randomly selected for the study. Data was collected using pretested self-structured socio demographic questionnaire and PHQ-9 questionnaire among 284 students. The prevalence of depression was 49%. Also, the study showed prevalence of depression increased with age and was higher among females. In the study, 67.6% had mild depression, 23% had moderate depression, 8.6% had moderately severe Depression, 0.8% had severe depression, 29.9% had trouble sleeping, 9.9% had trouble concentrating on works, 11.6% had a feeling of worthlessness. The study indicates the need for early diagnosis and prevention of progression of the disease as the majority of students had mild Depression[30].
- A study by Gupta M *et al.* among 542 school going adolescents (13-18 year), from eight schools selected by multistage sampling technique in the city of Chandigarh during July 2012 – October 2013. Face to face interviews were done using pre tested predesigned questionnaire and the PHQ-9 questionnaire. Multivariate analysis was done to identify significant associated factors. Overall prevalence of depression was 40%.

7.6% had major depressive disorders. In terms of severity, 29.7 % had mild depression, 15.5 % had moderate depression, 3.7 % had moderately severe depression and 1.1 % had severe depression. The study showed associated risk factors such as students from government school, studying in class Xth and XIIth, residing at a rural locality, physical abuse at home, alcohol use and smoking by father, schools lacking supportive environment, spending less time in studies, decreased participation in cultural activities and being in a relationship. But significant predictors on binary logistic regression analysis were being in class Xth and lack of satisfaction with one's academic performance[31].

- Sandhya Nair *et al.* conducted a cross-sectional study in schools of urban and rural areas in Gujarat. 693 students (13-17 years) were enrolled for the study. Teenage Screening questionnaires (TSQ) – Trivandrum and Strengths and difficulties questionnaire (SDQ) were used for assessment. 15% of the participants had a high SDQ score. The most common mental health issues in the study were Peer problems; 28%, emotional; 13% (girls>boys) and conduct problems: 8%. Students who had eye problems, faced failures in the exam, difficulty studying, and relationship issues had a high SDQ score. Being physically fit and having friends showed a normal SDQ score. Logistic regression model revealed that, age, receiving punishments, difficulty in discussing with friends and parents, increased

the odds of high SDQ score whereas being with friends, after school entertainments decreased the odds of high SDQ score. The study showed that at least one in eight adolescents were at risk of mental health problems[32].

- Arvind Pillai *et al.* performed a population-based survey (12-16 years aged adolescence) in 6 urban wards and 4 rural communities in Goa using Konkani translations of DAWBA (Development and Well Being Assessment). The sample size was 2048. The study showed the current prevalence of any DSM IV diagnosis was 1.81% with 95% CI. Most common diagnosis were anxiety disorders (1%), depressive disorders (0.5%), behavioral disorders (0.4%) and ADHD (0.2%). Strong family support was associated with a low prevalence of mental disorders. Adopting a non-traditional lifestyle (frequent partying, going out with friends for cinema, shopping), difficulties with studies, lack of safety in the neighborhoods, a history of physical or verbal abuse, and tobacco use were associated with increased prevalence[33].
- A similar study was done in South India, Tamil Nadu (SRM University) by Jayanthi P and Thirunavukarasu M in 3 private and 1 government school (9^{th} -12^{th} grade). Upon assessment with MINI-Kid (DSM IV), a screening tool for Depression, out of 2432 students 640 scored high and was subjected to further assessment using the Beck Depression Inventory

(BDI). The study showed (25%) high level of Depression in adolescents. According to the BDI score, 45.7% of adolescents had moderate, and 9.3% had minimal Depression. Adolescents in 12th grade or 17 years of age had moderate Depression, which was statistically significant[34].

- K. Jayashree, P. Prasanna Mithra, M. K. C. Nair, Bhaskaran Unnikrishnan, and Keshava Pai conducted a cross-sectional study among 15-19 year aged adolescence from two pre-graduation institutes in the urban area of Mangalore. Sample size was 201. Methods chosen for study were BDI II, screen for child anxiety-related disorders, Modified Kuppuswami scale - used for assessment of socio-economic status. The study revealed that 40.8% of students had Depression (more in females), Mild mood disturbances in 23.9%, Borderline clinical Depression in 17.4%, Moderate Depression in 16.4%, Severe Depression in 6%, Extreme Depression in 1% and 9% had suicidal thoughts. 54.7% had anxiety (more in females), panic disorders; 44.3%, Generalized anxiety disorders; 20.9%, Separation anxiety; 18.9%, and school avoidance in 14.9%. As per the study, other factors associated with depression and anxiety were lower socio-economic status, living with a non-nuclear family, increasing age, and mother's educational status and head of the family studied only till primary level[35].
- A review of Indian studies about depression in Children and Adolescents

by Sandeep Grover, V Venkatesh Raju, Akhilesh Sharma, and Ruchita Shah collected information on epidemiology, clinical features, risk factors, symptoms, and associated other diseases seen in children and adolescents with depression in India. Those studies that evaluated the prevalence of depression among adolescents were categorized as hospital/clinic-based, school-based, and community-based studies. In studies conducted in clinics, the prevalence of depressive/affective disorders ranged from 1.2% to 21%. The majority of the school-based studies reported the point prevalence of depression to be **>40%.** But studies that used screening instruments such as rating scale reported a point prevalence rate of depression ranging from **3% to 68%**, whereas lower point prevalence rates **(2.33%-25%)** were reported using structured instruments. The community-based studies where a two-stage method of evaluation (that is, initial screening followed by confirmation by use of diagnostic interview) of Depression was used, reported much lower rates of depression. The research also indicates that there is a significant knowledge gap on the risk factors and symptom profile in adolescent depression[36].

- A community-based study was done by Mohta A *et al.* to assess the prevalence of depression among 10- to 19 year old adolescents and to assess factors associated with adolescent depression. The study was done

among 630 adolescents residing in Ballabgarh (Haryana) and they were selected using simple random sampling technique. The study duration was May to July, 2019. PHQ-9 questionnaire and a semi structured questionnaire for assessing associated risk factors among adolescents were administered to the adolescents by house-to-house visits. Overall prevalence of depression in the study was 20.9%. The age-adjusted prevalence of depression was 20.6%. The prevalence in early and late adolescence was **8.9% and 11.7%**, respectively. The study showed girls have a higher prevalence (22.3%) than boys (19.2%). The most common type identified was mild depression. On multivariable logistic regression, depression was associated with birth order ≥ 4, History of chronic illness, Impaired perception towards own body image and stressful events in past 6 months[37].

- A systematic review done by Meherali S *et al*. on Mental Health of Children and Adolescents Amidst COVID-19 and Past Pandemics. It was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines and included experimental randomized and nonrandomized controlled trials, observational studies, and qualitative studies. Out of 5828 articles retrieved, 18 articles satisfied the inclusion criteria. These studies showed the effect of pandemics on children and adolescents such as stress, worry,

helplessness, and social and risky behavioral problems (e.g., substance abuse, suicide, relationship problems, academic issues, and absenteeism from work). Also, they proposed Interventions such as art-based programs, support services, and clinician-led mental health and psychosocial services are effective in decreasing mental health issues among children and adolescents[38].

- A cross sectional study by Das S C *et al*. in rural Odisha among 341 adolescents assessed the prevalence of depression in adolescents and identified epidemiological determinants causing severe depression. A semi-structured questionnaire, and "Beck's Depression Inventory II" questionnaire were used to screen depression. Prevalence of depression in this study was 43.4%. 7% of adolescents had severe depression, mild mood disturbance in 8.8%, borderline depression in 15.2%, and moderate depression in 12% individuals. On logistic regression analysis of factors related to depression were Female gender, Participants sleeping for lesser duration, participants witnessing regular parental fights and low socio-economic status[39].

Mental Health Program initiatives and challenges in India.

Major challenge faced in the mental health arena in India are delay in detection of mental health issues, shortage of professionals, treatment gap and inadequate

interventions[40]. An effective provision of interventions on mental health in an early life helps to prevent and manage mental health disorders among adolescents and youth[41]. Some of the mental health initiatives by government are given below;

- The District Mental Health Program, a subset of India's National Mental Health Program that operates at the district level, strives to provide integrated primary care for mental health as part of the nation's public healthcare system[40].
- The National Adolescent Health Program (Rashtriya Kishor Swasthya Karyakram- RKSK), launched by the Indian government, prioritizes mental health[42].
- 'Manodarpan' initiative was developed in response to the increased vulnerability of young people's mental health, and as part of it, a toll-free hotline number, a website, and a manual on the life skills required to survive a health crisis were all released[43].
- Snehi, psychosocial support centres, where counsellors assist children and teenagers in navigating the emotional obstacles caused by the pandemic[44].
- Kutty desk, a student run helpline as a part of a wider initiative called “Our Responsibility to Children" was launched in Kerala. Children run this initiative, which offers telephone advice to their peers on a variety of

topics, including how to maintain personal hygiene and be safe during the Covid pandemic, as well as how to use time efficiently and creatively during the lockdown. 265 kids were chosen and trained to run the Kutty Desk activities as part of this project. Since the lockdown period, Kutty Desk operators have called and raised awareness with almost 20000 children[45].

Review of mental health interventions in India

- Singhal, *et al.* in 2014 did a pilot study among 300 students of age 13-18 year old from 3 urban schools in Bangalore. Students were screened using standard measures, and were sequentially assigned to intervention group (13) or control group (6). These groups were assessed at baseline, post-intervention, and at 3 months follow-up. Interventional 8 weekly program was done in schools which includes Sessions of coping Skills for adolescents at-risk of depression, how to shift negative thinking to positive thinking, academic stress management, Skills which helps to deal with conflicts in interpersonal relationships and Depression Prevention Course. For control group Psycho-educatory interactive sessions were conducted. The results showed: In index group, the baseline Children's Depression Inventory score was significantly higher compared to control group. On comparing pre-post intervention, it showed a reduction in the frequency and severity of depressive symptoms and negative cognition in

index group. On comparing pre to Follow-up after intervention there was a significant reduction in depression score, cognition, academic stress and improvement in social problem solving. In control group no changes seen[46].

- A Qualitative study (Focused group discussions) done by Chandra *et al.* in 2014 among 40 girls (16-18 years) from an urban slum in Bangalore aimed to assesses the acceptability and feasibility of an intervention using mobile text messages for promoting positive mental health among adolescent girls. The digital interventions used were SMS/Text messages on tips for positive mental health every day for a month, Also the girls could message or call back if they feel emotionally weak or if they feel like talking to a counselor. The results were 62.5% rang back to ask about the mental health services provided, 57.5% messaged back to discuss how they feel. 62% felt they were motivated by these messages. Overall, the psychological wellbeing was improved in participants[47].
- A single group quasi-experimental study by Azeez A in 2015 was done 30 adolescents (boys: 22; girls: 8) aged 15 – 19 years in rural Palakkad district in Kerala using pre and post-tests. Interventions used were Life skills education which includes 7 sessions covering 10 core life skills with an emphasis on psychological well-being and self-esteem. It also included ice-breaks, role plays, games, group discussions, and relaxation

techniques. Post intervention there was a significant improvement in psychological well-being ($p < 0.001$) and overall self-esteem ($p < 0.001$) of the participants. The study showed an overall enhanced mental health and well-being of the participants[48].

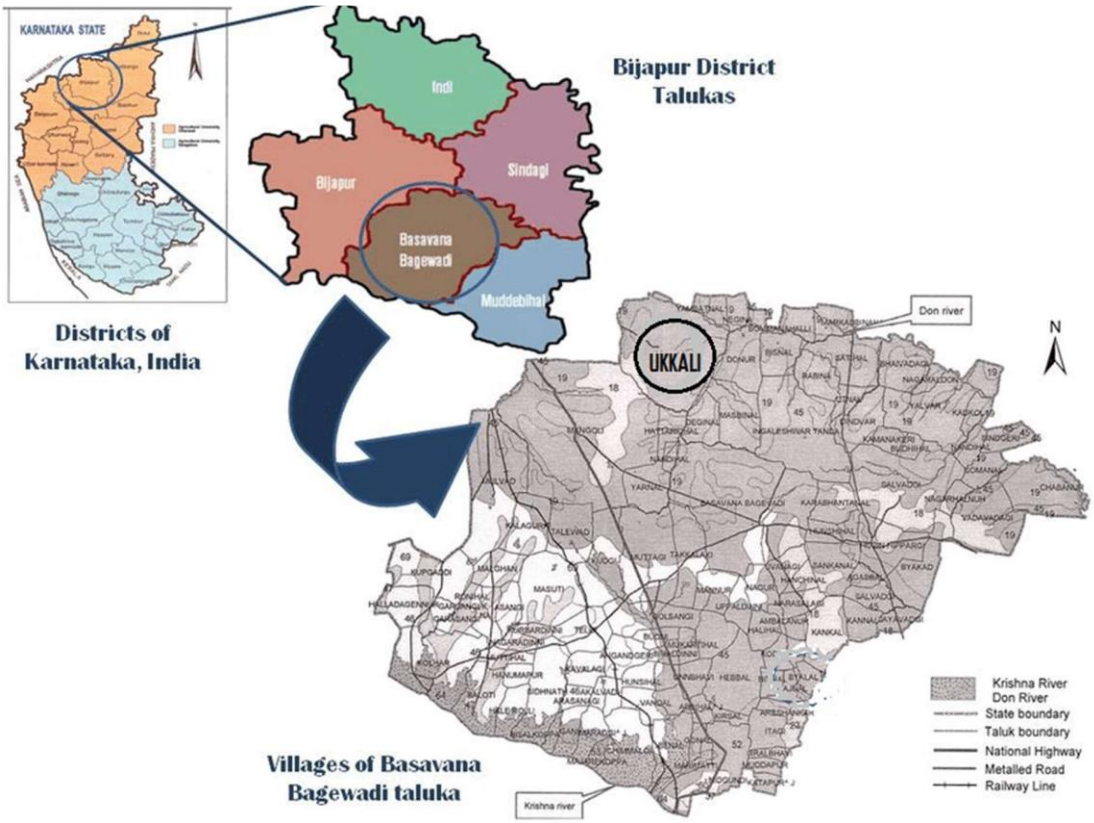
- A quasi-experimental study done by Sarkar *et al.* in 2017 among 742 adolescents (11-17 Years) in two schools of Purulia, West Bengal aimed to determine the effect of intervention (combined life skill-based empowerment) on the resilience of school-going adolescents in a tribal area. It had an experimental group (n=381) and control group (n=361). The experimental group underwent weekly sessions (on 2 successive days for 45–120 min duration) on Basic life skills, specific interventions which include; motivation, discipline, nutrition, hygiene, relationships, self-awareness, understanding body and mind and social responsibility. Control group didn't receive any intervention. The study showed a significant positive effect on resilience adjusted Odds Ratio (OR)- 11.2. Also, a higher resilience of 14.6%, Improved internal health locus of control and self-determination in interventional group[49].
- In 2018 Singhal *et al*. conducted a study to find the efficacy of a school-based skills program for adolescents (13-18 years) with subclinical depression in 2 urban schools, Bangalore. 120 Adolescents from two schools were included in intervention (n=65) and control (n=55) groups

and were assessed at baseline, immediate post-intervention, and 3 months post no-contact follow-up. The interventions were 8-weekly school-based skill building program, which includes sessions in same-gender groups of 4–8 adolescents each on depressive symptoms, negative cognitions, academic stress, social problem solving, and coping skills. While the control group received only interactive psycho-educatory session. 75–80% of the adolescents achieved recovery on all fields concerned and recovery was more in intervention group than in control group which was statistically significant. 13-63% participants in intervention group evidenced improvement[50].

MATERIALS & METHODS

Background details

The study was done in Ukkali village of Basavana Bagewadi Taluk in Vijayapura District, Karnataka. The total population of the village is 8519 with an average sex ratio of 988 as per census 2011. Ukkali is located 24 km towards East from Bijapur District headquarters, 27 km from Basavana Bagewadi and 532 km from Bangalore. Among the total population, 3896 people were working, out of which majority were cultivators and agricultural labourers. The major crops in the area are sunflower, pearl millet, pigeon pea, groundnut, maize, onion, tomato, grapes, pomegranate, guava etc[51].



Study setting:

Ukkali village has 6 schools. These are Government Kannada Boys school, Government Kannada Girls school, Government Urdu school, Aided High school and P U Arts college and English medium school. School rosters of 8th to 10th standard and PUC 1 and 2 were collected from all these 6 schools. A total of 410 students from these rosters, both boys and girls who gave assent to participate were included in the study. Since the study was done during the immediate post COVID time, some students were found to be chronic absentees in government schools. This may be because, many parents might be scared to send their children to school due to fear during the post covid school reopening or most of the children whose parents were migrant workers had taken their children along with them for work during COVID time and haven't yet returned back or some of the students got engaged in work to meet home expenses and some girls might have got married.

Study population: Adolescents studying in grade 8th to 12th (13 to 19 years) in 6 schools of Ukkali village.

Sampling method: All adolescents willing to consent and who all were eligible as per inclusion criteria were selected for study.

Interview method: Face to face interviews were conducted using semi structured questionnaires and PHQ-9 scale was administered maintaining privacy and not disturbing the school schedule.

Study design: Cross-sectional study.

Study duration: $1_{1/2}$ year. (Jan 2021 to June 2022)

Inclusion Criteria:

- All students from the 8^{th} -12^{th} classes from six high schools of Ukkali village.

Exclusion Criteria:

- Those who are not willing/their parents don't consent to participate in the study.
- Chronic absentees post COVID school reopening.

Sample size: With the anticipated Prevalence of Depression in Adolescents as 40.8%[14] in the population, the study will require a sample size of 372 subjects with a 95% level of confidence and at 5% absolute precision.

Formula used $n = \frac{Z^2\, p*q}{D^2}$

Where Z is Z statistic at α level of significance =1.96

D^2= Absolute error = $(0\ .05)^2 = 0.0025$

P= Proportion rate = 0.41

q= 100-p=0.59

Applying the values in formula, $n = \frac{(1.96)^2 * 0.41 * 0.59}{(0.05)^2} = 372$

On considering Dropout rate/non-Response rate of around 10% of the sample size (~ 37)

Total Sample required (372 + 37) is: ~ 410.

Study tool: A semi structured, pre tested questionnaire was developed (Annexure I). The questionnaire includes questions pertaining to following categories;

A. Socio demographic profile of the study participants which includes,
    a) Name, age, gender, grade, religion, residence.
    b) Information pertaining to family: Father's literacy, father's occupation, mother's literacy, mother's occupation, Socio economic status, Type of family, Siblings, Birth order.

B. Assessment of General Wellbeing of adolescents in COVID-19 lockdown time:
    a) Questions on how students continued studies, and interacted with friends during Covid-19 school closure, Health or financial burden due to COVID-19.
    b) Information about family environment: living with parents or not, Home atmosphere (conflicts with family members present or not), harsh parental behaviors (faced any physical / verbal abuse, Harassments etc. from parents/ caretakers), substance use by family members (Alcohol, Gutka chewing, smoking etc), Family member with chronic disease or mental health problems.
    c) Information on Academic and Extra-Curricular Activities: Interaction with classmates, feels inferior when compared with others students, academic failures, punishments, participation in extracurricular activities including sports.

d) General physical examination: Height, Weight, Body Mass Index (BMI). Bowel and bladder habits

e) Information on personal habits; questions regarding daily habit of taking breakfast, disturbed sleep, any other health issues, Use of any psycho active substance like tobacco, alcohol etc.

C. Patient Health Questionnaire 9 (PHQ 9) questionnaire[52]

The PHQ 9 questionnaire is a depression questionnaire module containing 9 questions derived from the primary care evaluation of mental disorders (PRIME-MD, Pfizer Inc., New York, NY) tool. PHQ 9 can be used to screen depression. Each of the nine items in PHQ 9 can be scored from 0 (“not at all”) to 3 (“nearly every day”), with a total score ranging from 0-27.

Interpretation of PHQ-9 is as follows:

- A score range between 5-9 indicates mild depression which requires no treatment but needs watchful waiting and repeat test.
- A score of 10-14 indicates moderate depression that needs follow-up with due consideration for counselling and/or pharmacotherapy.
- Score between 15-19 signifies moderately severe depression which requires initiation of pharmacotherapy and/or psychotherapy
- A score of 20-27 can be interpreted as severe depression with immediate initiation of pharmacotherapy and referral to a psychiatrist for psychotherapy and collaborative management.

The clinician should rule out physical causes of depression, normal bereavement, and history of a manic episode, before making a clinical diagnosis of depression[52].

Assessment of socio-economic status (SES)

To assess the socio-economic status of the participants, Revised Udai Pareek socio-economic status scale 2019 was used as shown on table 1[53,54].

Table 01 (a); Assessment of socio-economic status of adolescent's family by using Revised Udai Pareek scale (2019 version)

Components	Weighted Score	Components	Weighted Score
Caste		**Social Participation**	
Schedule Caste	1	None	0
Lower Caste	2	Member of one organisation	1
Artisan Caste	3	Member of more than one organisation	2
Agriculture caste	4	Office holder in such an organisation	3
Prestige Caste	5	Wide Public leader	4
Dominant caste	6	**House**	
Occupation		No house	0
None	0	Hut	1
Labourer	1	Kutcha House	2
Caste Occupation	2	Mixed House	3
Business	3	Pucca House	4
Independent profession	4	Mansion	5
Cultivation	5	**Farm Power**	
Service	6	No Draught animals	1
Education		1-2 Draught animals	2
Illiterate	0	3-4 Draught animals	4
Can read only	1	5-6 Draught animals	6
Can read and write	2	**Material Possessions**	
Primary	3	Bullock cart	0
Middle	4	Cycle	1
High school	5	Radio	2
Graduate	6	Chairs	3
Above Graduate	7	Mobile phone	4
Land		Television	5
No Land	0	Refrigerators	6
Less than 1 Acre	1	**Family members**	
1-5 acre	2	Up to 5 members	2
5-10 acre	3	>5 members	1
10-15 acre	4		
15-20 acre	5		
20 and above	6		

Table 01 (b); Revised Udai Pareek scale ; Score and Grades

Grade	Category	Score on scale
I	Upper class	>43
II	Upper middle class	33-42
III	Middle class	24-32
IV	Lower Middle class	13-23
V	Lower class	<13

Anthropometric Measurements

Height:

The measurement was done with the participant standing without footwear, feet together, and heels touching against the wall with his/her head in the Frankfurt plane, and standing erect on a flat surface. With the help of a ruler placed on the head, where the flat surface of the ruler is tangential to the head and perpendicular to the wall, the height was marked on the wall. The height was the measured in centimeters from the floor to the mark made on the wall using a measuring tape[55].

