

# Onychophagia In Government High School Students, Guntur, Andhra Pradesh, India

Podila Sankara Pitchaiah, Nazia Sultana  
Professor, Research Scholar Acharya Nagarjuna University

**Abstract - Onychophagia (Nail biting habit) is a common habit among the children. It was reported as a stress removing habit and appeared in anxiety state. Recent studies observed the perfectionism rather than anxiety at the root of the behavior. Present study made to record the extent of the nail biting habit among the rural and urban Government school students. A total of 3399 students, distributed over seven urban and seven rural schools was participated and given a response. Out of the total, 1342 students were studying in rural and 2057 were in urban schools. The study found that 6.88% to 21.29% of rural school students had a nail biting habit compared to 8.40% to 24.97% of urban schools. Various treatment methods suggested by the researchers were included.**

**Keywords: Onychophagia, anxiety, perfectionism, rural and urban government school students**

## I. INTRODUCTION

Onychophagia is a habit of biting nails and fingertips, also called nail biting (NB). It is a stress relieving oral habit adopted by many children and adults. People usually do it when they are nervous, stressed, hungry or bored (Sachan and Chaturvedi, 2012, Siddiqui et al., 2017). NB is usually confined to the fingernails and most nail biters bite all 10 fingers equally rather than selectively. Complications of NB include damage to the cuticles and nails, secondary bacterial infection and dental problems. NB is embarrassing, unattractive, socially undesirable and can predispose to the development of paronychia (Leung et al., 2015). NB habit was observed in 8<sup>th</sup> to 10<sup>th</sup> class students, studying in both rural and urban Government schools.

## II. METHODOLOGY

Seven Zilla Parishadh High schools (Two are girls' schools and others are coeducation) from Guntur rural villages and Seven municipal High schools (One is girls') were selected for the study. 8<sup>th</sup> to 10<sup>th</sup> class students were chosen as subjects. A total of 3399 students was participated and out of them 1175 are 8<sup>th</sup>, 1095 are 9<sup>th</sup> and 1129 are 10<sup>th</sup> students. 1342 were studying in rural schools and 2057 in urban schools. Details are shown in Table 1.

With the help of school Head Masters the students were assembled in a classroom of the respective schools and asked them to give their response to a single question-“Do you have a nail biting habit?”. The purpose of the study and the details regarding nail biting were explained in their mother tongue. The response was analyzed using statistical analysis. Percent variation was studied in rural and urban schools separately and comparatively.

Table 1-Details of School Students Strength

S.No	Rural Schools			Urban Schools				
	Place	8th	9th	10th	Name	8th	9th	10th
1	Chinakakani	59	56	49	Smt. Kasturiba (SK)	173	159	189
2	Namburu –girls'	30	21	30	Smt. Nanchamma Kondal Rao (SGNKR)	66	89	77
3	Namburu	97	96	86	Sri Rama Rao (SJRR)	130	93	93
4	Ponnekallu	92	78	86	Smt. Sayamma (SKS)	100	94	116
5	Takkellapadu	64	47	47	Pattabhipuram (P)	92	83	77
6	Tadikonda- girls'	49	57	49	Kaveti Sankar Rao (KSR)	51	77	53
7	Venigalla	79	69	101	Smt. Chebrolu Mahalakshmi Pullaiah (SCMP)	93	76	76

## III. RESULTS AND DISCUSSION

A percent variation of the rural and urban students with NB was shown in tables 2 and 3 and figures 1 and 2.

### Rural Schools

8<sup>th</sup> class

Highest percent of Namburu girls' school (53.33) were marked the habit of nail biting, followed by Tadikonda girls (53.06%) and Takkellapadu (40.63%). The lowest percent was noticed with Chinakakani school (11.86%).

Table 2 Nail biting habit in rural school students

Rural schools(%)			
Eating nails	8th	9th	10th
Chinakakani	11.86	37.50	30.61
Namburu girls	53.33	28.57	33.33
Namburu	24.74	28.13	31.40
Ponnekallu	21.74	56.41	36.05
Takkellapadu	40.63	48.94	42.55
Tadikonda girl	53.06	33.33	8.16
Venigalla	21.52	47.83	48.51