Weight:

The participant was asked to stand barefoot on a standardized digital weighing scale. Weight was measured in kilograms with the participant standing erect and looking straight ahead[55].

Calculation of BMI and Height for Age;

WHO Anthro plus software is used to calculate the BM1, height for age and z scores of the adolescents. The software is a global application of the WHO Reference 2007 for 5-19 years to monitor the growth of school-age children and adolescents[56].

Pilot testing of study tool

PHQ-9 is a validated questionnaire and used in Indian setting. Kannada translated version of PHQ-9 was used.

The semi structured questionnaire on general wellbeing was developed on the basis of similar studies [29,31,33] and was translated to the local language.

Both the questionnaires were pilot tested by administering it to 40 adolescent students. After pilot testing necessary corrections were made before starting data collection.

Data Collection

The Institutional Ethical Committee of Shri B M Patil Medical College approved the study protocol. Permission to conduct the study was obtained from the head of the schools. Adolescents aged 13-19 years, studying under VIII to XII grade, who all fulfilled the inclusion and exclusion criteria were included in the study. Chronic absentees were not included in the study. Time table of the respective classes were collected from the class teachers to schedule the interviews during their free hours to ensure that they don't miss any classes. The purpose of the study was explained

to them and a participant information sheet in their own language was provided to the participants. Prior to data collection, written informed consent was taken from the parents for their children's participation and “assent” from adolescents were also obtained. The information was gathered by one-on-one interview method from the adolescents. The interview was conducted in a separate area away from the class rooms where confidentiality was assured to the adolescent participants. A semi-structured questionnaire was used with details of their sociodemographic factors, general wellbeing, and a special section on the impact of COVID 19 on themselves, their family and academics. The basic depression evaluation was done using PHQ-9 questionnaire. After completion of data collection those adolescents with higher scores were further referred to a psychiatrist for final diagnosis and further treatment.

Statistical Analysis

The data obtained were entered in excel sheet. The results of the study were tabulated and appropriate statistical tests were applied using Statistical Package for Social Science (SPSS) Software version 20. Results were presented as counts and percentages, and diagrams. Associations were established using Chi square tests and logistic regression analysis was performed to find the associated risk factors. P value <0.05 was considered as statistically significant.

Study variables

- **Age** : Age was recorded in completed years as told by the participants.
- **Type of family**[57]:
  - Nuclear family: It consists of a married couple and their children while they are still regarded as dependents.
  - Joint family: It consists of number of married couple and their children live together in the same household. All men are related by blood and women of household are their wives, unmarried sisters and their family kinsmen.
  - Three Generation family: It is a family where representatives of three generation are living together. Young married couple continue to stay with their parents and have their own children as well.
- **Education**[57]:
  - Never attended school/ illiterate : Not able to read, write and understand in any language
  - Primary school: Studied up to 7th standard
  - High school: Studied up to 8th standard to SSLC
  - PUC/Diploma : Studied up to PUC or any diploma
  - Graduate and above: Studied up to graduation and above
- **Occupation;**
  - Unemployed; Those who are not employed.
  - Fixed salaried employee; Those who have a permanent salary every month. Eg; Government servants.

- Independent work; eg; Business man, Factory owners etc.
- Cultivation; Eg; Those who cultivate crops in their own land.
- Agricultural labourers; Those who work on others agricultural land.
- Nonagricultural labourers; Eg; coolies, domestic servants etc.

Substance use; Yes/ No:

- Yes: Person who at the time of the data collection had any habit of
  - Smoking /uses tobacco in any form either daily or occasionally. (Smoke form – cigarettes, bidis etc. Smokeless form – plug, loose leaf, tambak, gutkha etc)
  - Alcohol consumption.
  - Any other drugs.

The participants were asked for age of initiation and the quantity of consumption of the above mentioned substances.

In the study we asked about arecanut consumption also.

- No: Person who at the time of the data collection does not smoke or use tobacco, alcohol or any other drugs for the past one year.

Birth order: It is the order of birth of a child in relation to other siblings. We classified the children who all were first born as birth order 1, second born as birth order 2, third born and successive births as birth order 3 and above[58].

Sleep: As per National Sleep Foundation and the American Academy of Sleep Medicine adolescents need 8.5 – 9.5 hours sleep per night[59]. We assessed the sleep quality by asking the participants the sleep hours at night

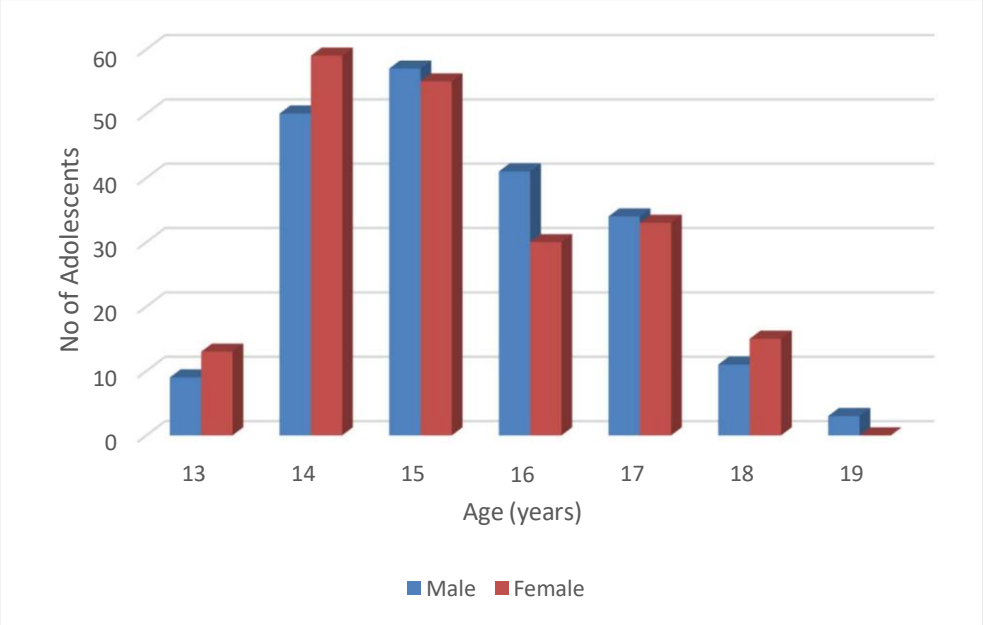
(Minimum 8 hours), ability of fall asleep easily, not waking up in the middle of sleep, and feeling refreshed once awake in the morning.

- **Physical activity**: As per WHO guidelines an adolescent should be involved in moderate to vigorous physical activity for an average at least 60 minutes per day[60]. The adolescents in our study were asked for involvement in outdoor physical activity (such as games exercise, jogging etc) for a minimum 1 hour every day.

RESULTS

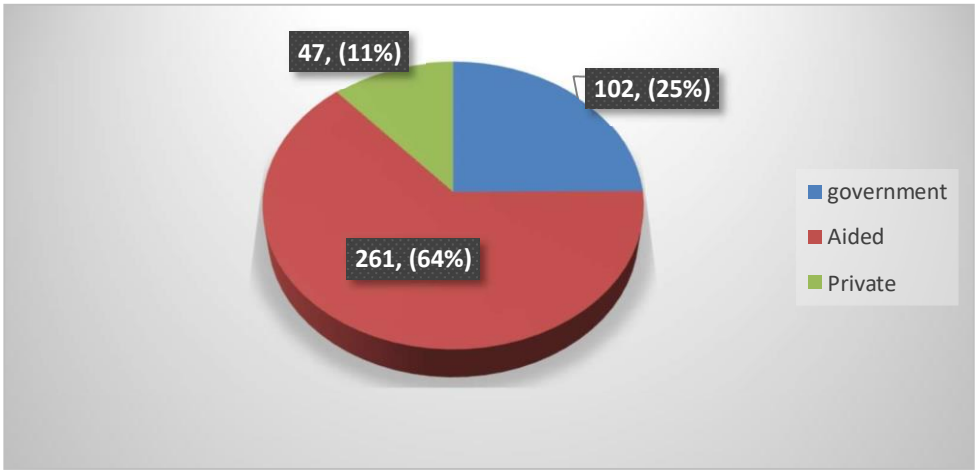
All students from the 6 schools in Ukkali were included in the study. 20 students were not willing to give assent for their participation in the study. Interviews were done for 410 adolescents who were willing to assent for the study, after obtaining their parents' consent.

Figure 1: Age and Gender wise distribution of adolescents (n=410)



Out of 410 adolescents, equal participation was shown by both the sexes and majority were in the age 14 years and 15 years (26.6 and 27.3 respectively).

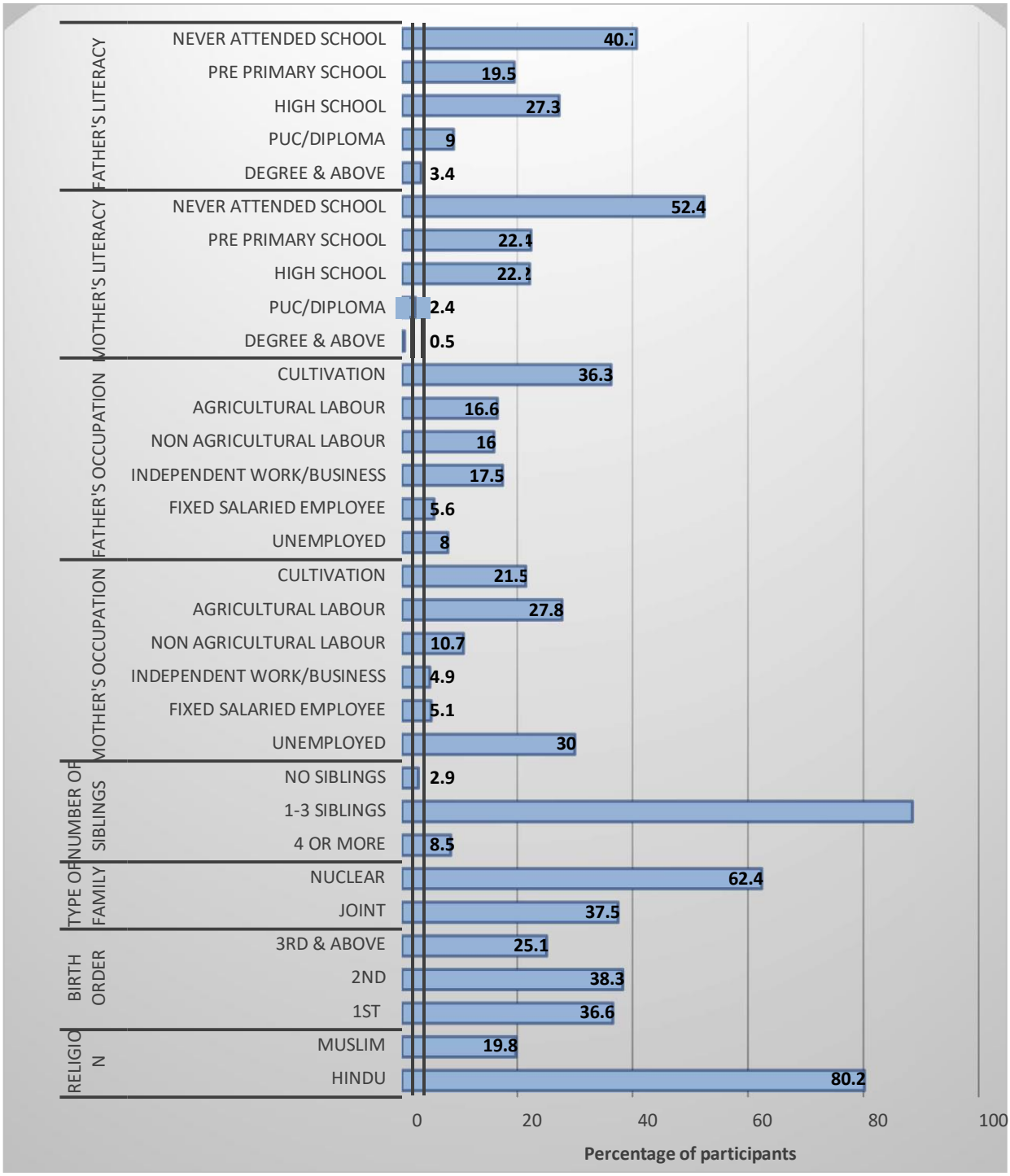
Figure 2: Type of school



Majority of the participants (64%) were from Government Aided school. The reasons for decreased number of participants from government and private schools were;

- The three government schools had classes only up to 8th standard so, from these schools we could collect response only from 8th standard students as the lower age limit for our study was 13 years.
- In private school, the student strength was very low during post COVID school reopening time.

Figure 3: Socio demographic profile of adolescents (n=410)



- Majority of the adolescent's parents never attended school (35.1% fathers & 51.2% mothers).
- Nearly 50% of the parents' occupation was agriculture (either cultivation

in own land or agricultural laborer in others land).

- Majority of the students (62.4%) were from nuclear family.
- 80% of participants were Hindus by religion.

Residence

8% of the students were residing outside Ukkali and used public transport services to come to school daily. They were from the neighbouring villages with in an ambit of 10 -15 km from the study area.

Table 2; Socio Economic Status (Revised Udai Pareek for rural 2019)

Socio Economic Status (Udai Pareek)	Number of Participants	Percentage (%)
I - Upper class	19	4.6
II - Upper middle class	110	26.8
III - Middle class	183	44.6
IV - Lower middle class	96	23.4
V - Lower class	2	0.5
Total	410	100

Majority of adolescents belong to the socio-economic class III – middle class (44.6%), followed by class II – Upper middle class (26.8%) and class IV – lower middle class (23.4%).

Table; 3 Nutritional status as per BMI*

Nutritional status as per BMI	Number of Participants	Percentage (%)
Normal (Z Score <+1SD & > -1 SD)	167	40.7
Overweight/ Obese (Z Score >+1 SD)	32	7.8
Underweight /Thinness (Z Score < -1 SD	211	51.5
Total	410	100.0

***** Age specific BMI Z scores were calculated using WHO Anthroplus software.

51.5% of the students had Underweight /Thinness and 7.8% students were Overweight/ Obese.

Table 4; Nutritional status as per height for Age*

Nutritional status as per Height for age	**Number of Participants**	**Percentage (%)**
Normal (Z Score ≤-2SD & > +3 SD)	295	72
Moderate stunting (Z Score ≥-3 SD to < 2SD)	93	22.7
Severe stunting (Z Score < -3 SD	22	5.4
Total	410	100.0

*Age specific BMI Z scores were calculated using WHO anthroplus software.

23% students were moderately stunted and 5.4% students had severe stunting.

Table;5 Personal habits of adolescents

Variables		Frequency	Percentage (%)
Skips breakfast	No	213	52
	Yes	197	48
Disturbed sleep	No	382	93
	Yes	28	7
Any other health issues	No	364	89
	Yes	46	11
Substance use	No	406	99
	Yes	4	1

- 48% adolescents had a habit of skipping breakfast, among them 30% students skipped breakfast almost every day, 42% skipped it for 2-3 days/week and 22% did it once a week.
- Out of 7% adolescents reported sleep disturbance, 14% had disturbed sleep almost every day, 21% had disturbed sleep some days in a week and 64% had disturbed sleep rarely.
- 11% adolescents reported other health issues. Among them common issues were frequent headache (30.4%), eye problems (28.1%),

abdominal pain (8.7%) menstrual problems (8.7%) and allergy/ asthma (6.5%).

- Out of 4 adolescents who reported substance use;
    - 1 student had habit of chewing gutka (brand name; star) and smoking (cigarette – Players). Other 3 students had habit of smoking (cigarette – Players).
    - The age of initiation of these habits for 4 students were 7 years, 11years,14years and 14 years respectively.
    - Quantity of consumption among 4 students who smoke were 2 cigarettes / day, 1 cigarette/ day and 1 cigarette per month. The student who used gutka (star), chewed 1 packet star for 2-3 days/ week.
    - 83 students had habit of chewing flavored areca nut almost every day. The brand used was “Hello” and “Tiger”. The mean age of initiation was 13 years (SD ±2.5).

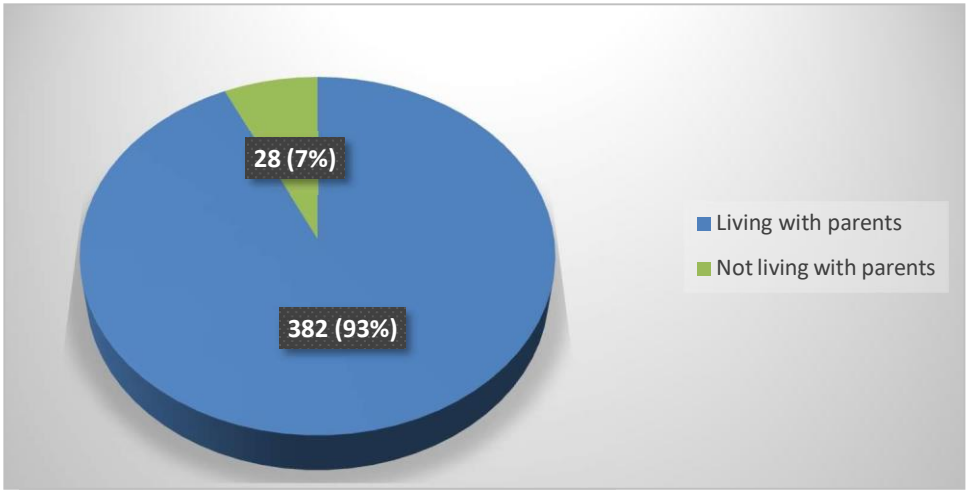
COVID-19 IMPACT ON ADOLESCENT LIFE

Since the study was conducted during the immediate post COVID lockdown period, the adolescents were asked about how they managed their academics and other activities as schools were closed as per the nationwide lockdown rules.

- In our study majority reported they were bored staying at home during COVID-19 school closure.
- Students were involved in multiple activities during the lockdown time. 51.7% students attended online classes, 87.3% students helped their parents in work, 60% students had spent time for entertainment activities like playing with siblings or watching TV, 13% students went for a paid job.
- Only half of the students attended online classes. Some of the reasons for not attending online classes were; lack of access to internet / mobile (32.7%), Not aware of online classes (6.8%) and no online class at previous school (3.4%).
- 31% students could never meet their friends during lockdown where as 27% students met their friends daily.
- In our study none of the participants got COVID infection. 10 participants reported that their family members suffered from COVID-19 Infection. Also, 11% of the participants said that their parents / caretakers lost job during pandemic.

FAMILY ENVIRONMENT

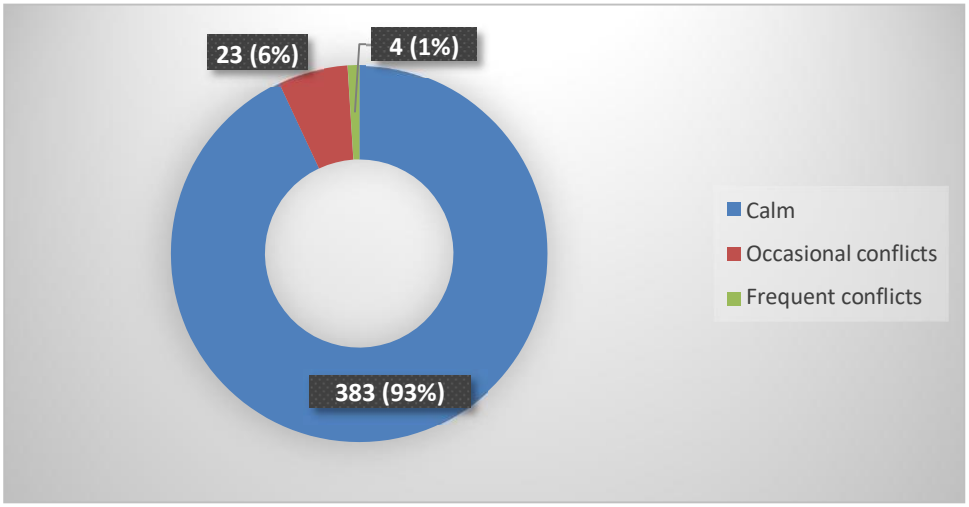
Figure 4; Participants living with parents or not.



Out of 28 students not living with their parents, 9 of them live with their grandparents, 8 live with their relative uncle or aunt, 6 at family friend's home and 5 students live alone. The reasons for not staying with parents were; parents were migrant workers, parents expired, hometown doesn't have a high school etc.

Figure 5; Home atmosphere: Calm / Conflicts.

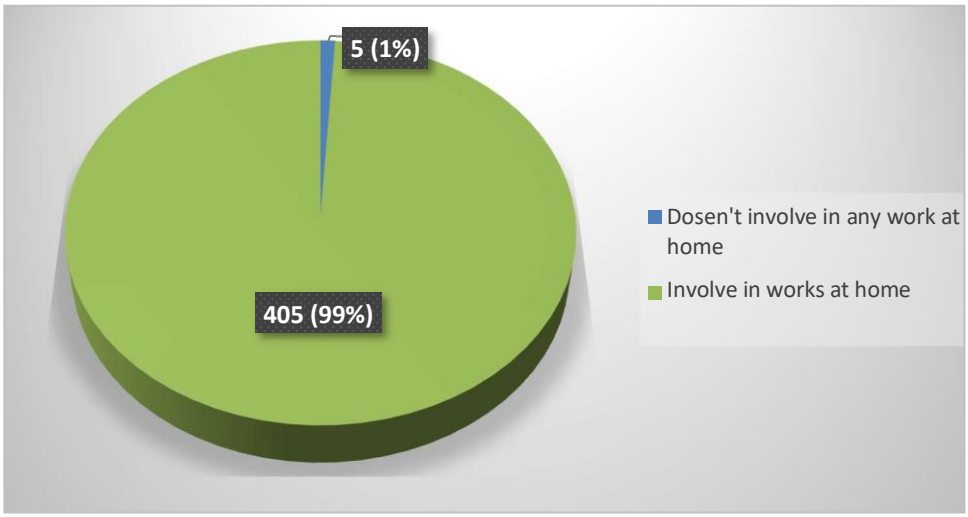
(The students were asked about the home environment whether there occurred frequent fights between parents / family members)



23 students reported that there occurred occasional conflicts between family

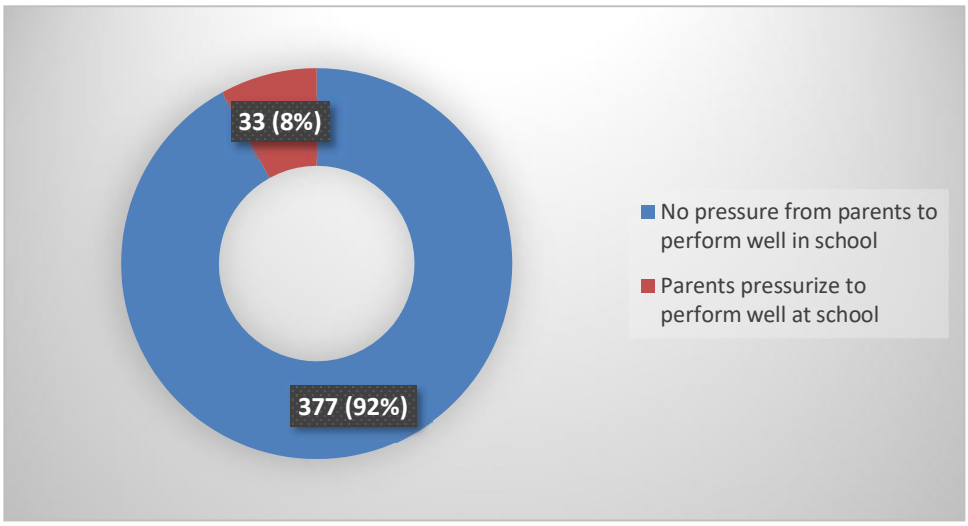
members and 1% students reported frequents conflicts in their families.

Figure 6; Involvement In Any Work at Home



Majority students were involved in multiple activities at home. The works involved were work in farms, house hold chores, and running errands.

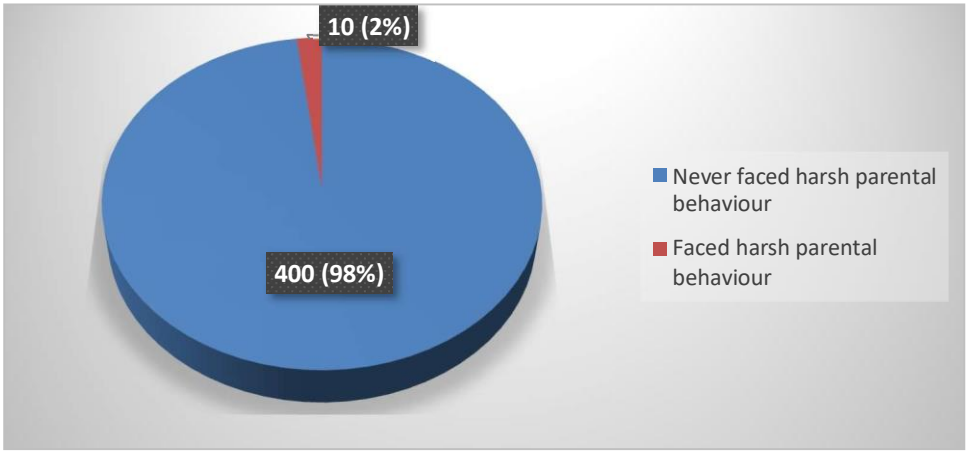
Figure 7; Pressure from parents to perform well in school



8% students reported that their parents pressurize to perform better in school with which they used to get more stress regarding academics.

Figure 8; Harsh Parental Behaviour

Students were asked whether they faced any physical / verbal abuse, harassments etc. from their parents / caretaker.



Only 2% students told they faced harsh parental behaviors at home.

Figure 9; Frequency of harsh parental behavior among those who reported yes (n= 10)

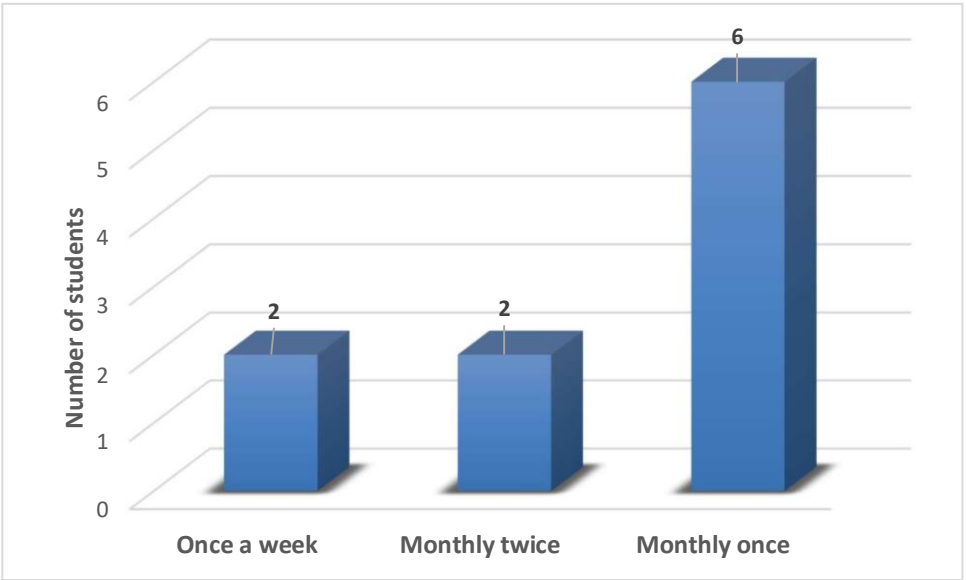
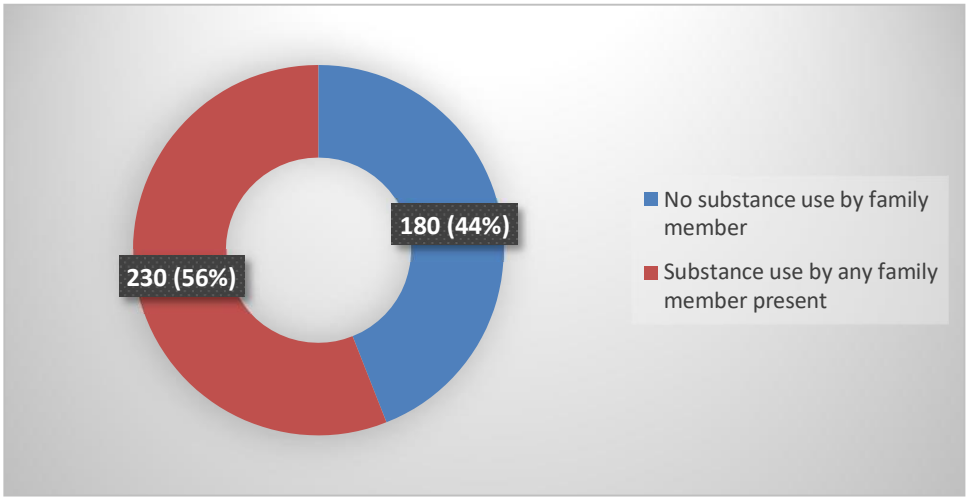
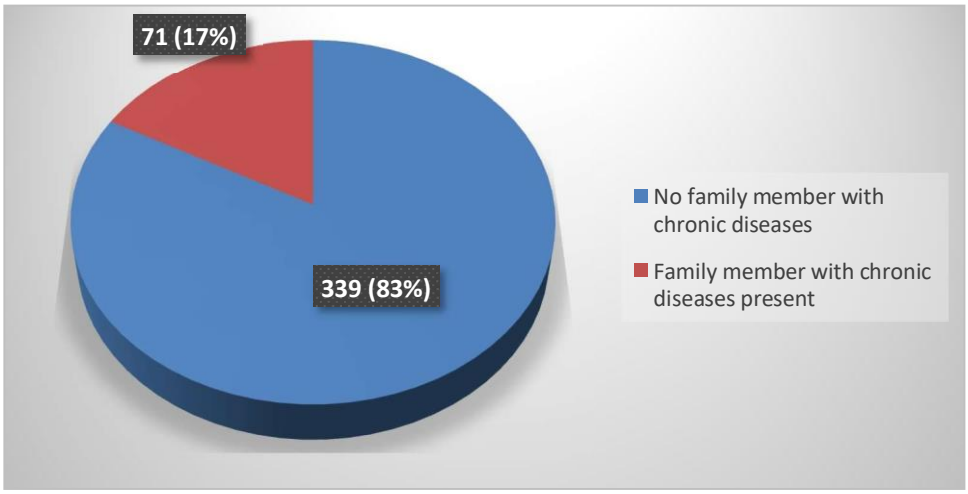


Figure 10; Substance Abuse/ use By Family Members



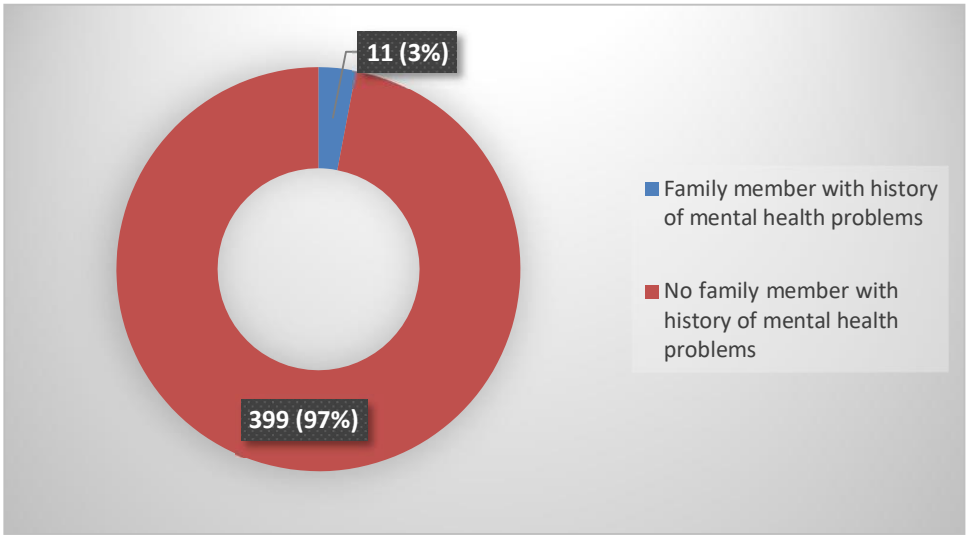
Majority students reported that their family members had habit of tobacco chewing and alcohol consumption. Only 10% smoked beedis/ cigerettes.

Figure 11; Family Members with history of chronic Diseases



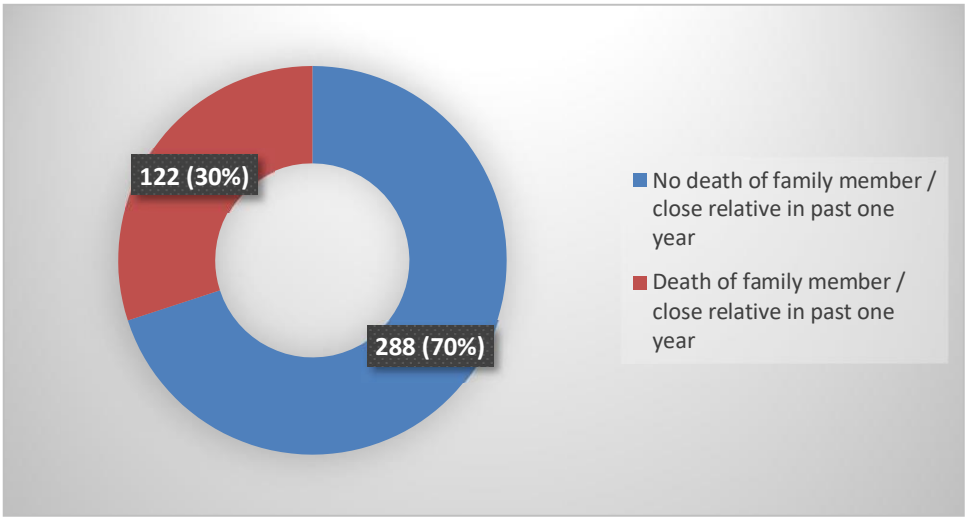
Among 17% students whose family members suffered from chronic diseases majority had hypertension and diabetes mellitus. 2 students had family members with history of stroke.

Figure 12; Family members with known history of mental health problems



Only 3% students had a family member with known history of mental health problems.

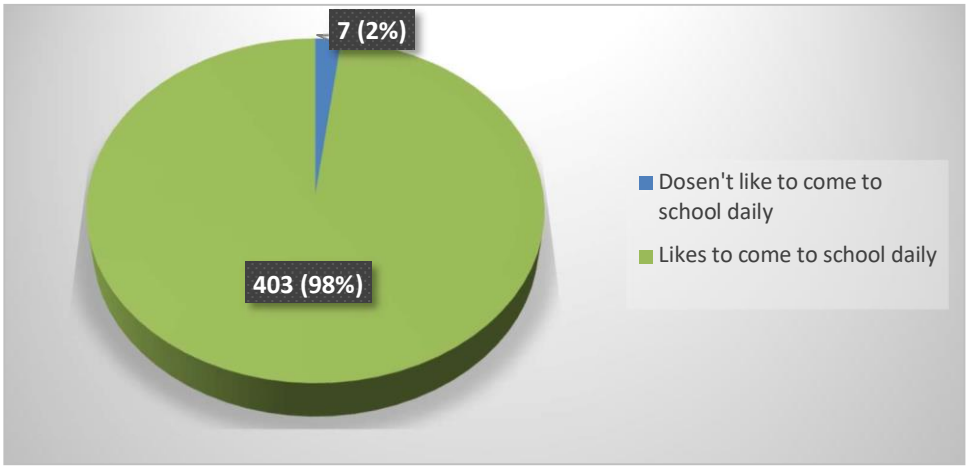
Figure 13; Death of family member / close relative in past one year.



30% students reported the death of family member / close relative in past one year

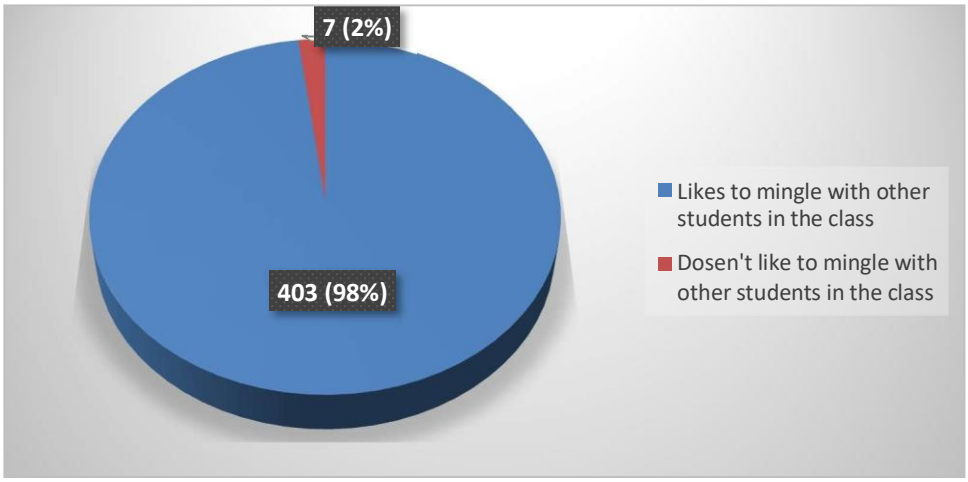
SCHOOL ENVIRONMENT

Figure 14; Do you look forward to come to school daily?



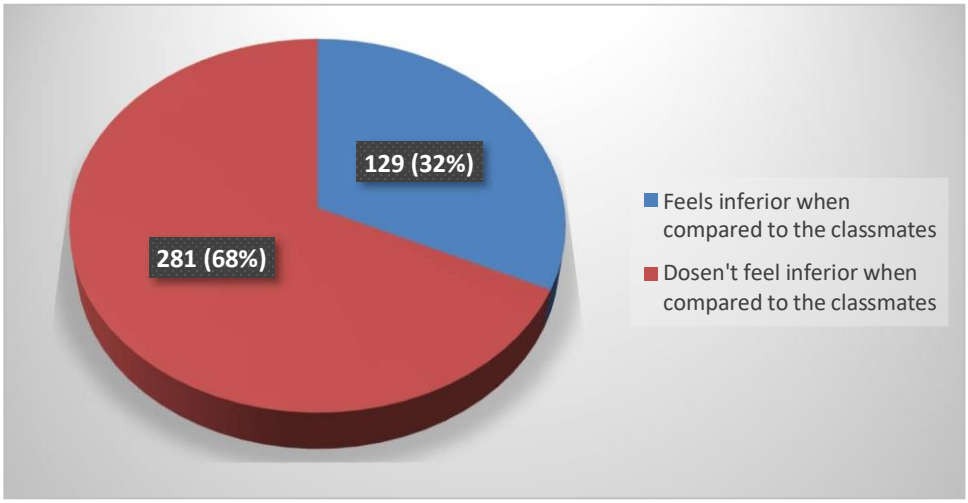
Only 7 students don't like to go to school daily. The reasons they told where they are not interested in studying.

Figure 15; Interaction with other students in the class



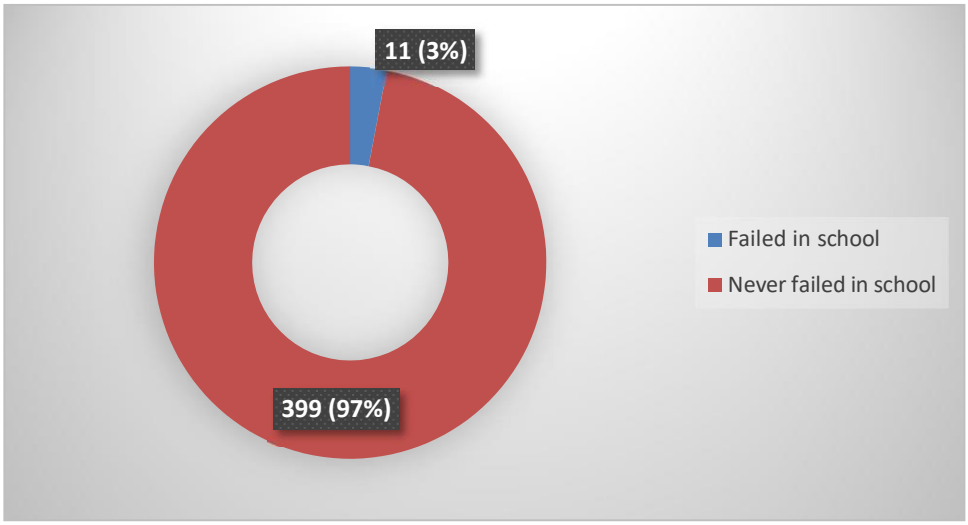
Only 2% students don't like to mingle with other students in the class.

Figure 16; Feeling inferior when compared to the classmates



32% students feels that they are not performing well when compared to their classmates.

Figure 17; Failed or repeated a year at School



3% students reported that they had failed or repeated a year at school

Figure 18; Punished at School for Any Reason

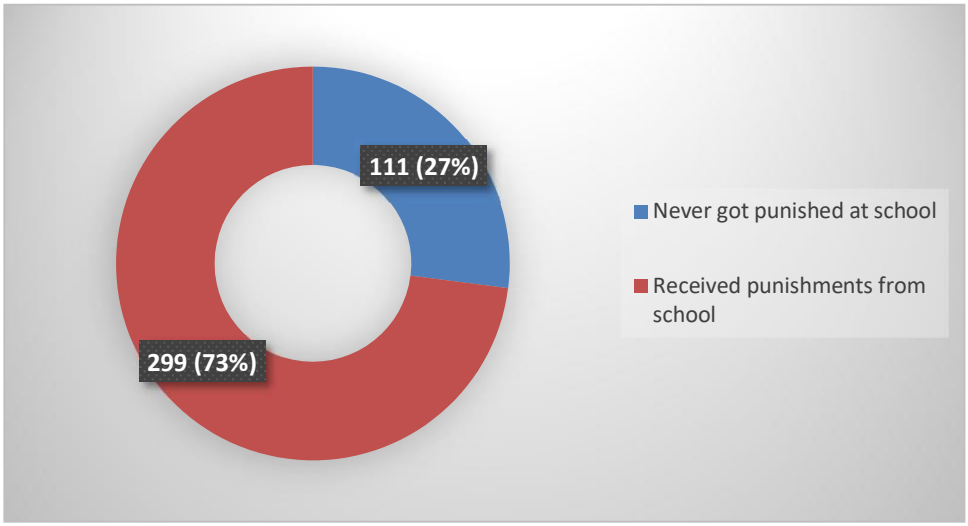
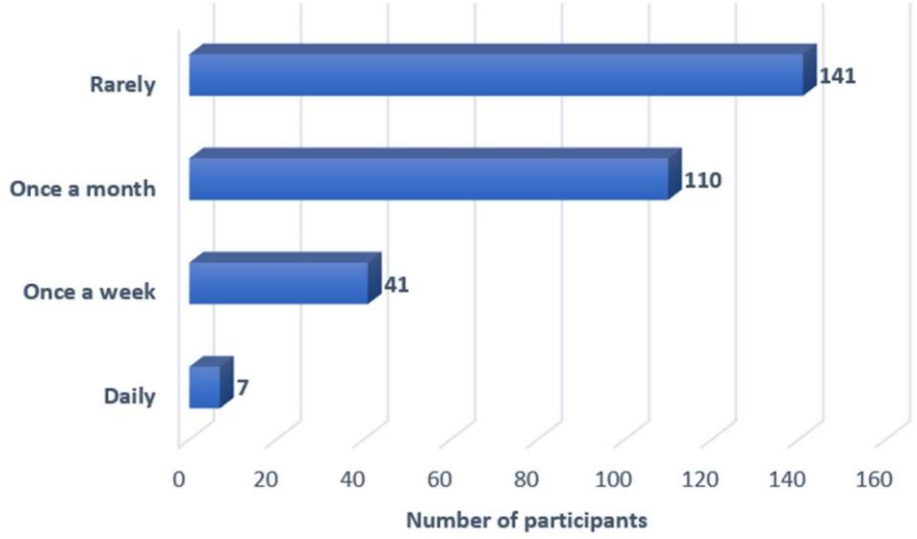
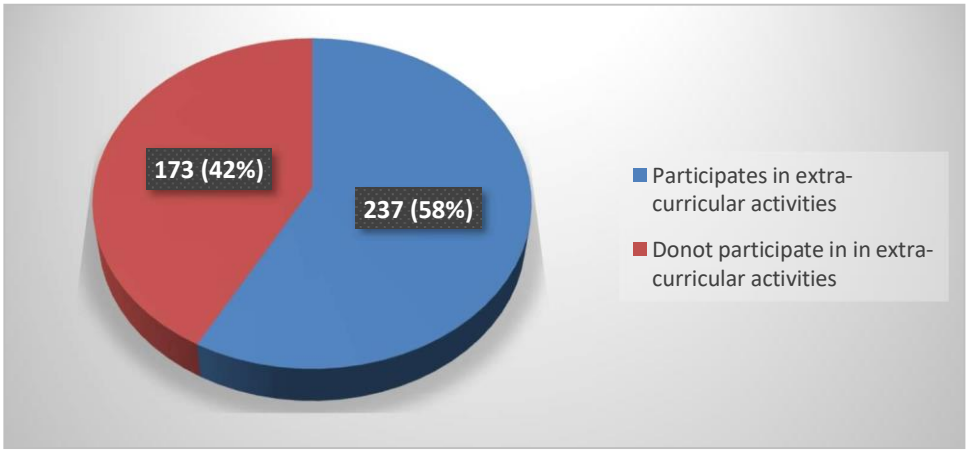


Figure 19; How frequently the students got punished in school



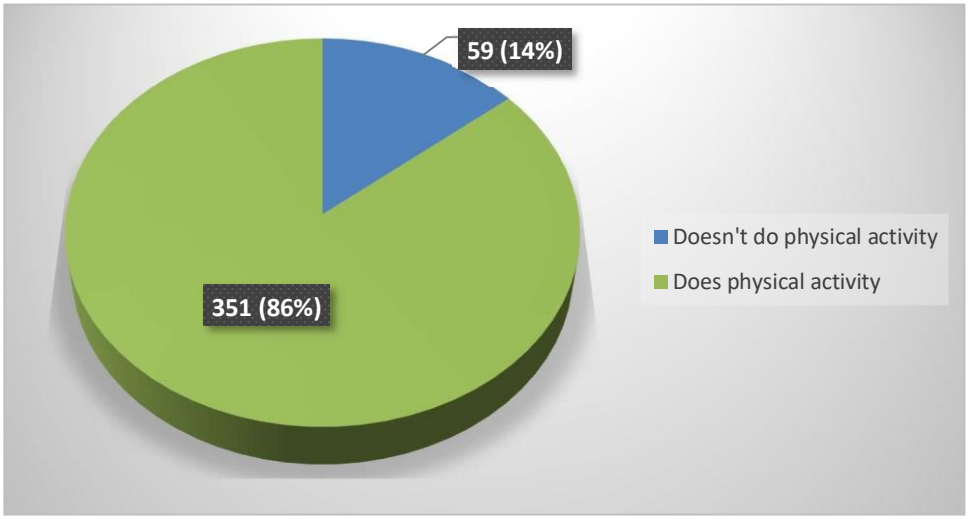
Majority students told they receive punishments at school. Among them nearly 12% received punishments very often. Common punishments received were making students to stand outside the class, Beatings on palm etc.