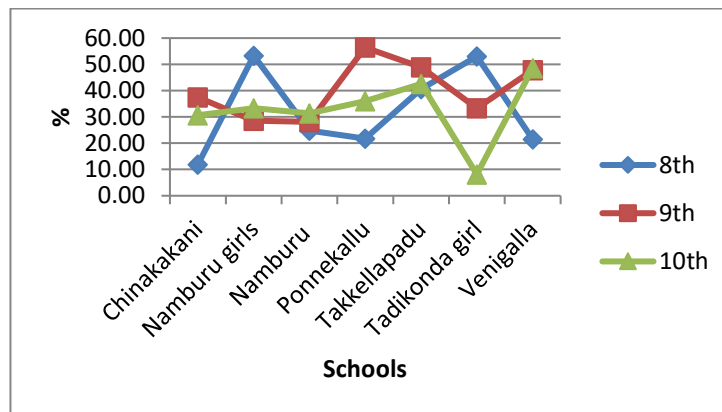


Figure 1 Percent variation of nail biting habit in rural school students

9<sup>th</sup> Class

56.41% of Ponnekallu school students had expressed the habit of nail biting, followed by Takkellapadu School students (48.94%) and Venigalla (47.83%). The lowest percent was observed in Namburu (28.13) and Namburu girls (28.57%).

10<sup>th</sup> Class

Highest percent of Vengilla students (48.51) were marked the habit of nail biting, followed by Takkellapadu (42.55%) and Ponnekallu (36.05%). The lowest percent was noticed with Tadikonda girls' (8.16%).

**Urban Schools**

8<sup>th</sup> Class

Highest percent of P (53.26) was pointed nail biting problem, followed by SKS (47.00%) and SJRR (46.15%). The lowest percent was observed in SGNKR (28.79%).

Table 3 Nail biting habit in urban school students

Urban schools (%)			
Nail biting	8th	9th	10th
SK	44.51	43.40	39.15
SGNKR	28.79	44.94	37.66
SJRR	46.15	61.29	38.71
SKS	47.00	47.87	41.38
P	53.26	49.40	37.66
KSR	37.25	49.35	32.08
SCMP	44.09	28.95	31.58

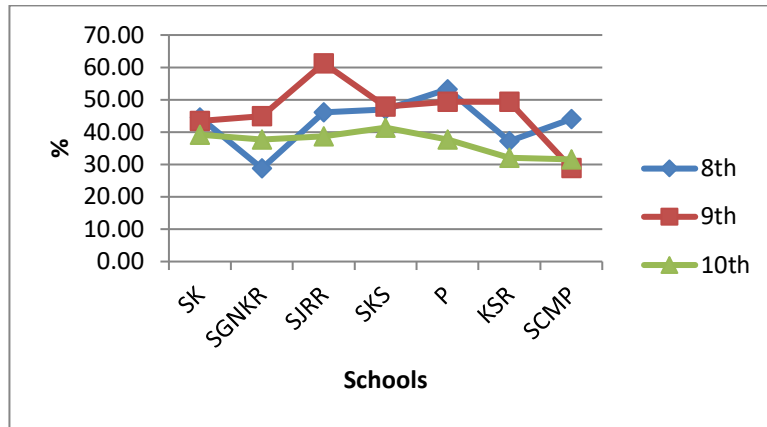


Figure 2 Percent variation of nail biting habit in urban school students

**9<sup>th</sup> Class**

Highest percent of SJRR (61.29) school students had a nail biting habit, followed by P (49.40%) and KSR (49.35%). The lowest percent was observed in SCMP students (28.95%).

**10<sup>th</sup> Class**

41.38% of SKS students were opted nail biting, followed by SK (39.15%) and SJRR (38.71%). The lowest percent was observed in SCMP (31.58%).

**Comparative study**

**Rural schools**

Comparison of 8<sup>th</sup> to 10 class rural and urban students were given (Table 4 and Figure 3). Among the rural schools, high percent of Venigalla students (21.29) had NB habit followed by Ponnekallu (20.43%), Namburu (16.77%) and Takkellapadu (14.84%). The lowest percent was observed with Namburu girls' (6.88%).

**Urban schools**

In the case of urban schools, high percent of SK students (24.97) had a NB habit (Table 4 and Figure 4), followed by SJRR (17.37%), SKS (15.89%) and P (13.51%). The lowest percent was observed with SKS (8.40%).