Figure 20; Participation in extra- curricular activities at school



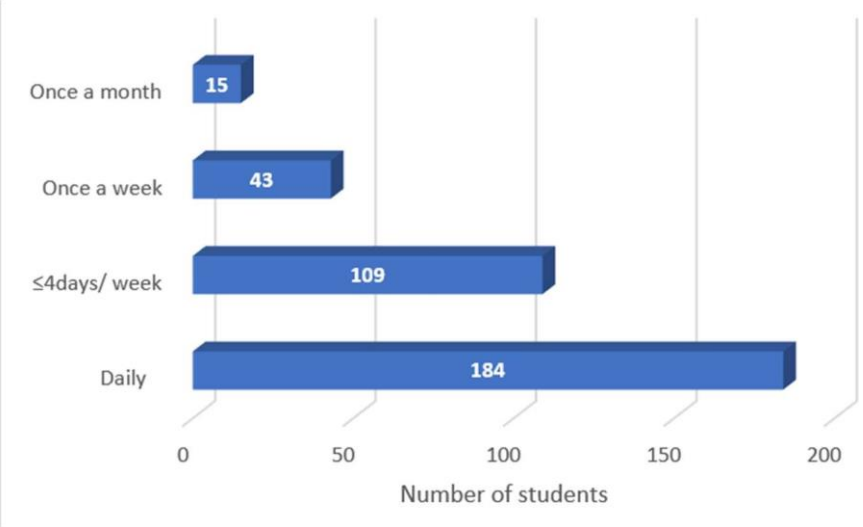
When asked about students' involvement in extracurricular activities 42% told they participate in such activities.

Figure 21; Involvement in Physical activity at school



14% students reported that they don't do any kind of physical activity.

Figure 22; How often students engage in Physical activities in school?



Majority of the adolescents reported that they play with their friends in the school ground. Among them, half of the students used to play daily.

Figure 23; Prevalence of depression among 13-19 years old students (n=410)

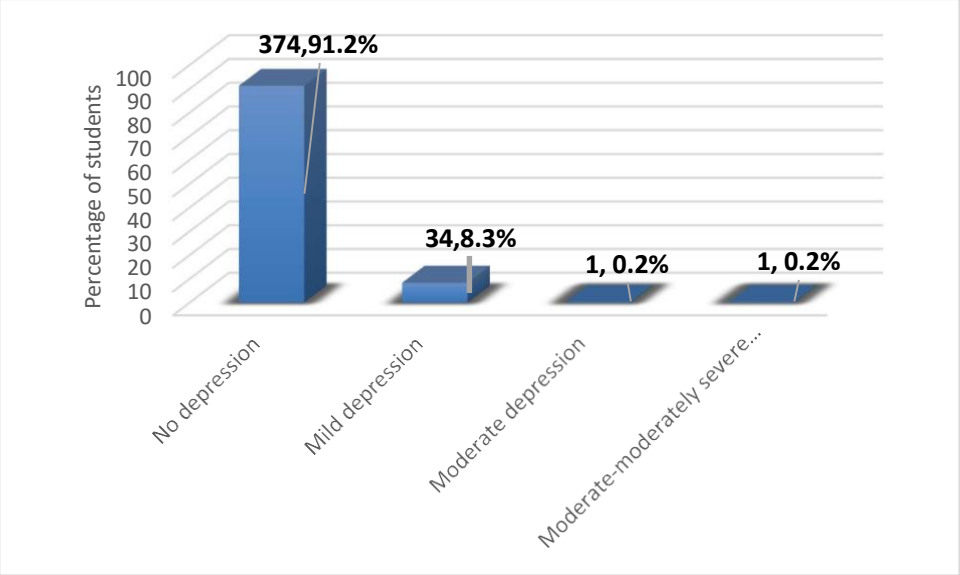


Figure no.22 shows the proportion of participants suffering from Depression

according to the severity as per PHQ-9. It was observed that 91.2% (no depression) did not suffer from any degree of depression, 8.3% participants suffered from a mild degree of depression, 1 student had moderate depression and 1 student with moderately severe depression.

The highest mean score achieved in PHQ-9 scale was attained for question 2 (Feeling low depressed or hopeless in life) and question 6 (Feeling bad about yourself, or feeling that you are a failure or that you have let yourself or your family down).

Table; 6 Association between Socio demographic factors and Depression

Variables	Category	Depression severity			Chi Square Value	P Value
		No depression	Mild depression	Moderate – moderately severe		
Age (Years)	≤ 15 (243)	224 (92.2%)	19(7.8%)	0	3.132	0.209
	≥ 16 (167)	150 (89.8%)	15 (9%)	2 (1.2%)		
Gender	Male (205)	190 (92.7%)	13 (6.3%)	2 (1%)	3.979	0.137
	Female (205)	184 (89.8%)	21 (10.2%)	0		
Type of School	Government (102)	97 (95.1%)	5 (4.9%)	0	3.946	0.413
	Aided (261)	233 (89.3%)	26 (10%)	2 (0.8%)		
	Private (47)	44 (93.6%)	3 (6.4%)	0		
Classes attended	8^{th}, 9^{th}, 10^{th} (329)	301 (91.5%)	26 (7.9%)	2 (0.6%)	0.811	0.667
	11th, 12^{th} (81)	73 (90.1%)	8 (9.9%)	0		
Religion	Hindu (329)	297 (90.3%)	31 (9.4%)	1 (0.3%)	3.881	0.144
	Muslim (81)	77 (95.1%)	3 (3.7%)	1 (1.2)		

Fathers' literacy	Never attended / Primary school (246)	228 (92.7%)	16 (6.5%)	2 (0.8%)	3.850	0.146
	High school & above (164)	146 (89%)	18 (11%)	0		
Fathers' occupation	Daily wage worker (133)	117 (88%)	15 (11.3%)	1 (0.8%)	6.464	0.373
	Self-employed (221)	208 (94.1%)	12 (5.4%)	1 (0.5%)		
	Fixed Salaried employees (23)	21 (91.3%)	2 (8.7%)	0		
	Unemployed (33)	28 (84.8%)	5 (15.2%)	0		
Mothers' literacy	Never attended / Primary school (307)	281 (91.5%)	24 (7.8%)	2 (0.7%)	1.017	0.602
	High school & above (103)	93 (90.3%)	10 (9.7%)	0		
Mothers' occupation	Daily wage worker (158)	140 (88.6%)	17(10.8%)	1 (0.6%)	7.868	0.248
	Self-employed (108)	103 (95.4%)	5 (4.6%)	0		
	Fixed Salaried employees (21)	17 (81%)	4 (19%)	0		
	Unemployed (123)	114 (92.7%)	8 (6.5%)	1 (0.8%)		
Type of family	Nuclear (256)	231 (90.2%)	24 (9.4%)	1 (0.4%)	1.167	0.558
	Joint (154)	143 (92.9%)	10 (6.5%)	1 (0.6%)		
Number of siblings	No siblings (12)	8 (66.7%)	4 (33.3%)	0	18.212	**0.001***
	1-3 siblings (363)	338 (93.1%)	23 (6.3%)	2 (0.6%)		
	4 & above (35)	28 (80%)	7 (20%)	0		
Birth Order	1st (150)	130 (86.7%)	19 (12.7%)	1(0.7%)	8.297	0.081
	2nd (157)	150 (95.5%)	7 (4.5%)	0		
	3rd & above (103)	94 (91.3%)	8 (7.8%)	1 (1%)		

*P value <0.05 are considered statistically significant

- Among socio demographic factors, the number of siblings has been found to have a statistically significant association with depression severity at p value 0.001. 33.3% adolescents who did not have any siblings showed mild depression followed by 20% students who had 4 or more siblings and 6.3%

students with 1-3 siblings. Two adolescents with 1-3 siblings had moderate – moderately severe depression.

- 1.2% and 9% of students ≥ 16 years had Moderate – moderately severe and mild depression respectively.
- Moderate – moderately severe depression was shown by male students (1%). 10.2% female students were mildly depressed whereas 6.3% males had mild depression.
- 10.8% students from aided school and 8.5% students from classes 8^{th}, 9^{th} and 10^{th} had depression.
- 31 students who were Hindus were more depressed whereas only 4 students from Muslim community were depressed.
- More students whose parents who had an educational qualification of high school and above had depression. Also moderate moderately severe depression was exhibited by students whose parents were either daily wage workers, unemployed or self-employed.
- Students from nuclear family (9.4%) and students who were first born in family (12.7%) had mild depression but was not statistically significant.

Table:7 Association between socio economic status of family and depression in adolescents

Variables	Category	Depression severity			Chi Square Value	P Value
		No depression	Mild depression	Moderate – moderately severe		
Socio economic status	Upper class (19)	19 (100%)	0	0	7.136	0.522
	Upper middle class (110)	105 (95.5%)	5 (4.5%)	0		
	Middle class (183)	164 (89.6%)	18 (9.8%)	1 (0.5%)		
	Lower middle class (96)	84 (87.5%)	11 (11.5%)	1 (1%)		
	Lower class (2)	2 (100%)	0	0		

11.5% students from lower middle-class family followed by 9.8% students from middle class family and 4.5% students from upper middle-class family had mild depression. Two students, each from middle class and lower middle-class family had moderate to moderately severe depression. No statistically significant association was found here.

Table: 8 Association between nutritional status and depression

Variables	Category	Depression severity			Chi Square Value	P Value
		No depression	Mild depression	Moderate – moderately severe		
Nutritional status as per BMI	**Normal**	152 (91%)	15 (9%)	0	2.159	0.707
	Overweight/ Obese	29 (90.6%)	3 (9.4%)	0		
	Underweight/Thinness	193 (91.5%)	16 (7.6%)	2 (0.9%)		
Nutritional status as per Height for age	**Moderate Stunting**	87 (93.5%)	6 (6.5%)	9	1.930	0.749
	Normal	266 (90.2%)	27 (9.2%)	2 (0.7%)		
	Severe stunting	21 (95.5%)	1 (4.5%)	0		

9.4% and 7.6% students with underweight/ thinness and overweight/obesity respectively had mild depression. Also 2 students with underweight/ thinness had Moderate – moderately severe depression.

On nutritional status assessment either with BMI or Height for age was found to have no statistical association with depression.

Table: 9 Association with other personal habits with depression

Variables	Category	Depression severity			Chi Square Value	P Value
		No depression	Mild depression	Moderate – moderately severe		
Skipping breakfast	No	204 (94.8%)	9 (4.2%)	0	12.014	**0.002***
	Yes	170 (86.3%)	25 (12.7%)	2 (1%)		
Disturbed sleep	No	362 (94.8%)	20 (5.2%)	0	98.030	**0.0001***
	Yes	12 (42.9%)	14 (50%)	2 (7.1%)		
Any other health issues	No	336 (92.3%)	27 (7.4%)	1 (0.3%)	6.437	**0.04***
	Yes	38 (82.6%)	7 (15.2%)	1 (2.2%)		
Substance use	No	370 (91.1%)	34 (8.4%)	2 (0.5%)	0.389	0.823
	Yes	4 (100%)	0	0		

*P value <0.05 are considered statistically significant

Students those who skipped breakfast, who had disturbed sleep and who suffered from other health issues had a statistically significant association with depression severity.

- Among students who skip breakfast, 1% had Moderate – moderately severe depression and 12.7% showed mild depression
- 7.1% and 50% students whose sleep was disturbed, reported Moderate – moderately severe depression and mild depression respectively.
- 15.2% students who had other health issues had mild depression.

Table: 10 Association between family environment and depression

Variables	Category	Depression severity			Chi Square Value	P Value
		No depression	Mild depression	Moderate – moderately severe		
Are you living with your parents	No	19 (67.9%)	8 (28.6%)	1 (3.6%)	22.559	**0.0001***
	Yes	355 (92.9%)	26 (6.8%)	1 (0.3%)		
Home atmosphere	Calm	360 (94%)	23 (6%)	0	96.528	**0.0001***
	Occasional conflicts	14 (60.9%)	7 (30.4%)	2 (8.7%)		
	Frequent conflicts	0	4 (100%)	0		
Involvement In Any Work at Home	No	5 (100%)	0	0	0.487	0.784
	Yes	369 (91.1%)	34 (8.4%)	2 (0.5%)		
Pressure from parents to perform well in school	No	344 (91.2%)	32 (8.5%)	1 (0.3%)	4.972	0.083
	Yes	30 (90.9%)	2 (6.1%)	1 (3%)		
Harsh Parental Behaviour	No	367 (91.8%)	31 (7.8%)	2 (0.5%)	6.380	**0.041***
	Yes	7 (70%)	3 (30%)	0		
Substance Abuse By Family Members	No	175 (97.2%)	4 (2.2%)	1 (0.6%)	15.556	**0.0001***
	Yes	199 (86.5%)	30 (13%)	1 (0.4%)		
Family members with chronic diseases	No	309 (91.2%)	28 (8.3%)	2 (0.6%)	0.422	0.810
	Yes	65 (91.5%)	6 (8.5%)	0		
Family members with mental health problems	No	367 (92%)	30 (7.5%)	2 (0.5%)	11.738	**0.003***
	Yes	7 (63.6%)	4 (36.4%)	0		
Death of any close relative in past one year?	No	265 (92%)	21(7.3%)	2 (0.7%)	2.084	0.353
	Yes	109 (89.3%)	13 (10.7%)	0		

*P value <0.05 are considered statistically significant

On analyzing the family environment of the students, those students who don't stay with their parents, home environment, harsh parental behaviour, family members with a habit of substance use, any family member with a known history of mental health problems were statistically significant with depression severity (p value <0.05).

- Among those adolescents who doesn't live with their parents, 28.6% of them had mild depression and one student had moderate – moderately severe depression.
- Almost all adolescents who reported frequent conflicts at home had mild depression. Among 23 students who faced occasional conflicts at home, 7 students had mild depression and 2 of them had moderate – moderately severe depression.
- 30% students who faced harsh parental behaviors had mild depression.
- 30 students whose family members had a habit of using alcohol, gutka or cigarettes were mildly depressed and one student with such family members had moderate – moderately severe depression.
- Among those students whose family members had a known history of mental health problem 36.4% students had mild depression.

Students who have family members with chronic diseases (8.5%) and those students who faced death of any close relative in past one year (10.7%) showed mild depression.

Table: 11 Association between school environment and depression

Variables	Category	Depression severity			Chi Square Value	P Value
		No depression	Mild depression	Moderate – moderately severe (>10)		
Do you look forward to come to school daily?	No	6 (85.7%)	1 (14.3%)	0	0.367	0.832
	Yes	368 (91.3%)	33 (8.2%)	2 (0.5%)		
Do you mingle with other children in your class	No	5 (71.4%)	1 (14.3%)	1 (14.3%)	28.409	**0.0001***
	Yes	369 (91.6%)	33 (8.2%)	1 (0.2%)		
Feeling inferior when compared to your classmates	No	265 (94.3%)	16 (5.7%)	0	12.563	**0.002***
	Yes	109 (84.5%)	18 (14%)	2 (1.6%)		
Failed or repeated a year at School	No	364 (91.2%)	33 (8.3%)	2 (0.5%)	0.064	0.969
	Yes	10 (90.9%)	1 (9.1%)	0		
Gets Punished at School	No	101(91%)	9 (8.1%)	1 (0.9%)	0.540	0.764
	Yes	273 (91.3%)	25 (8.4%)	1 (0.3%)		
Participation in extracurricular activities	No	156 (90.2%)	16 (9.2%)	1 (0.6%)	0.416	0.812
	Yes	218 (92%)	18 (7.6%)	1 (0.4%)		
Participation in Physical activity	No	51 (86.4%)	8 (13.6%)	0	2.814	0.245
	Yes	323 (92%)	26 (7.4%)	2 (0.6%)		

*P value <0.05 are considered statistically significant

Those students who doesn't like to mingle with other students and those students who feels that they don't perform well in school when compared to friends had a

statistically significant association with depression severity.

- Among the students who doesn't like to mingle with other children in the class, 14.3% students have mild depression and 14.3% students have moderate – moderately severe depression.
- 14% students who feels that they are not performing well when compared to your classmates had mild depression and 2 students who felt the same showed moderate – moderately severe depression.

14.3% students who doesn't like to come to school were found to be mildly depressed up on screening with PHQ-9.

Students who Failed or repeated a year at School (9.1%), get frequent punishments from school (8.4%) and those students who doesn't participate in extracurricular (9.2%) / physical activities (13.6%) were also found mildly depressed.

Table: 12 Independent variables Impact on depression by Binary logistic regression

Variables	Odds Ratio (Exp B)	Confidence Interval	Wald test	P Value
Siblings present	0.066	0.14 – 0.319	11.41	0.001
No siblings	1			
Sleep not disturbed	0.078	0.025 – 0.242	19.5	0.000
Disturbed Sleep	1			
Living With Parents	0.270	0.078 – 0.934	4.27	0.039
Not Living with Parents	1			
No conflicts at Home Atmosphere	0.122	0.037 – 0.402	11.96	0.001
Conflicts present at Home Atmosphere	1			
No Substance Use in Family history	0.265	0.086 – 0.813	5.39	0.020
Substance Use in Family	1			

Binary Logistic regression method was applied to the independent variables which showed significant association with depression in univariate analysis (See tables 6,8,9 and10). In this, independent variables like students with Siblings, students not having any sleep disturbance, students living with parents, having a calm home atmosphere without conflicts and no substance use history among family members had a lower odds, (OR<1) suggestive of having a protective impact on depression, which was statistically significant (P value <0.05)

DISCUSSION

This study aimed to assess the prevalence of depression among rural school going adolescents and its associated risk factors in Ukkali Village of Vijayapura district. Not many studies are available on rural adolescents in India, our study was an attempt to assess the prevalence of depression, which was found to be 8.7%. Studies conducted among school going adolescents in India, have shown varied prevalence of depression ranging between 16% to 40%. The methodology and scales used for estimating prevalence rates also differ in these studies.

The prevalence of depression in our study was ~9%, similar to a study done by Raja D *et al.* (2020) in Pune among urban school going adolescents which showed a depression prevalence of 8%[61]. Similar results were shown by another study in Nepal (2019) where prevalence of depression in school going adolescents were 11%[62]. Prevalence of depression estimated in Kashmir study during COVID 19 (2021) was 16%[63]. A study by Nair *et al.* (2004) in Kerala among school going adolescents and another community-based study from a rural area in north India (2019) have shown a low prevalence of 3% and 3.7% respectively[64, 37]. Whereas, a higher prevalence of 65% was reported from a study conducted in Bellary Karnataka (2013)[65]. Findings from a study by Malik M *et al.* (2012) among urban school going adolescents also showed an increased prevalence of 53%[66].

According to PHQ-9 scoring, most adolescents in our study had mild depression followed by moderate and moderately severe depression as 8.3%, 0.2% and 0.2%

respectively. Almost similar findings were observed in a study done in Nepal by T G Chettri *et al.* among adolescents where 6.3% had mild, 3.8% had moderate and 1.1% had severe depression[52]. Another study from Bihar among urban school going adolescents showed 23% had mild depression, 18% had moderate depression and 7.7% had severe depression[67]. As per 2020 National Survey of Children's Health and CDC data (USA), since 2016 there is 1/3rd times increase in adolescents who experience depression or anxiety[68].

Socio demographic profile of study participants

Out of the total study participants (n=410) interviewed in this study, majority (60%) of the participants were in the age group of 13 -15 years, followed by age group 16-19 years (40%) and both Male and Female students were almost equal in participation. In a similar study from north India by Singh M M et al., there was an equal participation by males and females but majority were in the age group >15 years[31].

In our study 10.2% of the students from age group 16 – 19 years and 7.8% in age group 13-15 years were found to have depression, this observation may be attributed to factors such as more academic and parental pressure in 16-19 years age group attending higher classes. This corroborates with the findings of S C Das *et al.*[39] study but contrary to the studies by Jha *et al.*[67] and Shukla *et al* .[69]. Among students with depression majority were females (71%) in our study. A similar study by Jeelani *et al.* (2022) in Kashmir also showed a female preponderance to depression[63]. A 10-year prospective longitudinal study on gender differences and depressive symptoms

from pre-adolescence to young adulthood showed that greatest difference was between 15 and 18 years[70]. The increased depression among adolescent girls is primarily linked to the sudden female hormonal changes[71].

In our study majority of the participants were from Aided school (64%) (Aided High school and PU arts college), followed by government school (25%) (Government Kannada Boys school, Government Kannada Girls school, Government Urdu school) and private school (11%) (English medium school). 15.7% students from Government school and government aided school had depression where as 6.4% students from private school had depression. In a similar study done in Telengana by Kumar R K *et al.* also shows depression was slightly more in children from public schools compared to children from private schools which is similar to our study[72].

In another study by Singh *et al.* among school going adolescents in Chandigarh the proportion of students with depression was more in government schools compared to private schools[31]. This may be because of the difference in the socio-economic family background of students studying in government schools which can be stressful when compared to private school students.

Majority of the parents of the adolescents with depression in our study had a literacy status of high school or PUC. Some parents who couldn't complete their education as they wished might try to fulfill their dreams through their children which can cause excess parental pressure on academics and they might restrict children from doing activities which they really like to do which can be a reason for mental health

issues among adolescents. The results were similar in a study done by Singh M M *et al.*[31]

Adolescents (33%) whose parents don't have a fixed monthly salary were found to be more depressed in our study. Almost similar results were shown in a study in eastern India by Bharati DR *et al.*[73] The financial security of parents who are daily wage workers or self-employed fluctuates based on the socio environmental factors. Our study was done during immediate post COVID-19 lockdown period and such employees were badly affected financially, which might have affected their children also. Fixed salaried employees usually spend more time with their children so that these children get an emotional support from their family itself.

Twenty-five students (6.1%) who had depression in our study belonged to nuclear families but was not statistically significant. On contrary, Jayashree et al (2018) in her study found more depressed students belonged to non-nuclear families[35]. A comparable result to our study was found in a study by Sinha S *et al.* where more number of students with depression were from nuclear families[74]. In nuclear families usually parents will be busy in their own work and the children face lack of attention when they feel helpless/ worried. Also, such families lack emotional support from grandparents and other family members which is a cause for feeling lonely.

In our study, the number of siblings an adolescent had, showed a statistically significant association with presence of depressive symptoms. 33% adolescents with no siblings and 20% with 4 or more siblings had depression. A comparable

study by Mohta A *et al.* says that with increase in number of siblings the risk for depression also increases but it failed to show a significant association[37]. Adolescents with no siblings had risk of loneliness.

20 students who were the first born in the family followed by 9 students whose birth order was 3 and above were depressed in the current study. A study in Tokyo by Fukuya Y *et al.* showed that the last-borns were less likely to have mental health problems whereas first borns were prone for conduct problems and Middle-borns showed the lowest level of happiness[75]. In rural areas where repeated pregnancies occur without adequate spacing the first-born child gets neglected unknowingly which might affect their mental health.

In this study Revised Udai Pareek (2019) classification is used to assess the socio-economic status of the adolescents since this classification is suitable for rural population. According to this 12.5% students who belonged to lower middle-class families (scoring 13 – 26) and 10% from middle class families were found to be depressed. On contrary, Shilpa R *et al*. in their study showed that SES had a significant influence over depression where adolescents from poor SES had least depression scores and those who are from below average SES had highest depression scores[76]. During interview we found that 54 students used to go for work to help their parents to meet the expenses in the family. This shows the bigger responsibilities taken up by adolescents from a lower socio-economic background. Also, poverty is a risk factor for depression.

Nutritional status of adolescents

Both significant weight gain or weight loss is a sign of depression at any age, according to the Diagnostic and Statistical Manual of Mental Disorders. The relation between weight change and depression varies from one individual to another. Questions concerning weight change as a marker of depression in adolescents were raised as a result of these discrepancies, which were explained by individual differences in body dissatisfaction, eating attitudes, and behaviours[77]. In our study 9% and 8% students with underweight/ thinness and overweight/obesity respectively had depressive symptoms. Similarly, Drosopoulou G *et al.* showed a significant association with weight change and psychosocial health of the adolescents[78].

Adolescents' personal habits and depression

14% adolescents who skipped breakfast had a statistically significant association with depression. Lee YS *et al.* showed there is a significance association between skipping breakfast and depressive symptoms[79]. Other studies have also shown the adverse effects of skipping breakfast on mental and physical health[80,81,82].

50% adolescents in our study with sleep disturbance had a significant association with depression. A meta-analysis study by Marino C *et al.* also showed an association between sleep disruption and depressive symptoms and also found that sleep disturbance in adolescents cause depression in future[83].

In many studies other health issues in adolescents have a significant effect on mental health which was similar to our study[84,85,86]. Those adolescents who has other health

issues finds it difficult to come to school daily, to concentrate in classes and feels inferior when their grades drop which can affect their mental health.

Though substance use / abuse doesn't show any association with depression in our study, adolescent depression and drug use are both serious public health issues that frequently co-occur[87]. A study in Chandigarh suggests those participants who had habit of smoking and alcohol use had higher prevalence of depression[88]. In the present study, nearly 20% of adolescents had habit of chewing sweetened areca nut (available in the shop as packets named – Hello & Tiger) every day. But as per DSM 5 areca nut doesn't come under substance use Disorders[89]. But areca nuts are rated as the fourth most widely consumed psychoactive substance after tobacco, alcohol and caffeine[90]. This may act as a precursor habit for tobacco chewing.

Family environment and depression

In our study area, many parents are seasonal workers who migrate regularly to neighbouring states for better wages, so their children will be staying along with their relatives. Also, some of the neighbouring villages doesn't have high schools so the adolescents stay at their relatives' homes for educational purpose. Such adolescents who don't stay with their parents, had a significant association with depression which was contrary to a community-based study in rural Haryana[37]where adolescents who live with their parents also had depressive symptoms. This may be because these adolescents who stay away from parents lack the parental care and support which is much needed at this phase of life. Also such adolescents might feel insecure to stay at relatives home.

Adolescents' negative emotional reactivity is associated with their exposure to marital conflict according to Schermerhorn A *et al.*[91] Parents frequently end up directing their negative feelings onto one another at the expense of their children. According to studies, marital conflicts lead to arguments over raising up their children and parental overreaction, both of which can result in adolescent mental health issues[92]. In our study out of 27 students who reported conflicts at home, 13 students had depression which showed a statistically significant association. Also 30% students who experienced harsh parental behaviour had depressive symptoms which was also statistically significant. Similar results were given by Bharati D R *et al.* in a study done in eastern India[73].

Literature reviews suggests that children with alcoholic and drug-using parents are more likely to use alcohol or drugs, and they are prone to experience depression than their peers[93]. In our study 83% adolescents' parents had habit of substance use (like alcohol, tobacco chewing, smoking etc.), out of which 13% adolescents showed depression. Alcohol intake by the father is a major cause of violence or conflicts in many rural families which in turn leads to financial burdens and has an overall negative impact on the mental health of their children.

Children who have a mentally ill parent may feel unpleasant emotions like insecurity, fear, sorrow, and rage more frequently. As a result, they are more likely to experience externalizing issues like aggression and rule-breaking behavior as well as internalizing issues like sadness and anxiety[94]. In our study, mental health problem history in family members showed significant association with depression.

Hanspal *et al*. (2019) had also reported similar results [17]. This may be because, these children lack parental monitoring (parents' knowledge of the child's whereabouts, activities) which might lead to either depression or anti-social activities in adolescents[94]. Also, a mentally ill parent will be less likely to be emotionally available to the adolescent, so such children lack emotional support from families which is very important during adolescent period.

School environment and depression

Adolescents spend most of their day time in school. First step of socialization occurs at school and the child learns emotional adjustment, social adjustment as well as educational adjustment[95]. Our study showed an association on peer interaction with presence of depression. Lack of interaction will lead to loneliness which can act as an antecedent cause for depression. Many other studies had shown about the association of feelings of sadness and loneliness among adolescents with depression[96,97]. In our study the adolescents who feels inferior when compared with other students had an association with depression. Such adolescents reported they are not satisfied in their scholastic performance, body image and financial status of parents. Drop in academics is a major issue for stress among adolescents which might cause depression, anxiety or suicidal ideation among adolescents[98,99]. Jayanthi P *et al.* had reported that adolescents with academic stress had 2.4 times higher risk of depression[34].

Some studies have shown that doing physical activity have beneficial effects on symptoms of depression which are comparable with the anti-depressant

treatment[100]. In this study 13.2% of adolescents who doesn't do any physical activity reported depression, but was not statistically significant. In a study by Mc Mohan E M *et al.* (2016) reported a positive association with increased frequency of physical activity and lower levels of depression[101]. The inverse relation between physical activity and depression is mentioned in a study by Hong X *et al.* in China (2008)[102].

In a study by Askeland KG *et al.* in Norway (2020) the protective factors which can prevent adolescent depression were goal orientation, self-confidence, social compliance and family cohesion[103]. As per the binary logistic regression results in our study, determinants such as having siblings, getting a sound sleep, having a calm home atmosphere, living with the parents, and no history of substance use in family was found to have a protective effect on the mental health of adolescents.

SUMMARY

The present cross-sectional study was conducted among school going adolescents aged 13 –19 years in Ukkali Village, Vijayapura from January 2021 to April 2022. A total of 410 students were interviewed in 6 schools of the village using a semi-structured questionnaire (to assess the socio demographic characteristics, personal details, school and family environment) and a validated PHQ-9 questionnaire (to assess depression severity). We selected 3 government schools, 2 government aided schools and 1 private school for the study. All the adolescents in the age group mentioned, who attended classes regularly and gave the assent and consent to participate in the study were included, no sampling method was adopted for selecting the adolescents. Children from class 8^{th} to 12^{th} studying in these 6 schools were contacted. Only those who were chronically absent and few who were not attending post covid time, inspite of repeated attempts to contact were excluded from the study.

- When sociodemographic characteristics were analyzed, out of 410 participants, both males and females showed an equal participation in the study. Majority were between the age group 13 – 15 years. 64% participants were from government school. 80% adolescents were Hindus by religion. 50% of the adolescent's mothers never attended school, 22% studied till primary school, 22% finished high school, 3% completed PUC and above.

Educational status of father as reported by the participants were; 40% never attended school, 20% attended till primary school, 27% studied till high school, 9% completed PUC/Diploma, and 3% were degree holders. Majority father's (54%) were self-employed (either cultivation in own land or small business) whereas nearly 40% mothers were daily wage workers (either laborer or coolies). 30% mothers and 8% fathers were unemployed. Nearly 6% of parents were getting fixed salary per month. 60% participants were from a nuclear family and majority had 1-3 siblings. 37%, 38% and 25% of adolescents were of birth order first, second and third & above respectively. Socio economic status as reported by the participants showed 45% were from middle class followed by 27% from upper middle class as per Revised Udai Pareek for rural (2019).

- BMI and age specific z scores were calculated using WHO anthroplus software. It revealed that 50% of them were underweight/thin and 8% were overweight/obese. Also 23% had moderate stunting.
- Nearly half of the students interviewed, skips breakfast. 7% had sleep disturbance, 11% reported other health issues of which majority suffered from eye problems and headache. Only 4 students had habit of substance use.
- During COVID lockdown most of the students felt bored staying at home. Only half of the students attended online classes. Majority told they

couldn't attend online classes due to lack of mobile/internet. 13% students went for a paid job and 11% students reported that their parents lost job/wages during pandemic.

- 7% of the students were not staying with their parents. 7% students reported conflicts between family members. 10 students faced harsh parental behavior at home. 3% of the students had family members with mental health disorders.
- 7 students told they don't like to come to school and they don't interact with their peers. 32% students used to feel inferior when compared to classmates. 12% students used to get punishments very often. 58% and 86% of the adolescents used to get involved in extracurricular activities and physical activities respectively.
- Prevalence of depression in our study was 8.7% out of which 8.3% had mild depression and 0.4% had moderate – moderately severe depression.
- In our study, variables like having no siblings, skipping breakfast, having sleep disturbance, having other health issues, not living with parents, those reported conflicts at home, those experienced harsh parental behavior, history of substance use (alcohol, tobacco chewing, smoking etc.) by family members, having family members with history of mental health problems, not interacting with classmates, and feeling inferior when compared to classmates showed a statistically significant association with depression.

- On further analysis with logistic regression of the associated variables in univariate analysis, students who had siblings, students with no sleep disturbance, students who live with their parents, calm home atmosphere and no history of substance use by family members showed statistical significance with depression with a negative risk association.

CONCLUSION

The prevalence of depression among rural school adolescents (13–19 years) was less (8.7%) than the prevalence rates reported in other studies done in school going children in India.

Majority of the adolescents who had depression were in mild depression category as per PHQ-9 (8.3%). Only 0.4% had moderate or moderate to severe category. As there is lack of adequate clinical symptoms in mild depression, it can be easily missed by parents and teachers. Therefore, focus should be given on early identification of mental health problems including depression, among adolescents by regular screening.

Out of many factors which had an association with depression in the present study, determinants like having siblings, getting a proper sleep, living with Parents, having a calm home atmosphere and no history of substance use in family were found have a protective impact on depression.

Adolescents who suffer from depression are prone for recurrence and these adolescents are at risk of psychiatric illness in adulthood, and the risk for suicides also increases. Early detection and treatment, if given for affected adolescents will pave the way for a better future. Implementation of proper screening for depression in primary care level can prevent functional impairment in adolescents and helps to improve their scholastic performance, which is a major stressor in most of the adolescents.

RECOMMENDATIONS

1. Current study explored the prevalence of depression and its associated risk factors among rural school going adolescents which will be an addition to the existing literature that is necessary for planning, implementation and evaluation of the services for mental health illness in adolescents and children.
2. Proactive steps have to be taken at school and community levels to guarantee healthy school and family environments. To ensure this behavioral change communication strategies should be implemented which helps the parents, teachers, peers, or the adolescent themselves to identify even mild symptoms of depression and how to seek help when in need.
3. Implementation of life skills education program in all educational institutions is an urgent step to be taken by education and health departments. Also monitoring and implementation of RKSK programs at all schools to be done as priority.
4. All schools should have a counselor/psychologist which helps in identification of adolescents suffering from depression at the earliest.
5. Also mental health screening should be included in the annual general health camps at schools and the general health practitioner should be trained to screen for depression using validated questionnaires.

6. In rural areas where psychiatrist is not available every day, the general medical practitioner can be trained to screen and treat common mental illness as they are closer to the community and can act as a medium to create awareness about mental health thus helps to evade the stigma towards mental illness.

STRENGTHS OF THE STUDY

- Our study adds data to the handful of existing literature on prevalence of depression among rural adolescents and its associated risk factors, especially in northern Karnataka.
- As our study was done in immediate post COVID lockdown period, we could ask about the life of adolescents during that period.
- Use of a validated questionnaire (PHQ-9) in local language which has good sensitivity and specificity.
- Our study focused on all domains of adolescent's life like socio-demographic details, personal habits, school and home atmosphere to identify different risk factors rather than only assessing prevalence.

LIMITATIONS OF THE STUDY

- Our study was done during the post COVID lockdown period when the schools just reopened. During this time some students were not coming to school, so we couldn't screen those adolescents, which might be a reason for low prevalence.
- Attempts were made to screen the school dropout students but was not successful as some of the parents in the study area were migrant workers and they had taken their children along with them for work.
- Though the PHQ-9 questionnaire has good sensitivity and specificity, it assesses the participants mental status of prior two weeks only.
- Our study was a cross sectional study, so temporality of associations of independent variables on depression cannot be concluded as causal**.**

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ANNEXURE –I

QUESTIONNAIRE

Socio-demographic questionnaire:

Date: Proforma No:

1. Name:	
2. Age:	☐☐ Years
3. Gender	Male ---------- 1 Female 2 Others 3
4. Type of school:	Government---------- 1 Aided 2 Private 3
5. Education:	8th class ---------- 1 9th class 2 10th class 3 11th class 4 12th class 5
6. House address:	
7. Religion:	Hindu ---------- 1 Muslim 2 Christian 3 Jain/Buddhist 4 Others 5
8. Father's literacy:	Never attended School---------- 1 Primary School 2 High school 3 PUC/Diploma 4 Degree and above 5
9. Father's occupation:	Cultivation ---------- 1 Herdsman 2 Agri Labour 3 Non agri labour 4 Craft men/ Independent work---------- 5 Small Business 6 Organised Business (5+ employees) ---------- 7

	Salaried employees 8 Professional 9 Retired 10 House wife 11 Student 12 Unemployed 13 Unfit 14 Others 15
10. Mother's Literacy	Never attended School ---------- 1 Primary School 2 High school 3 PUC/Diploma 4 Degree and above 5
11. Mother's Occupation	Cultivation ----------1 Herdsman 2 Agri Labour 3 Non agri labour 4 Craft men/ Independent work----------5 Small Business 6 Organised Business (5+ employees) ----------7 Salaried employees 8 Professional 9 Retired 10 House wife 11 Student 12 Unemployed 13 Unfit 14 Others 15
12. Type of family:	Nuclear ----------1 Joint 2 Three generation 3
13. Any relative staying with your family:	Yes----------1 No----------0 Refused 999
14. Number of siblings:	
15. Birth Order:	1st 1 2nd 2 3rd 3 4th and above 4

Revised Udai Pareek socio-economic status scale (rural) 2019

Head of the family:

Components	Weighted Score	Components	Weighted Score
Caste		**Social Participation**	
Schedule Caste	1	None	0
Lower Caste	2	Member of one organisation	1
Artisan Caste	3	Member of more than one organisation	2
Agriculture caste	4	Office holder in such an organisation	3
Prestige Caste	5	Wide Public leader	4
Dominant caste	6	**House**	
Occupation		No house	0
None	0	Hut	1
Labourer	1	Kutcha House	2
Caste Occupation	2	Mixed House	3
Business	3	Pucca House	4
Independent profession	4	Mansion	5
Cultivation	5	**Farm Power**	
Service	6	No Draught animals	1
Education		1-2 Draught animals	2
Illiterate	0	3-4 Draught animals	4
Can read only	1	5-6 Draught animals	6
Can read and write	2	**Material Possessions**	
Primary	3	Bullock cart	0
Middle	4	Cycle	1
High school	5	Radio	2
Graduate	6	Chairs	3
Above Graduate	7	Mobile phone	4
Land		Television	5
No Land	0	Refrigerators	6
Less than 1 Acre	1	**Family members**	
1-5 acre	2	Up to 5 members	2
5-10 acre	3	>5 members	1
10-15 acre	4		
15-20 acre	5		
20 and above	6		

Grade	Category	Score on scale
I	Upper class	>43
II	Upper middle class	33-42
III	Middle class	24-32
IV	Lower middle class	13-23
V	Lower class	<13

General physical examination

	1st reading	2nd reading	Average
Height (cm)			
Weight (cm)			

16. BMI - Kg/m2

17. Bowel habits

18. Bladder Habits;

19. Do you skip breakfast? If Yes, how frequently?	Daily---------- 1 2-3 Days/week----------2 Weekly once.....3 Monthly once----------4 Never.....5
20. How often your sleep is disturbed? (8 hours sleep with out any disturbance)	Daily---------- 1 2-3 Days/week----------2 Sometimes in a month-------3 Rarely.....4 Never.....5
21. Do you have any other health issues?	Yes---------- 1 No.....0 Refused.....999
If Yes, 21.1 What are the problems? 21.2 Have you seeked medical help for that? 21.3 Are you on any regular medications?	---------- ---------- ----------
22. Have you ever consumed any of these substances? (a). Alcohol (b). Tobacco (in any form) (c) Any other drugs	Yes---------- 1 No---------- 0 Refused----------999
If yes : 22.1 How many times in last 12 months? 22.2 Which one specify? 22.3 Quantity of consumption? 22.4 Age of initiation?	---------- ---------- ---------- ----------

QUESTIONNAIRE TO ASSESS GENERAL WELLBEING.
(To evaluate overall mental health status; post covid school reopening)

23. How you felt staying at home during COVID-19 school closure?	Happy ---------- 1 Sad.....2 Anxious.....3 Bored.....4 Irritable.....5 Others.....6

24.How did you spend majority of your time during COVID-19 lockdown? (Read Out Choices)	Online classes ----------1 Studied myself ---------- 2 Helped parents in their works----------3 Went for a job with payment----------4 Watching TV .....5 Playing with siblings / neighbours ---------- 6 Others.....7
25. How did you continue learning during lockdown? (When schools were closed)	Attended online classes with own mobile ----------1 Attended online classes by sharing friends/ siblings mobile ----------2 Did not attend online classes due to lack of access to internet / mobile ----------3 Others.....4
26. How often you could interact with your friends during lockdown?	Daily----------1 Weekly twice----------2 Weekly once.....3 Once a month.....4 Never met.....5
27. Did you get COVID-19 infection anytime?	Yes .....1 No----------0 Refused.....999
28. Did anyone in your family suffered from COVID-19?	Yes----------1 No.....0 Refused.....999
29. Did your parents / caretakers lost job or wages during lockdown?	Yes.....1 No.....0 Refused.....999

Questions about family environment

30. Are you living with your parents? (if yes skip to Qn 31)	Yes---------- 1 No---------- 0
30.1. If No, With whom?	Grandparents ----------1 Uncle.....2 Relative.....3 Others.....4
31. How is home atmosphere?	Calm----------1 Occasional conflicts ----------2

	Frequent conflicts ---------- 3 Refused 999
32. What kind of works do you get involved in house. (Multiple Choice)	Work in farms ---------- 1 House hold chores ----------2 Goes to shops for buying things for home. (Running Errands) ---------- 3 Don't do any regular work---------- 4
33. Do you have pressure from parents to perform well in school?	Yes----------1 No----------0 Sometimes ..... 2 Refused 999
34. Do you face any harsh parental behaviours? (Physical/ hurtful verbal abuse, Harassments etc)	Yes----------1 No----------0 Sometimes ----------2 Refused 999
34.1 If Yes, How frequently?	Daily---------- 1 ≤3 days/ week ..... 2 Once a week ..... 3 Monthly twice ..... 4 Monthly once 5
35. Substance abuse by any of the family member? (Multiple Choice)	Alcohol---------- 1 Smoking / Bidi ----------2 Gutka / Tobacco chewing ----------3 Others 4
36. Any family member with chronic diseases?	Yes----------1 No ..... 0 Don't know ..... 99 Refused 999
37. Any family member with history of mental health problems?	Yes----------1 No----------0 Don't know ..... 99 Refused 999
38. Death of family member / close relative in past one year?	Yes----------1 No----------0