Table 4 Comparative study of Nail biting between Rural and Urban students (%)

	Rural average (%)	Urban average (%)	
Chinakakani	9.25	24.97	SK
Namburu girls'	6.88	9.99	SGNKR
Namburu	16.77	17.37	SJRR
Ponnekallu	20.43	15.89	SKS
Takkellapadu	14.84	13.51	P
Tadikonda girls'	10.54	8.40	KSR
Venigalla	21.29	9.88	SCMP

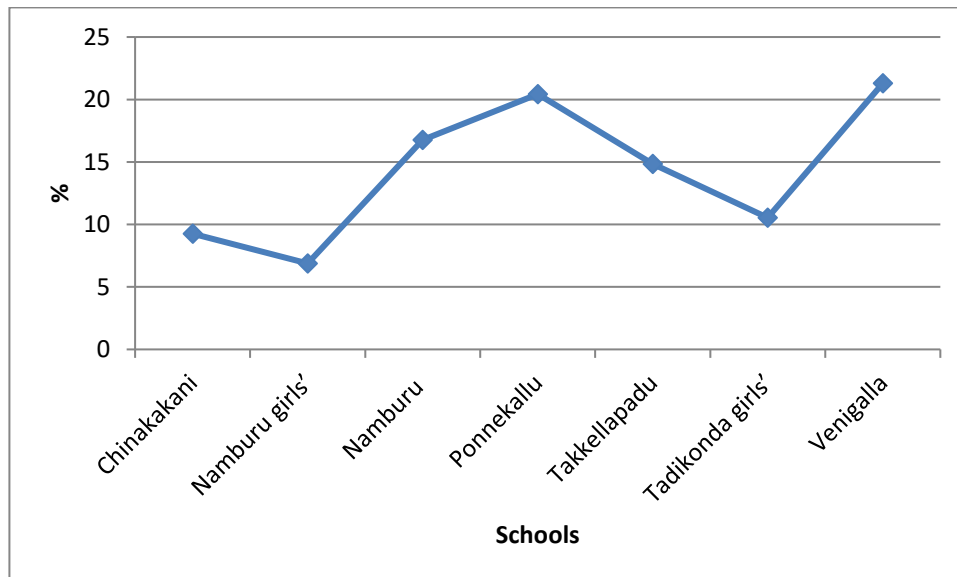


Figure 3 Comparison within the rural school students

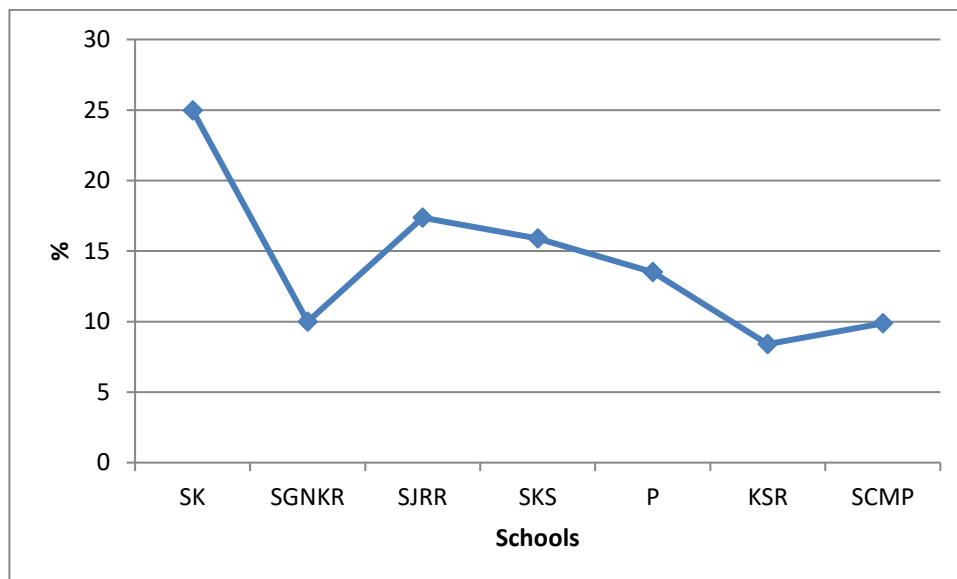


Figure 4 Comparison within the Urban school students

According to Herdiyati and Marhani (2017) most nail biters in elementary students are boys who are mostly aged 9 years old. NB is a common oral habit in children and young adults. It is estimated that 28 to 33% of children between the ages of 7 to 10 years and 45% of adolescents are nail biters. The etiologies suggested for NB include stress, imitation of other family members, heredity a transference from the thumb sucking habit, and poorly manicured nails (Leung et al., 2015). More pathological forms of nails biting are considered an impulse control disorder in the DSM-IV-R and are classified under obsessive-compulsive and related disorders in the DSM-5. The ICD-10 classifies the practice as "other specified behavioral and emotional disorders with onset usually occurring in childhood and adolescence". However, not all nail biting is pathological, and the difference between harmful obsession and normal behavior is not always clear (<https://en.wikipedia.org>). A new study adds evidence to a theory that perfectionism rather than anxiety is at the root of these behaviors (<https://www.scientificamerican.com>).