	Refused.....999

Questions on Academic and Extra-Curricular Activities

39. Do you look forward to come to school daily?	Yes ----------1 No.....0 Refused.....999
40. Do you like to mingle with other children in your class?	Yes ----------1 No ----------0 Refused.....999
41. Have you ever felt that you are not performing well when compared to your classmates?	Yes ----------1 No ----------0 Refused.....999
42. Have you ever failed or repeated a year at School?	≥2 times---------- 1 Only once---------- 2 No.....0 Refused.....999
43. How often you get punished at school for any reason? (Read out choices)	Daily ----------1 Once in a week----------2 Once in a month----------3 Vary rarely.....4 Never.....5 Refused.....999
44. Have you been part of any extra- curricular activities at school?	Yes ---------- 1 No ---------- 0 Refused.....999
45. How often do you engage in Physical activities in school? (Exercise / Sports)	Daily ----------1 ≤4days/ week----------2 Once a week.....3 Once a month.....4 Never.....5

PHQ-9 Questionnaire

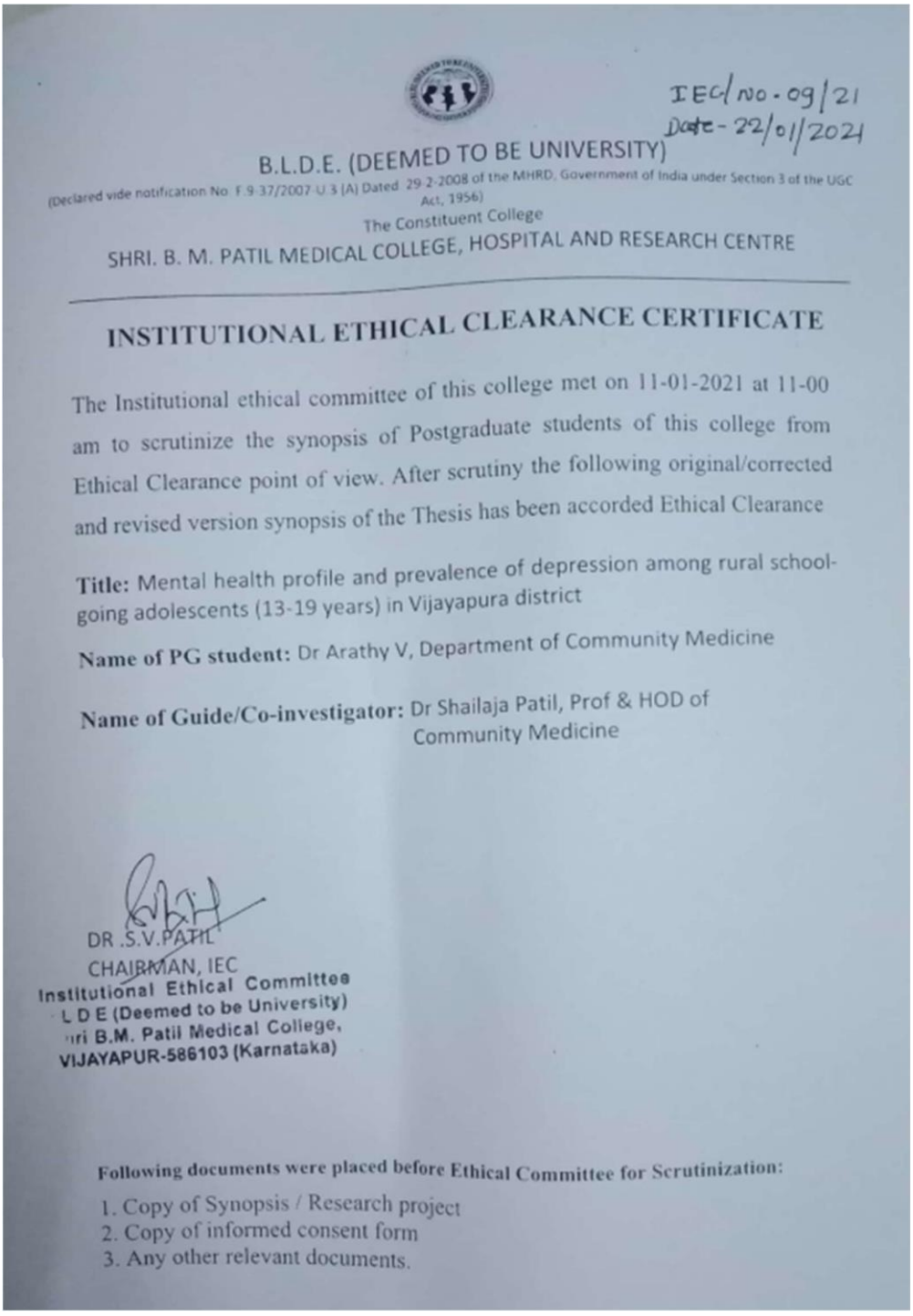
Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
Lack of interest or pleasure in doing things?	0	1	2	3
Feeling low, depressed, or hopeless in life	0	1	2	3
disturbed sleep, trouble falling asleep, or sleeping too much	0	1	2	3
Fatigability or having little energy	0	1	2	3
Loss of appetite or overeating	0	1	2	3
Feeling bad about yourself, or feeling that you are a failure or that you have let yourself or your family down?	0	1	2	3
Trouble concentrating on daily activities like reading a newspaper or books or watching television	0	1	2	3
Being restless that you have been moving around a lot more than usual. Or moving or speaking slowly that others could easily notice	0	1	2	3
Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

In case of a positive response to any of the above problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all Somewhat difficult Very difficult Extremely difficult

ANNEXURE –II

ETHICAL CLEARANCE CERTIFICATE



IEC/No-09/21
Date-22/01/2021

B.L.D.E. (DEEMED TO BE UNIVERSITY)

(Declared vide notification No. F.9-37/2007-U.3 (A) Dated 29-2-2008 of the MHRD, Government of India under Section 3 of the UGC Act, 1956)

The Constituent College

SHRI. B. M. PATIL MEDICAL COLLEGE, HOSPITAL AND RESEARCH CENTRE

INSTITUTIONAL ETHICAL CLEARANCE CERTIFICATE

The Institutional ethical committee of this college met on 11-01-2021 at 11-00 am to scrutinize the synopsis of Postgraduate students of this college from Ethical Clearance point of view. After scrutiny the following original/corrected and revised version synopsis of the Thesis has been accorded Ethical Clearance

Title: Mental health profile and prevalence of depression among rural school-going adolescents (13-19 years) in Vijayapura district

Name of PG student: Dr Arathy V, Department of Community Medicine

Name of Guide/Co-investigator: Dr Shailaja Patil, Prof & HOD of Community Medicine

DR .S.V.PATIL
CHAIRMAN, IEC
Institutional Ethical Committee
L D E (Deemed to be University)
Shri B.M. Patil Medical College,
VIJAYAPUR-586103 (Karnataka)

Following documents were placed before Ethical Committee for Scrutinization:

1. Copy of Synopsis / Research project
2. Copy of informed consent form
3. Any other relevant documents.

ANNEXURE – III

INFORMED CONSENT FORM FOR HEAD OF THE SCHOOL

Title of Topic: Prevalence Of Depression Among Rural School Going Adolescents (13-19 Years) In Vijayapura District.

Guide: Dr. Shailaja. S. Patil

PG Student: Dr. Arathy V

Purpose of Research: I have been informed that this study will help to assess the General wellbeing and prevalence of Mental health problems among rural school-going adolescents in Vijayapura. The study is intended to interview school-going adolescents to explore the risk factors associated with adolescent depression.

Procedure: I understand that this is a School based study. In this procedure, the students will be asked a series of questions by the researcher regarding the topic.

Benefits: I understand that my students participation in the study as one of the study subjects will help the researcher to assess the general wellbeing and prevalence of Depression among rural school-going adolescents in the Vijayapura district.

Confidentiality: I have been told that my students Name, contact information, and the answers to the questions are kept secret and will never be identified to anyone outside of the study.

Request For More Information: I understand that I may ask more

questions about the study at any time to Dr. Arathy V, PG at the department of community medicine to answer my questions or concerns. I understand that I will be informed of any significant new findings discovered during the course of the study, which might influence my student's continued participation. A copy of this consent form will be given to me for careful reading.

Refusal or Withdrawal of Participation: I understand that my student's participation is voluntary and that he/ she may refuse to participate or may withdraw consent and discontinue participation in the study at any time without prejudice. I also understand that Dr. Arathy V may terminate his/ her participation in the study at any time after she has explained the reasons for doing so.

CONSENT STATEMENT:

I confirm that Dr. Arathy V has explained the research's purpose, the study procedure that the students will undergo & benefits that he/she may experience. I have been explained all the above in detail in my language and understand the same. Therefore, I agree to give consent for my student's participation as a subject in this research project.

Date:

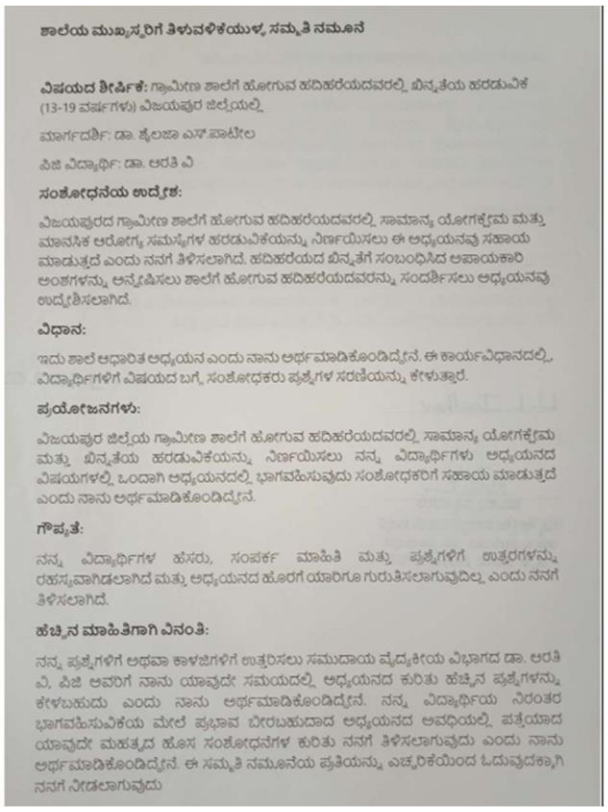
_____

(Name of Head of the Institution)

_____

(Signature of Head of the Institution

Permission letters from head of the institutions of 6 schools in our study.



ಶಾಲೆಯ ಮುಖ್ಯಸ್ಥರಿಗೆ ತಿಳುವಳಿಕೆಯುಳ್ಳ ಸಮ್ಮತಿ ನಮೂನೆ

ವಿಷಯದ ಶೀರ್ಷಿಕೆ: ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಖಿನ್ನತೆಯ ಹರಡುವಿಕೆ (13-19 ವರ್ಷಗಳು) ವಿಜಯಪುರ ಜಿಲ್ಲೆಯಲ್ಲಿ.

ಮಾರ್ಗದರ್ಶಿ: ಡಾ. ಶೈಲಜಾ ಎಸ್.ಪಾಟೀಲ

ಪಿಜಿ ವಿದ್ಯಾರ್ಥಿ: ಡಾ. ಆರತಿ ಎ

ಸಂಶೋಧನೆಯ ಉದ್ದೇಶ:

ವಿಜಯಪುರದ ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಸಾಮಾನ್ಯ ಯೋಗಕ್ಷೇಮ ಮತ್ತು ಮಾನಸಿಕ ಆರೋಗ್ಯ ಸಮಸ್ಯೆಗಳ ಹರಡುವಿಕೆಯನ್ನು ನಿರ್ಣಯಿಸಲು ಈ ಅಧ್ಯಯನವು ಸಹಾಯ ಮಾಡುತ್ತದೆ ಎಂದು ನನಗೆ ತಿಳಿಸಲಾಗಿದೆ. ಹದಿಹರೆಯದ ಖಿನ್ನತೆಗೆ ಸಂಬಂಧಿಸಿದ ಅಪಾಯಕಾರಿ ಅಂಶಗಳನ್ನು ಅನ್ವೇಷಿಸಲು ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರನ್ನು ಸಂದರ್ಶಿಸಲು ಅಧ್ಯಯನವು ಉದ್ದೇಶಿಸಲಾಗಿದೆ.

ವಿಧಾನ:

ಇದು ಶಾಲೆ ಆಧಾರಿತ ಅಧ್ಯಯನ ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಈ ಕಾರ್ಯವಿಧಾನದಲ್ಲಿ, ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ವಿಷಯದ ಬಗ್ಗೆ ಸಂಶೋಧಕರು ಪ್ರಶ್ನೆಗಳ ಸರಣಿಯನ್ನು ಕೇಳುತ್ತಾರೆ.

ಪ್ರಯೋಜನಗಳು:

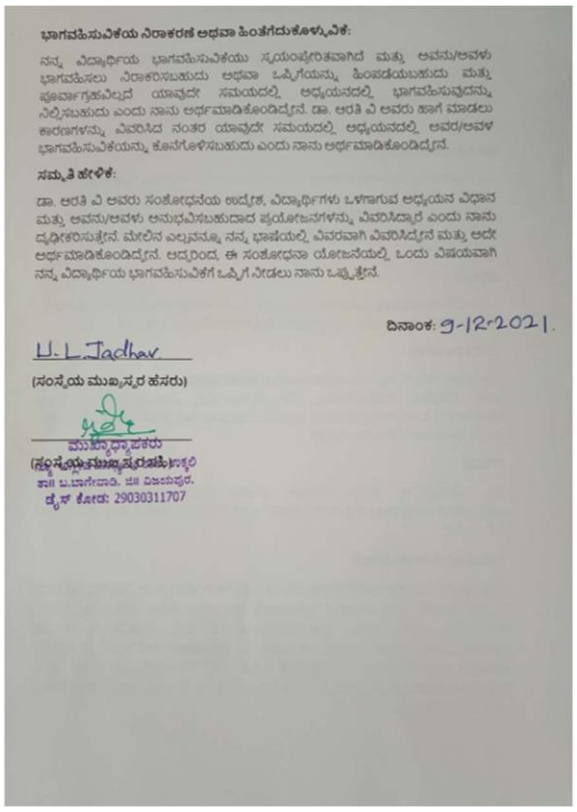
ವಿಜಯಪುರ ಜಿಲ್ಲೆಯ ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಸಾಮಾನ್ಯ ಯೋಗಕ್ಷೇಮ ಮತ್ತು ಖಿನ್ನತೆಯ ಹರಡುವಿಕೆಯನ್ನು ನಿರ್ಣಯಿಸಲು ನನ್ನ ವಿದ್ಯಾರ್ಥಿಗಳು ಅಧ್ಯಯನದ ವಿಷಯಗಳಲ್ಲಿ ಒಂದಾಗಿ ಅಧ್ಯಯನದಲ್ಲಿ ಭಾಗವಹಿಸುವುದು ಸಂಶೋಧಕರಿಗೆ ಸಹಾಯ ಮಾಡುತ್ತದೆ ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ.

ಗೌಪ್ಯತೆ:

ನನ್ನ ವಿದ್ಯಾರ್ಥಿಗಳ ಹೆಸರು, ಸಂಪರ್ಕ ಮಾಹಿತಿ ಮತ್ತು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಗಳನ್ನು ರಹಸ್ಯವಾಗಿಡಲಾಗಿದೆ ಮತ್ತು ಅಧ್ಯಯನದ ಹೊರಗೆ ಯಾರಿಗೂ ಗುರುತಿಸಲಾಗುವುದಿಲ್ಲ ಎಂದು ನನಗೆ ತಿಳಿಸಲಾಗಿದೆ.

ಹೆಚ್ಚಿನ ಮಾಹಿತಿಗಾಗಿ ವಿನಂತಿ:

ನನ್ನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಅಥವಾ ಕಾಳಜಿಗಳಿಗೆ ಉತ್ತರಿಸಲು ಸಮುದಾಯ ವೈದ್ಯಕೀಯ ವಿಭಾಗದ ಡಾ. ಆರತಿ ಎ, ಪಿಜಿ ಅವರಿಗೆ ನಾನು ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಅಧ್ಯಯನದ ಕುರಿತು ಹೆಚ್ಚಿನ ಪ್ರಶ್ನೆಗಳನ್ನು ಕೇಳಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ನಿರಂತರ ಭಾಗವಹಿಸುವಿಕೆಯ ಮೇಲೆ ಪ್ರಭಾವ ಬೀರಬಹುದಾದ ಅಧ್ಯಯನದ ಅವಧಿಯಲ್ಲಿ ಪತ್ತೆಯಾದ ಯಾವುದೇ ಮಹತ್ವದ ಹೊಸ ಸಂಶೋಧನೆಗಳ ಕುರಿತು ನನಗೆ ತಿಳಿಸಲಾಗುವುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಈ ಸಮ್ಮತಿ ನಮೂನೆಯ ಪ್ರತಿಯನ್ನು ಎಚ್ಚರಿಕೆಯಿಂದ ಓದುವುದಕ್ಕಾಗಿ ನನಗೆ ನೀಡಲಾಗುವುದು



ಭಾಗವಹಿಸುವಿಕೆಯ ನಿರಾಕರಣೆ ಅಥವಾ ಹಿಂತೆಗೆದುಕೊಳ್ಳುವಿಕೆ:

ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ಭಾಗವಹಿಸುವಿಕೆಯು ಸ್ವಯಂಪ್ರೇರಿತವಾಗಿದೆ ಮತ್ತು ಅವನು/ಅವಳು ಭಾಗವಹಿಸಲು ನಿರಾಕರಿಸಬಹುದು ಅಥವಾ ಒಪ್ಪಿಗೆಯನ್ನು ಹಿಂಪಡೆಯಬಹುದು ಮತ್ತು ಪೂರ್ವಾಗ್ರಹವಿಲ್ಲದೆ ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಅಧ್ಯಯನದಲ್ಲಿ ಭಾಗವಹಿಸುವುದನ್ನು ನಿಲ್ಲಿಸಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಡಾ. ಆರತಿ ಎ ಅವರು ಹಾಗೆ ಮಾಡಲು ಕಾರಣಗಳನ್ನು ವಿವರಿಸಿದ ನಂತರ ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಅಧ್ಯಯನದಲ್ಲಿ ಅವರ/ಅವಳ ಭಾಗವಹಿಸುವಿಕೆಯನ್ನು ಕೊನೆಗೊಳಿಸಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ.

ಸಮ್ಮತಿ ಹೇಳಿಕೆ:

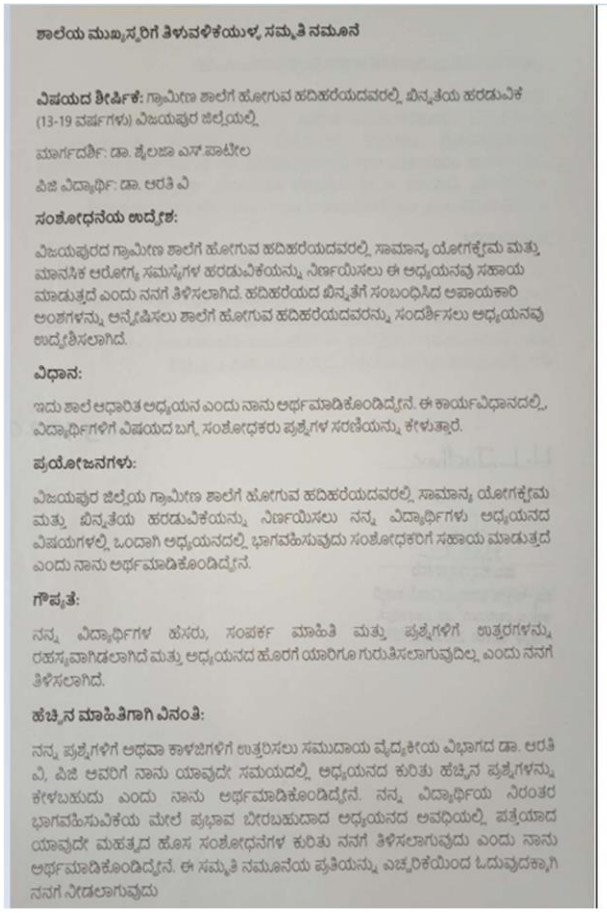
ಡಾ. ಆರತಿ ಎ ಅವರು ಸಂಶೋಧನೆಯ ಉದ್ದೇಶ, ವಿದ್ಯಾರ್ಥಿಗಳು ಒಳಗಾಗುವ ಅಧ್ಯಯನ ವಿಧಾನ ಮತ್ತು ಅವನು/ಅವಳು ಅನುಭವಿಸಬಹುದಾದ ಪ್ರಯೋಜನಗಳನ್ನು ವಿವರಿಸಿದ್ದಾರೆ ಎಂದು ನಾನು ದೃಢೀಕರಿಸುತ್ತೇನೆ. ಮೇಲಿನ ಎಲ್ಲವನ್ನೂ ನನ್ನ ಭಾಷೆಯಲ್ಲಿ ವಿವರವಾಗಿ ವಿವರಿಸಿದ್ದೇನೆ ಮತ್ತು ಅದೇ ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಆದ್ದರಿಂದ, ಈ ಸಂಶೋಧನಾ ಯೋಜನೆಯಲ್ಲಿ ಒಂದು ವಿಷಯವಾಗಿ ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ಭಾಗವಹಿಸುವಿಕೆಗೆ ಒಪ್ಪಿಗೆ ನೀಡಲು ನಾನು ಒಪ್ಪುತ್ತೇನೆ.

ದಿನಾಂಕ: 9-12-2021.

U. L. Jadhav

(ಸಂಸ್ಥೆಯ ಮುಖ್ಯಸ್ಥರ ಹೆಸರು)

ಮುಖ್ಯೋಪಾಧ್ಯಾಪಕರು
(ಸ್ಥಳೀಯ ಮುಖ್ಯಸ್ಥರ ಹುದ್ದೆ)
ಸಾ॥ ಬಬಲೇಶ್ವರ. ಜಿ॥ ವಿಜಯಪುರ.
ಮೈಸ್ ಕೋಡ್: 29030311707



ಶಾಲೆಯ ಮುಖ್ಯಸ್ಥರಿಗೆ ತಿಳುವಳಿಕೆಯುಳ್ಳ ಸಮ್ಮತಿ ನಮೂನೆ

ವಿಷಯದ ಶೀರ್ಷಿಕೆ: ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಖಿನ್ನತೆಯ ಹರಡುವಿಕೆ (13-19 ವರ್ಷಗಳು) ವಿಜಯಪುರ ಜಿಲ್ಲೆಯಲ್ಲಿ.