### Treatment

Various researchers had suggested different methods to treat onychophagia. The best way to treat a nail biter is to educate them, encourage good habits and should provide emotional support and encouragement. Behavior modification therapy has proved to be a successful means of treatment along with drug management. Multidisciplinary approach was suggested by Siddiqui et al., (2017).

Onychophagia cannot be managed without considering some related factors such as comorbidities, precedent and consequences of the behavior.

Nail biting is not an isolated symptom. It can be one symptom from a cluster of symptoms, all of which as well as the motivation behind NB should be evaluated, assessed, and managed. Behavioral modification techniques, positive reinforcement, and regular follow-ups are important for the treatment of nail biting or onychophagia. Application of

denatonium benzoate as a nail polish suggested as a cheap and widely available treatment method (Sachan and Chaturvedi, 2012).

More recently, technology companies have begun producing wearable devices and smart watch applications that track the position of users' hands. Ergun et al., (2013) observed the impact of a healthy nails program on nail biting in Turkish school children and found useful. Albagieh et al., (2017) strong influence of nail biting on Temporomandibular disorders and concluded that it is important to increase the level of awareness about the risks of nail biting habit among teenagers and parents. Punishments have been shown to be not better than placebo, and in some cases may even increase the nail biting frequency.

In the present study, nail biting is observed in the students with 13 to 16 years age. In some schools even 50 to 60% of students had the nail biting habit.

#### IV. CONCLUSION

Nail biting is classified under obsessive compulsive and related disorders in the DSM-5. The present study was observed a maximum of 53.33% 8<sup>th</sup>, 56.41% 9<sup>th</sup> and 42.55 10<sup>th</sup> rural students had the habit. In urban school students the percentages are 53.26, 61.29 and 41.38 respectively. Awareness shall be created among the students, parents and teachers take care in time using researcher's suggestions.

#### V. ACKNOWLEDGMENT

Authors are thankful to Rotary club – Adharsh, Guntur Commissioner, GMC and the Authorities of Acharya Nagarjuna University for the financial assistance.

#### REFERENCES

- [1] Albagieh Hamad N., Abdulaziz A. Alwakeel, Fahad M. Albedairi, Saleh M. Alegaye (2017) Correlation between Nails Biting and Temporomandibular Joint Disorders and Emotional Status among Teenagers in Riyadh: A Cross sectional study, International Journal of Medical Science and Clinical Inventions 4(1): 2599-2603.
- [2] Ergun Ayse, Rumeysa Toprak, and Fatma Nevin Sisman (2013) Impact of a Healthy Nails Program on Nail-Biting in Turkish Schoolchildren: A Controlled Pretest–Posttest Study, The Journal of School Nursing 00(0) 1-9, DOI: 10.1177/1059840513481386.
- [3] Herdiyati Yetty and Nasya Daniya Marhani (2017) A Description of Nail Biting Habit in Elementary School Children, OnLine Journal of Biological Sciences, 17 (2): 66.69.
- [4] Leung Alexander K.C., MD, Wm.Lane M.Robson, MD (2015) Nailbiting, Clinical Pediatrics, Vol 29, No12, pp.690-692.
- [5] Sachan Avesh and TP Chaturvedi (2012) Onychophagia (Nail biting), anxiety, and malocclusion, Indian Journal of Dental Research, 23(5), pp.680-682.
- [6] Siddiqui Javed Ather, Shazia Farheen Qureshi, Waseem M Marei, Talal Abdullah Mahfouz (2017) Onychophagia (Nail Biting): A Body Focused Repetitive Behavior due to Psychiatric Co-morbidity, Journal of Mood Disorders Volume: 7, Number: 1, pp.47-49.
- [7] [https://en.wikipedia.org/wiki/Nail\\_biting](https://en.wikipedia.org/wiki/Nail_biting)
- [8] <https://www.scientificamerican.com/article/nail-biting-may-arise-from-perfectionism/>