ಮಾರ್ಗದರ್ಶಿ: ಡಾ. ಶೈಲಜಾ ಎಸ್.ಪಾಟೀಲ

ಪಿಜಿ ವಿದ್ಯಾರ್ಥಿ: ಡಾ. ಆರತಿ ಎ

ಸಂಶೋಧನೆಯ ಉದ್ದೇಶ:

ವಿಜಯಪುರದ ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಸಾಮಾನ್ಯ ಯೋಗಕ್ಷೇಮ ಮತ್ತು ಮಾನಸಿಕ ಆರೋಗ್ಯ ಸಮಸ್ಯೆಗಳ ಹರಡುವಿಕೆಯನ್ನು ನಿರ್ಣಯಿಸಲು ಈ ಅಧ್ಯಯನವು ಸಹಾಯ ಮಾಡುತ್ತದೆ ಎಂದು ನನಗೆ ತಿಳಿಸಲಾಗಿದೆ. ಹದಿಹರೆಯದ ಖಿನ್ನತೆಗೆ ಸಂಬಂಧಿಸಿದ ಅಪಾಯಕಾರಿ ಅಂಶಗಳನ್ನು ಅನ್ವೇಷಿಸಲು ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರನ್ನು ಸಂದರ್ಶಿಸಲು ಅಧ್ಯಯನವು ಉದ್ದೇಶಿಸಲಾಗಿದೆ.

ವಿಧಾನ:

ಇದು ಶಾಲೆ ಆಧಾರಿತ ಅಧ್ಯಯನ ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಈ ಕಾರ್ಯವಿಧಾನದಲ್ಲಿ, ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ವಿಷಯದ ಬಗ್ಗೆ ಸಂಶೋಧಕರು ಪ್ರಶ್ನೆಗಳ ಸರಣಿಯನ್ನು ಕೇಳುತ್ತಾರೆ.

ಪ್ರಯೋಜನಗಳು:

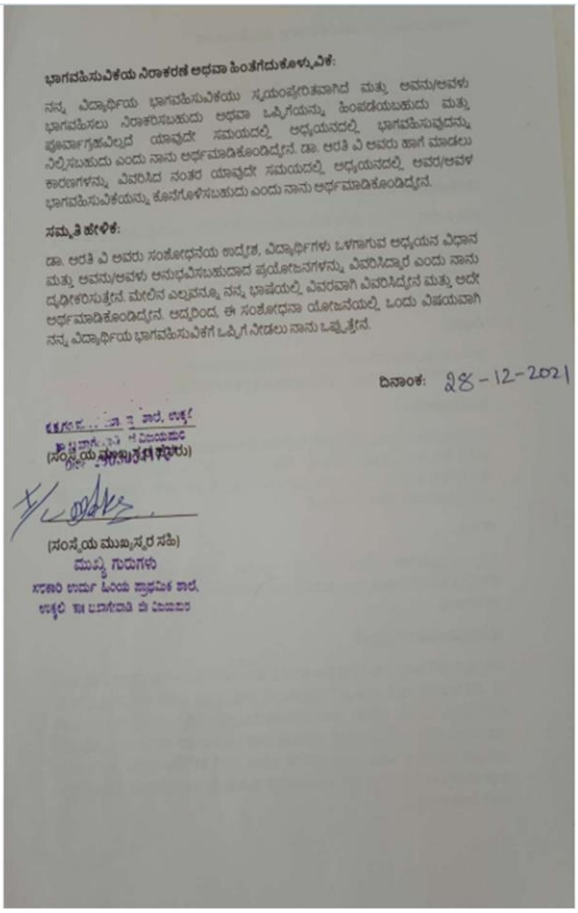
ವಿಜಯಪುರ ಜಿಲ್ಲೆಯ ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಸಾಮಾನ್ಯ ಯೋಗಕ್ಷೇಮ ಮತ್ತು ಖಿನ್ನತೆಯ ಹರಡುವಿಕೆಯನ್ನು ನಿರ್ಣಯಿಸಲು ನನ್ನ ವಿದ್ಯಾರ್ಥಿಗಳು ಅಧ್ಯಯನದ ವಿಷಯಗಳಲ್ಲಿ ಒಂದಾಗಿ ಅಧ್ಯಯನದಲ್ಲಿ ಭಾಗವಹಿಸುವುದು ಸಂಶೋಧಕರಿಗೆ ಸಹಾಯ ಮಾಡುತ್ತದೆ ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ.

ಗೌಪ್ಯತೆ:

ನನ್ನ ವಿದ್ಯಾರ್ಥಿಗಳ ಹೆಸರು, ಸಂಪರ್ಕ ಮಾಹಿತಿ ಮತ್ತು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಗಳನ್ನು ರಹಸ್ಯವಾಗಿಡಲಾಗಿದೆ ಮತ್ತು ಅಧ್ಯಯನದ ಹೊರಗೆ ಯಾರಿಗೂ ಗುರುತಿಸಲಾಗುವುದಿಲ್ಲ ಎಂದು ನನಗೆ ತಿಳಿಸಲಾಗಿದೆ.

ಹೆಚ್ಚಿನ ಮಾಹಿತಿಗಾಗಿ ವಿನಂತಿ:

ನನ್ನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಅಥವಾ ಕಾಳಜಿಗಳಿಗೆ ಉತ್ತರಿಸಲು ಸಮುದಾಯ ವೈದ್ಯಕೀಯ ವಿಭಾಗದ ಡಾ. ಆರತಿ ಎ, ಪಿಜಿ ಅವರಿಗೆ ನಾನು ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಅಧ್ಯಯನದ ಕುರಿತು ಹೆಚ್ಚಿನ ಪ್ರಶ್ನೆಗಳನ್ನು ಕೇಳಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ನಿರಂತರ ಭಾಗವಹಿಸುವಿಕೆಯ ಮೇಲೆ ಪ್ರಭಾವ ಬೀರಬಹುದಾದ ಅಧ್ಯಯನದ ಅವಧಿಯಲ್ಲಿ ಪತ್ತೆಯಾದ ಯಾವುದೇ ಮಹತ್ವದ ಹೊಸ ಸಂಶೋಧನೆಗಳ ಕುರಿತು ನನಗೆ ತಿಳಿಸಲಾಗುವುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಈ ಸಮ್ಮತಿ ನಮೂನೆಯ ಪ್ರತಿಯನ್ನು ಎಚ್ಚರಿಕೆಯಿಂದ ಓದುವುದಕ್ಕಾಗಿ ನನಗೆ ನೀಡಲಾಗುವುದು



ಭಾಗವಹಿಸುವಿಕೆಯ ನಿರಾಕರಣೆ ಅಥವಾ ಹಿಂತೆಗೆದುಕೊಳ್ಳುವಿಕೆ:

ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ಭಾಗವಹಿಸುವಿಕೆಯು ಸ್ವಯಂಪ್ರೇರಿತವಾಗಿದೆ ಮತ್ತು ಅವನು/ಅವಳು ಭಾಗವಹಿಸಲು ನಿರಾಕರಿಸಬಹುದು ಅಥವಾ ಒಪ್ಪಿಗೆಯನ್ನು ಹಿಂಪಡೆಯಬಹುದು ಮತ್ತು ಪೂರ್ವಾಗ್ರಹವಿಲ್ಲದೆ ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಅಧ್ಯಯನದಲ್ಲಿ ಭಾಗವಹಿಸುವುದನ್ನು ನಿಲ್ಲಿಸಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಡಾ. ಆರತಿ ಎ ಅವರು ಹಾಗೆ ಮಾಡಲು ಕಾರಣಗಳನ್ನು ವಿವರಿಸಿದ ನಂತರ ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಅಧ್ಯಯನದಲ್ಲಿ ಅವರ/ಅವಳ ಭಾಗವಹಿಸುವಿಕೆಯನ್ನು ಕೊನೆಗೊಳಿಸಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ.

ಸಮ್ಮತಿ ಹೇಳಿಕೆ:

ಡಾ. ಆರತಿ ಎ ಅವರು ಸಂಶೋಧನೆಯ ಉದ್ದೇಶ, ವಿದ್ಯಾರ್ಥಿಗಳು ಒಳಗಾಗುವ ಅಧ್ಯಯನ ವಿಧಾನ ಮತ್ತು ಅವನು/ಅವಳು ಅನುಭವಿಸಬಹುದಾದ ಪ್ರಯೋಜನಗಳನ್ನು ವಿವರಿಸಿದ್ದಾರೆ ಎಂದು ನಾನು ದೃಢೀಕರಿಸುತ್ತೇನೆ. ಮೇಲಿನ ಎಲ್ಲವನ್ನೂ ನನ್ನ ಭಾಷೆಯಲ್ಲಿ ವಿವರವಾಗಿ ವಿವರಿಸಿದ್ದೇನೆ ಮತ್ತು ಅದೇ ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಆದ್ದರಿಂದ, ಈ ಸಂಶೋಧನಾ ಯೋಜನೆಯಲ್ಲಿ ಒಂದು ವಿಷಯವಾಗಿ ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ಭಾಗವಹಿಸುವಿಕೆಗೆ ಒಪ್ಪಿಗೆ ನೀಡಲು ನಾನು ಒಪ್ಪುತ್ತೇನೆ.

ದಿನಾಂಕ: 28-12-2021

(ಸಂಸ್ಥೆಯ ಮುಖ್ಯಸ್ಥರ ಸಹಿ)
ಮುಖ್ಯ ಗುರುಗಳು
ಸರಕಾರಿ ಉರ್ದು ಹಿರಿಯ ಪ್ರಾಥಮಿಕ ಶಾಲೆ,
ಬಬಲೇಶ್ವರ ತಾ ಬಬಲೇಶ್ವರ ಜಿ ವಿಜಯಪುರ

ಶಾಲೆಯ ಮುಖ್ಯಸ್ಥರಿಗೆ ತಿಳುವಳಿಕೆಯುಳ್ಳ ಸಮ್ಮತಿ ನಮೂನೆ

ವಿಷಯದ ಶೀರ್ಷಿಕೆ: ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಖಿನ್ನತೆಯ ಹರಡುವಿಕೆ (13-19 ವರ್ಷಗಳು) ವಿಜಯಪುರ ಜಿಲ್ಲೆಯಲ್ಲಿ.

ಮಾರ್ಗದರ್ಶಿ: ಡಾ. ಶೈಲಜಾ ಎಸ್ ಪಾಟೀಲ

ಪಿಜಿ ವಿದ್ಯಾರ್ಥಿ: ಡಾ. ಆರತಿ ಎ

ಸಂಶೋಧನೆಯ ಉದ್ದೇಶ:

ವಿಜಯಪುರದ ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಸಾಮಾನ್ಯ ಯೋಗಕ್ಷೇಮ ಮತ್ತು ಮಾನಸಿಕ ಆರೋಗ್ಯ ಸಮಸ್ಯೆಗಳ ಹರಡುವಿಕೆಯನ್ನು ನಿರ್ಣಯಿಸಲು ಈ ಅಧ್ಯಯನವು ಸಹಾಯ ಮಾಡುತ್ತದೆ ಎಂದು ನನಗೆ ತಿಳಿಸಲಾಗಿದೆ. ಹದಿಹರೆಯದ ಖಿನ್ನತೆಗೆ ಸಂಬಂಧಿಸಿದ ಅಪಾಯಕಾರಿ ಅಂಶಗಳನ್ನು ಅನ್ವೇಷಿಸಲು ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರನ್ನು ಸಂದರ್ಶಿಸಲು ಅಧ್ಯಯನವು ಉದ್ದೇಶಿಸಲಾಗಿದೆ.

ವಿಧಾನ:

ಇದು ಶಾಲೆ ಆಧಾರಿತ ಅಧ್ಯಯನ ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಈ ಕಾರ್ಯವಿಧಾನದಲ್ಲಿ, ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ವಿಷಯದ ಬಗ್ಗೆ, ಸಂಶೋಧಕರು ಪ್ರಶ್ನೆಗಳ ಸರಣಿಯನ್ನು ಕೇಳುತ್ತಾರೆ.

ಪ್ರಯೋಜನಗಳು:

ವಿಜಯಪುರ ಜಿಲ್ಲೆಯ ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಸಾಮಾನ್ಯ ಯೋಗಕ್ಷೇಮ ಮತ್ತು ಖಿನ್ನತೆಯ ಹರಡುವಿಕೆಯನ್ನು ನಿರ್ಣಯಿಸಲು ನನ್ನ ವಿದ್ಯಾರ್ಥಿಗಳು ಅಧ್ಯಯನದ ವಿಷಯಗಳಲ್ಲಿ ಒಂದಾಗಿ ಅಧ್ಯಯನದಲ್ಲಿ ಭಾಗವಹಿಸುವುದು ಸಂಶೋಧಕರಿಗೆ ಸಹಾಯ ಮಾಡುತ್ತದೆ ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ.

ಗೌಪ್ಯತೆ:

ನನ್ನ ವಿದ್ಯಾರ್ಥಿಗಳ ಹೆಸರು, ಸಂಪರ್ಕ ಮಾಹಿತಿ ಮತ್ತು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಗಳನ್ನು ರಹಸ್ಯವಾಗಿಡಲಾಗಿದೆ ಮತ್ತು ಅಧ್ಯಯನದ ಹೊರಗೆ ಯಾರಿಗೂ ಗುರುತಿಸಲಾಗುವುದಿಲ್ಲ ಎಂದು ನನಗೆ ತಿಳಿಸಲಾಗಿದೆ.

ಹೆಚ್ಚಿನ ಮಾಹಿತಿಗಾಗಿ ವಿನಂತಿ:

ನನ್ನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಅಥವಾ ಕಾಳಜಿಗಳಿಗೆ ಉತ್ತರಿಸಲು ಸಮುದಾಯ ವೈದ್ಯಕೀಯ ವಿಭಾಗದ ಡಾ. ಆರತಿ ಎ, ಪಿಜಿ ಅವರಿಗೆ ನಾನು ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಅಧ್ಯಯನದ ಕುರಿತು ಹೆಚ್ಚಿನ ಪ್ರಶ್ನೆಗಳನ್ನು ಕೇಳಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ನಿರಂತರ ಭಾಗವಹಿಸುವಿಕೆಯ ಮೇಲೆ ಪ್ರಭಾವ ಬೀರಬಹುದಾದ ಅಧ್ಯಯನದ ಅವಧಿಯಲ್ಲಿ ಪತ್ರಯಾದ ಯಾವುದೇ ಮಹತ್ವದ ಹೊಸ ಸಂಶೋಧನೆಗಳ ಕುರಿತು ನನಗೆ ತಿಳಿಸಲಾಗುವುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಈ ಸಮ್ಮತಿ ನಮೂನೆಯ ಪ್ರತಿಯನ್ನು ಎಚ್ಚರಿಕೆಯಿಂದ ಓದುವುದಕ್ಕಾಗಿ ನನಗೆ ನೀಡಲಾಗುವುದು

ಭಾಗವಹಿಸುವಿಕೆಯ ನಿರಾಕರಣೆ ಅಥವಾ ಹಿಂತೆಗೆದುಕೊಳ್ಳುವಿಕೆ:

ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ಭಾಗವಹಿಸುವಿಕೆಯು ಸ್ವಯಂಪ್ರೇರಿತವಾಗಿದೆ ಮತ್ತು ಅವನು/ಅವಳು ಭಾಗವಹಿಸಲು ನಿರಾಕರಿಸಬಹುದು ಅಥವಾ ಒಪ್ಪಿಗೆಯನ್ನು ಹಿಂಪಡೆಯಬಹುದು ಮತ್ತು ಪೂರ್ವಾಗ್ರಹವಿಲ್ಲದ ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಅಧ್ಯಯನದಲ್ಲಿ ಭಾಗವಹಿಸುವುದನ್ನು ನಿಲ್ಲಿಸಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಡಾ. ಆರತಿ ಎ ಅವರು ಹಾಗೆ ಮಾಡಲು ಕಾರಣಗಳನ್ನು ವಿವರಿಸಿದ ನಂತರ ಯಾವುದೇ ಸಮಯದಲ್ಲಿ, ಅಧ್ಯಯನದಲ್ಲಿ, ಅವರ/ಅವಳ ಭಾಗವಹಿಸುವಿಕೆಯನ್ನು ಕೊನೆಗೊಳಿಸಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ.

ಸಮ್ಮತಿ ಹೇಳಿಕೆ:

ಡಾ. ಆರತಿ ಎ ಅವರು ಸಂಶೋಧನೆಯ ಉದ್ದೇಶ, ವಿದ್ಯಾರ್ಥಿಗಳು ಒಳಗಾಗುವ ಅಧ್ಯಯನ ವಿಧಾನ ಮತ್ತು ಅವನು/ಅವಳು ಅನುಭವಿಸಬಹುದಾದ ಪ್ರಯೋಜನಗಳನ್ನು ವಿವರಿಸಿದ್ದಾರೆ ಎಂದು ನಾನು ದೃಢೀಕರಿಸುತ್ತೇನೆ. ಮೇಲಿನ ಎಲ್ಲವನ್ನೂ ನನ್ನ ಭಾಷೆಯಲ್ಲಿ ವಿವರವಾಗಿ ವಿವರಿಸಿದ್ದೇನೆ ಮತ್ತು ಅದೇ ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಆದ್ದರಿಂದ, ಈ ಸಂಶೋಧನಾ ಯೋಜನೆಯಲ್ಲಿ, ಒಂದು ವಿಷಯವಾಗಿ ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ಭಾಗವಹಿಸುವಿಕೆಗೆ ಒಪ್ಪಿಗೆ ನೀಡಲು ನಾನು ಒಪ್ಪುತ್ತೇನೆ.

ದಿನಾಂಕ: 3 - 01 - 2022

(ಸಂಸ್ಥೆಯ ಮುಖ್ಯಸ್ಥರ ಹೆಸರು)

ಶಾಲೆಯ ಮುಖ್ಯಸ್ಥರಿಗೆ ತಿಳುವಳಿಕೆಯುಳ್ಳ ಸಮ್ಮತಿ ನಮೂನೆ

ವಿಷಯದ ಶೀರ್ಷಿಕೆ: ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಖಿನ್ನತೆಯ ಹರಡುವಿಕೆ (13-19 ವರ್ಷಗಳು) ವಿಜಯಪುರ ಜಿಲ್ಲೆಯಲ್ಲಿ.

ಮಾರ್ಗದರ್ಶಿ: ಡಾ. ಶೈಲಜಾ ಎಸ್.ಪಾಟೀಲ

ಪಿಜಿ ವಿದ್ಯಾರ್ಥಿ: ಡಾ. ಆರತಿ ಎ

ಸಂಶೋಧನೆಯ ಉದ್ದೇಶ:

ವಿಜಯಪುರದ ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಸಾಮಾನ್ಯ ಯೋಗಕ್ಷೇಮ ಮತ್ತು ಮಾನಸಿಕ ಆರೋಗ್ಯ ಸಮಸ್ಯೆಗಳ ಹರಡುವಿಕೆಯನ್ನು ನಿರ್ಣಯಿಸಲು ಈ ಅಧ್ಯಯನವು ಸಹಾಯ ಮಾಡುತ್ತದೆ ಎಂದು ನನಗೆ ತಿಳಿಸಲಾಗಿದೆ. ಹದಿಹರೆಯದ ಖಿನ್ನತೆಗೆ ಸಂಬಂಧಿಸಿದ ಅಪಾಯಕಾರಿ ಅಂಶಗಳನ್ನು ಅನ್ವೇಷಿಸಲು ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರನ್ನು ಸಂದರ್ಶಿಸಲು ಅಧ್ಯಯನವು ಉದ್ದೇಶಿಸಲಾಗಿದೆ.

ವಿಧಾನ:

ಇದು ಶಾಲೆ ಆಧಾರಿತ ಅಧ್ಯಯನ ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಈ ಕಾರ್ಯವಿಧಾನದಲ್ಲಿ, ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ವಿಷಯದ ಬಗ್ಗೆ, ಸಂಶೋಧಕರು ಪ್ರಶ್ನೆಗಳ ಸರಣಿಯನ್ನು ಕೇಳುತ್ತಾರೆ.

ಪ್ರಯೋಜನಗಳು:

ವಿಜಯಪುರ ಜಿಲ್ಲೆಯ ಗ್ರಾಮೀಣ ಶಾಲೆಗೆ ಹೋಗುವ ಹದಿಹರೆಯದವರಲ್ಲಿ ಸಾಮಾನ್ಯ ಯೋಗಕ್ಷೇಮ ಮತ್ತು ಖಿನ್ನತೆಯ ಹರಡುವಿಕೆಯನ್ನು ನಿರ್ಣಯಿಸಲು ನನ್ನ ವಿದ್ಯಾರ್ಥಿಗಳು ಅಧ್ಯಯನದ ವಿಷಯಗಳಲ್ಲಿ ಒಂದಾಗಿ ಅಧ್ಯಯನದಲ್ಲಿ ಭಾಗವಹಿಸುವುದು ಸಂಶೋಧಕರಿಗೆ ಸಹಾಯ ಮಾಡುತ್ತದೆ ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ.

ಗೌಪ್ಯತೆ:

ನನ್ನ ವಿದ್ಯಾರ್ಥಿಗಳ ಹೆಸರು, ಸಂಪರ್ಕ ಮಾಹಿತಿ ಮತ್ತು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಗಳನ್ನು ರಹಸ್ಯವಾಗಿಡಲಾಗಿದೆ ಮತ್ತು ಅಧ್ಯಯನದ ಹೊರಗೆ ಯಾರಿಗೂ ಗುರುತಿಸಲಾಗುವುದಿಲ್ಲ ಎಂದು ನನಗೆ ತಿಳಿಸಲಾಗಿದೆ.

ಹೆಚ್ಚಿನ ಮಾಹಿತಿಗಾಗಿ ವಿನಂತಿ:

ನನ್ನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಅಥವಾ ಕಾಳಜಿಗಳಿಗೆ ಉತ್ತರಿಸಲು ಸಮುದಾಯ ವೈದ್ಯಕೀಯ ವಿಭಾಗದ ಡಾ. ಆರತಿ ಎ, ಪಿಜಿ ಅವರಿಗೆ ನಾನು ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಅಧ್ಯಯನದ ಕುರಿತು ಹೆಚ್ಚಿನ ಪ್ರಶ್ನೆಗಳನ್ನು ಕೇಳಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ನಿರಂತರ ಭಾಗವಹಿಸುವಿಕೆಯ ಮೇಲೆ ಪ್ರಭಾವ ಬೀರಬಹುದಾದ ಅಧ್ಯಯನದ ಅವಧಿಯಲ್ಲಿ ಪತ್ರಯಾದ ಯಾವುದೇ ಮಹತ್ವದ ಹೊಸ ಸಂಶೋಧನೆಗಳ ಕುರಿತು ನನಗೆ ತಿಳಿಸಲಾಗುವುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಈ ಸಮ್ಮತಿ ನಮೂನೆಯ ಪ್ರತಿಯನ್ನು ಎಚ್ಚರಿಕೆಯಿಂದ ಓದುವುದಕ್ಕಾಗಿ ನನಗೆ ನೀಡಲಾಗುವುದು

ಭಾಗವಹಿಸುವಿಕೆಯ ನಿರಾಕರಣೆ ಅಥವಾ ಹಿಂತೆಗೆದುಕೊಳ್ಳುವಿಕೆ:

ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ಭಾಗವಹಿಸುವಿಕೆಯು ಸ್ವಯಂಪ್ರೇರಿತವಾಗಿದೆ ಮತ್ತು ಅವನು/ಅವಳು ಭಾಗವಹಿಸಲು ನಿರಾಕರಿಸಬಹುದು ಅಥವಾ ಒಪ್ಪಿಗೆಯನ್ನು ಹಿಂಪಡೆಯಬಹುದು ಮತ್ತು ಪೂರ್ವಾಗ್ರಹವಿಲ್ಲದ ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಅಧ್ಯಯನದಲ್ಲಿ ಭಾಗವಹಿಸುವುದನ್ನು ನಿಲ್ಲಿಸಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಡಾ. ಆರತಿ ಎ ಅವರು ಹಾಗೆ ಮಾಡಲು ಕಾರಣಗಳನ್ನು ವಿವರಿಸಿದ ನಂತರ ಯಾವುದೇ ಸಮಯದಲ್ಲಿ, ಅಧ್ಯಯನದಲ್ಲಿ, ಅವರ/ಅವಳ ಭಾಗವಹಿಸುವಿಕೆಯನ್ನು ಕೊನೆಗೊಳಿಸಬಹುದು ಎಂದು ನಾನು ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ.

ಸಮ್ಮತಿ ಹೇಳಿಕೆ:

ಡಾ. ಆರತಿ ಎ ಅವರು ಸಂಶೋಧನೆಯ ಉದ್ದೇಶ, ವಿದ್ಯಾರ್ಥಿಗಳು ಒಳಗಾಗುವ ಅಧ್ಯಯನ ವಿಧಾನ ಮತ್ತು ಅವನು/ಅವಳು ಅನುಭವಿಸಬಹುದಾದ ಪ್ರಯೋಜನಗಳನ್ನು ವಿವರಿಸಿದ್ದಾರೆ ಎಂದು ನಾನು ದೃಢೀಕರಿಸುತ್ತೇನೆ. ಮೇಲಿನ ಎಲ್ಲವನ್ನೂ ನನ್ನ ಭಾಷೆಯಲ್ಲಿ ವಿವರವಾಗಿ ವಿವರಿಸಿದ್ದೇನೆ ಮತ್ತು ಅದೇ ಅರ್ಥಮಾಡಿಕೊಂಡಿದ್ದೇನೆ. ಆದ್ದರಿಂದ, ಈ ಸಂಶೋಧನಾ ಯೋಜನೆಯಲ್ಲಿ, ಒಂದು ವಿಷಯವಾಗಿ ನನ್ನ ವಿದ್ಯಾರ್ಥಿಯ ಭಾಗವಹಿಸುವಿಕೆಗೆ ಒಪ್ಪಿಗೆ ನೀಡಲು ನಾನು ಒಪ್ಪುತ್ತೇನೆ.

ದಿನಾಂಕ: 10/1/2022

G.K. Naik.

(ಸಂಸ್ಥೆಯ ಮುಖ್ಯಸ್ಥರ ಹೆಸರು)

(ಸಂಸ್ಥೆಯ ಮುಖ್ಯಸ್ಥರ ಸಹಿ)

Principal,
New Arts P.U.College, Ukkali

INFORMED CONSENT FORM FOR HEAD OF THE SCHOOL

Title of Topic: Prevalence Of Depression Among Rural School Going Adolescents (13-19 Years) In Vijayapura District.

Guide: Dr. Shailaja S.Patil

PG Student: Dr. Arathy V

Purpose of Research:

I have been informed that this study will help to assess the General wellbeing and prevalence of Mental health problems among rural school-going adolescents in Vijayapura. The study is intended to interview school-going adolescents to explore the risk factors associated with adolescent depression.

Procedure:

I understand that this is a School based study. In this procedure, the students will be asked a series of questions by the researcher regarding the topic.

Benefits:

I understand that my students participation in the study as one of the study subjects will help the researcher to assess the general wellbeing and prevalence of Depression among rural school-going adolescents in the Vijayapura district.

Confidentiality:

I have been told that my students Name, contact information, and the answers to the questions are kept secret and will never be identified to anyone outside of the study.

Request For More Information:

I understand that I may ask more questions about the study at any time to Dr. Arathy V, PG at the department of community medicine to answer my questions or concerns. I understand that I will be informed of any significant new findings discovered during the course of the study, which might influence my student's continued participation. A copy of this consent form will be given to me for careful reading.

Refusal or Withdrawal of Participation:

I understand that my student's participation is voluntary and that he/ she may refuse to participate or may withdraw consent and discontinue participation in the study at any time without prejudice. I also understand that Dr. Arathy V may terminate his/ her participation in the study at any time after she has explained the reasons for doing so.

CONSENT STATEMENT:

I confirm that Dr. Arathy V has explained the research's purpose, the study procedure that the students will undergo & benefits that he/she may experience. I have been explained all the above in detail in my language and understand the same. Therefore, I agree to give consent for my student's participation as a subject in this research project.

Date: 4/12/2021

G.B. Managoli Headmaster.

(Name of Head of the Institution)

Head Master,
B.L.D.E.A's English Medium High School,
(XXAI...) Bagewadi Dist Vijayapur.
DISE Code: 29030311711

(Signature of Head of the Institution)

INFORMED CONSENT FORM FOR HEAD OF THE SCHOOL

Title of Topic: Prevalence Of Depression Among Rural School Going Adolescents (13-19 Years) In Vijayapura District.

Guide: Dr. Shailaja S.Patil

PG Student: Dr. Arathy V

Purpose of Research:

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Procedure:

I understand that this is a School based study. In this procedure, the students will be asked a series of questions by the researcher regarding the topic.

Benefits:

I understand that my students participation in the study as one of the study subjects will help the researcher to assess the general wellbeing and prevalence of Depression among rural school-going adolescents in the Vijayapura district.

Confidentiality:

I have been told that my students Name, contact information, and the answers to the questions are kept secret and will never be identified to anyone outside of the study.

Request For More Information:

I understand that I may ask more questions about the study at any time to Dr. Arathy V, PG at the department of community medicine to answer my questions or concerns. I understand that I will be informed of any significant new findings discovered during the course of the study, which might influence my student's continued participation. A copy of this consent form will be given to me for careful reading.

Refusal or Withdrawal of Participation:

I understand that my student's participation is voluntary and that he/ she may refuse to participate or may withdraw consent and discontinue participation in the study at any time without prejudice. I also understand that Dr. Arathy V may terminate his/ her participation in the study at any time after she has explained the reasons for doing so.

CONSENT STATEMENT:

I confirm that Dr. Arathy V has explained the research's purpose, the study procedure that the students will undergo & benefits that he/she may experience. I have been explained all the above in detail in my language and understand the same. Therefore, I agree to give consent for my student's participation as a subject in this research project.

Date: 24/1/2022

Smt. S.P. Awatiger

(Name of Head of the Institution)

(Signature of Head of the Institution)

PARTICIPANT INFORMATION SHEET

Title of Topic: **Prevalence Of Depression Among Rural School Going Adolescents (13-19 Years) In Vijayapura District**

Guide: Dr. Shailaja S Patil

PG Student: Dr. Arathy V

Purpose of Research:

Adolescence (10 to 19 years) is the phase of life between childhood and adult-hood. It is a unique stage of human development and an important time for laying the foundations of good health mentally and physically. Unhealthy behaviours established during adolescence continue into adult life and are often hard to change. Such unhealthy lifestyles are the causes of chronic non-communicable diseases at an early age. This study will help to assess the General wellbeing and prevalence of mental health problems among rural school-going adolescents in Vijayapura. The study will also explore risk factors of general mental health issues, specifically adolescent depression.

As there is no data regarding this topic in this region, this study will help in knowing and reporting the adolescent health and mental wellbeing status to the policy people.

Procedure:

This is a School based study. After your written consent and resolving any queries that you have regarding the study, the participants will be interviewed using a

questionnaire. We would like to collect information regarding your socio demographic details and personal details which has an impact on your general physical and mental wellbeing. You are invited to participate in the study voluntarily. We are doing this study on all the students like you, who will be enrolled. By participating in the study, the participants general physical and mental health status is analysed. In case if any abnormality is detected, you will be linked for further health education and counselling services at BLDE hospital itself.

Risk and Discomforts:

As this is a questionnaire-based interview no physical or psychological harm is involved in the study.

Confidentiality:

Participants name, contact information, and the answers to the questions are kept secret and will never be identified to anyone outside of the study.

Request For More Information:

You can ask more questions about the study at any time to the researcher. You will be informed of any significant new findings discovered during the course of the study, which might influence your continued participation.

Refusal or Withdrawal of Participation:

Your participation is voluntary and that you may refuse to participate or may withdraw consent and discontinue participation in the study at any time without prejudice. You must understand that Dr. Arathy V may terminate your participation

in the study at any time after she has explained the reasons for doing so.

We request you to participate in this study willingly. If you have any queries, we will be happy to answer them.

CONSENT STATEMENT FROM PARENTS / LOCAL GUARDIAN:

I confirm that Dr. Arathy V has explained the research's purpose, the study procedure that my Son / daughter will undergo & the possible discomfort and benefits that he/she may experience in my own language. I have been explained all the above in detail in my language and understand the same.

Therefore, I agree to give consent for my student's participation as a subject in this research project.

_____

(Signature of the Parent / Guardian) Date:

_____

(Signature of witness)

ASSENT FORM

I have been asked to participate in a study on the topic Prevalence of depression among rural school going adolescence in Vijayapura done by Dr Arathy V under the guidance of Dr. Shailaja S Patil. By participating in this research, I will be asked a series of questions by the researcher regarding the topic. I have understood that the information about me will be kept secret, and I have the right to ask questions about my information and the result of the study. I have been informed that I will be able to leave the research at any time I want with out any prejudice.

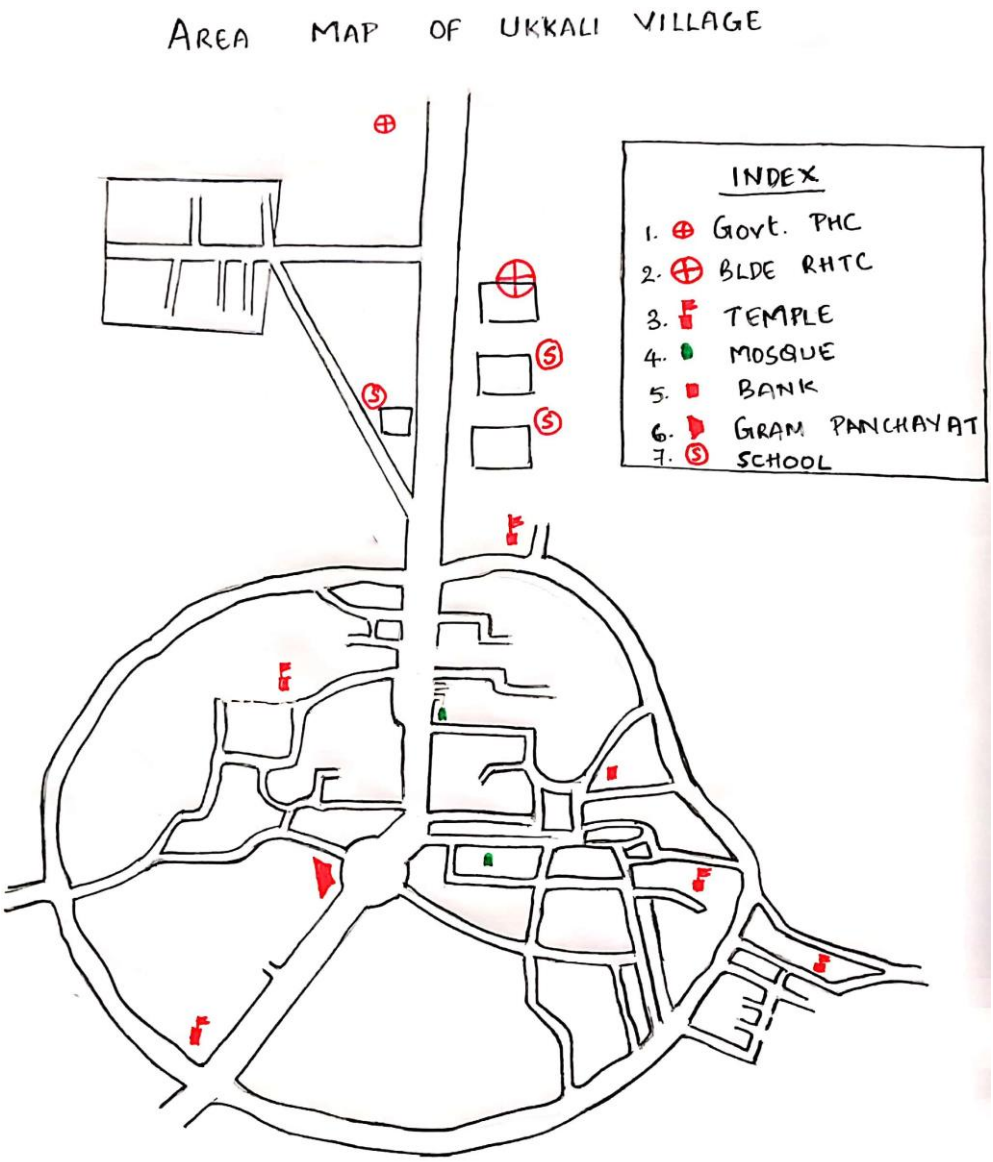
I agree to be a part of this research.

Participants full Name

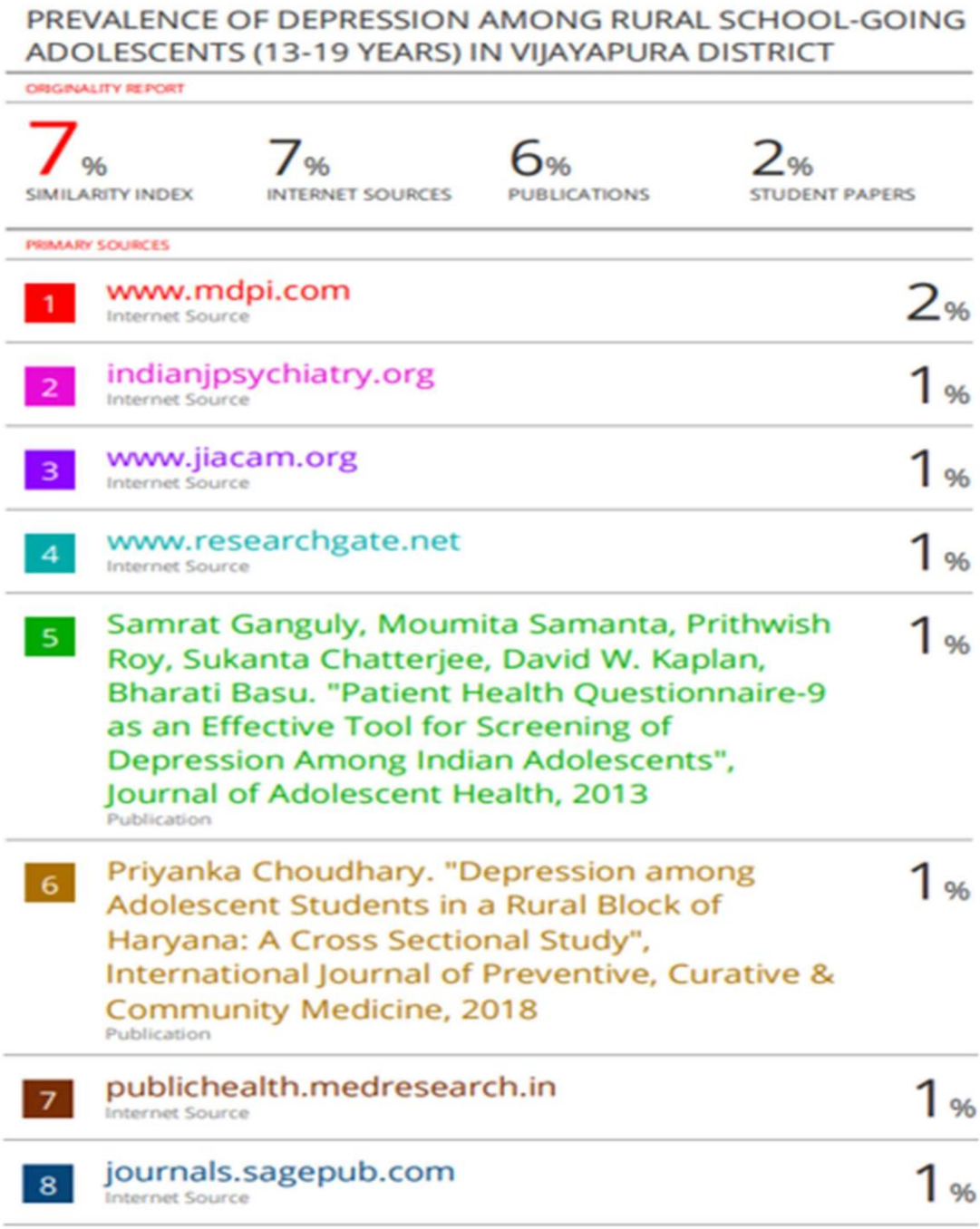
Date:

ANNEXURE IV

Map of the study area



PLAGIARISM REPORT



PREVALENCE OF DEPRESSION AMONG RURAL SCHOOL-GOING ADOLESCENTS (13-19 YEARS) IN VIJAYAPURA DISTRICT

ORIGINALITY REPORT

7%	7%	6%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.mdpi.com Internet Source	2%
2	indianjpsychiatry.org Internet Source	1%
3	www.jiacam.org Internet Source	1%
4	www.researchgate.net Internet Source	1%
5	Samrat Ganguly, Moumita Samanta, Prithwish Roy, Sukanta Chatterjee, David W. Kaplan, Bharati Basu. "Patient Health Questionnaire-9 as an Effective Tool for Screening of Depression Among Indian Adolescents", Journal of Adolescent Health, 2013 Publication	1%
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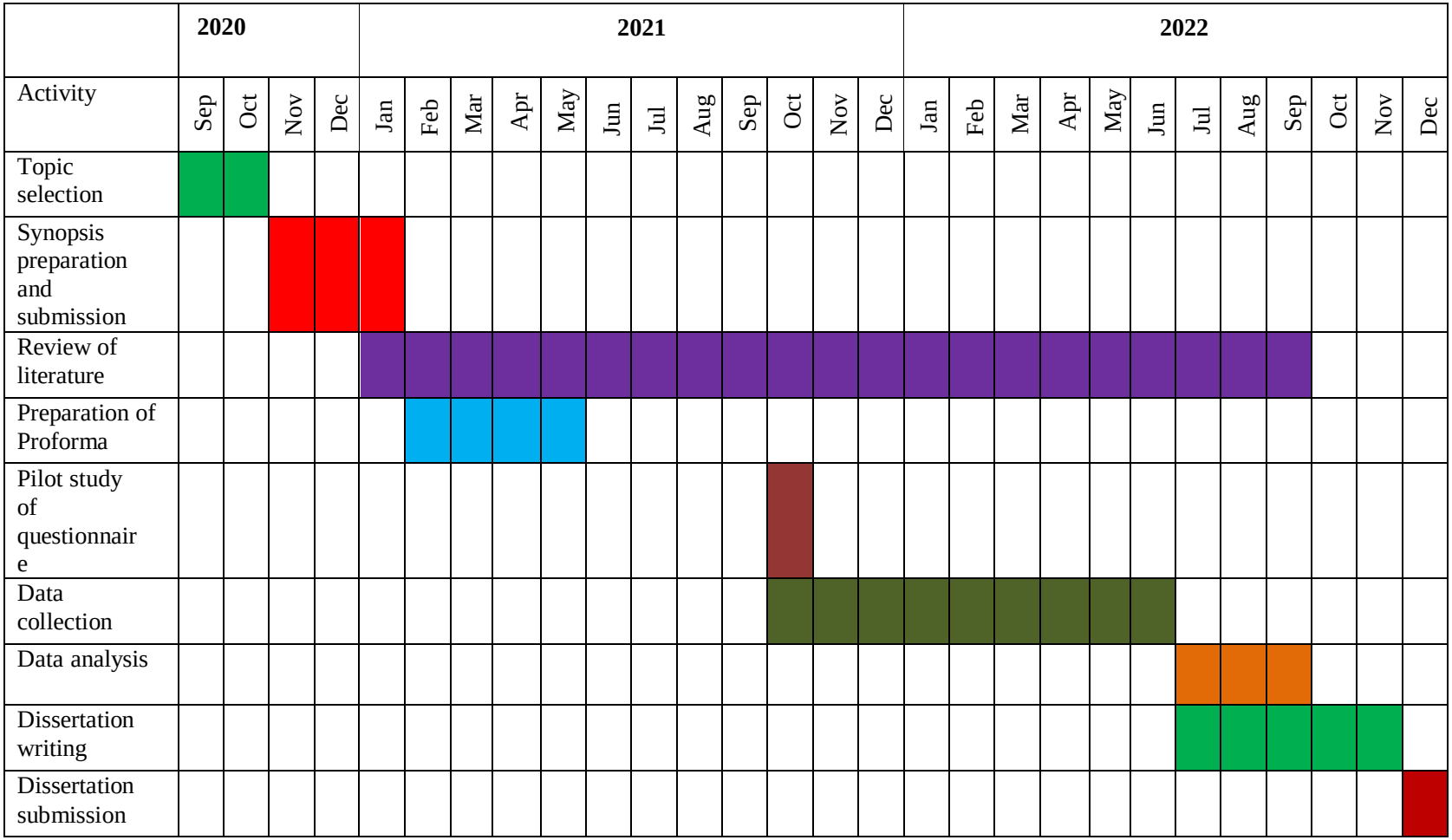
ANNEXURE V: Gantt chart



ANNEXURE V

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