

Achluophobia and Gender- A Case Study on Government High School Students, Guntur District, Andhra Pradesh, India

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Abstract - Achluophobia is one type of specific phobia. It is a fear of darkness. The present study was carried out to know the degree of Achluophobia among 8th to 10th Government high school students. The response was taken from 2743 students (Male: 1589 Female: 1154). The study found that 23.41% of male students expressed the phobia and it is 30.06% in the case of female. Comparatively, high percentage of female students have Achluophobia than male. Some of the useful treatment methods are Homeopathy, Exposure based therapy, Cognitive therapy and Relaxation techniques.

Keywords: Achluophobia, treatment, male and female, high school students

I. INTRODUCTION

Specific phobias are extreme and persistent fears of certain objects, situations, or activities, or persons. Achluophobia is the scientific term for fear of the dark (<https://www.allhealthsite.com>). This is also called as scotophobia or nyctophobia. It is triggered by the brain's disfigured perception of what would, or could happen when in a dark environment. It can also be temporarily triggered if the mind is unsteady or scared about recent events or ideas, or a partaking in content the brain considers a threat. Achluophobia produces symptoms beyond the normal instinctive parameters, such as breathlessness, excessive sweating, nausea, dry mouth, feeling sick, shaking, heart palpitations, inability to speak or think clearly or sensation of detachment from reality and death. It can be severely detrimental physically and mentally if these symptoms are not resolved. There are many types of therapies to help manage Nyctophobia (<https://en.wikipedia.org>).

The present study was carried out to know the degree of Achluophobia among male and female students of 8th to 10th class students.

II. METHODOLOGY

A total of 2743 students, studying 8th to 10th in Government high schools was participated, out of them 1589 are male and 1154 were female. The details are shown in tables 1 and 2. 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 fear of darkness ?” The purpose of the study and the details regarding the phobia were explained in their mother tongue. The data were analyzed using statistical analysis. Percent variation was observed and presented under results and discussion.

Table 1 School Wise, Class Wise and Gender Wise Student's Strength

| Classes → Schools | 8th | | | 9th | | | 10th | | |
|----------------------|------|--------|-------|------|--------|-------|------|--------|-------|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Ponnekallu | 52 | 40 | 92 | 36 | 42 | 78 | 49 | 40 | 89 |
| Takkellapadu | 27 | 37 | 64 | 25 | 22 | 47 | 24 | 23 | 47 |
| Venigalla | 33 | 52 | 85 | 31 | 37 | 68 | 48 | 55 | 103 |
| Koppuravuru | 40 | 36 | 76 | 39 | 28 | 67 | 30 | 23 | 53 |
| SK | 104 | 75 | 179 | 106 | 54 | 160 | 118 | 70 | 188 |
| SJRR | 80 | 53 | 133 | 78 | 47 | 125 | 48 | 45 | 93 |
| SKS | 55 | 45 | 100 | 46 | 48 | 94 | 67 | 51 | 118 |
| P | 75 | 17 | 92 | 62 | 21 | 83 | 57 | 20 | 77 |
| KSR | 26 | 26 | 52 | 62 | 17 | 79 | 30 | 26 | 56 |
| SCMP | 54 | 39 | 93 | 40 | 36 | 76 | 47 | 29 | 76 |
| Total | 546 | 420 | 966 | 525 | 352 | 877 | 518 | 382 | 900 |

Table 2 School Wise and Gender Wise Student, with Achluophobia

| Classes → Schools | 8th | | 9th | | 10th | |
|----------------------|------|--------|------|--------|------|--------|
| | Male | Female | Male | Female | Male | Female |

| | | | | | | |
|--------------|-----|-----|-----|----|----|-----|
| Ponnekallu | 9 | 7 | 6 | 10 | 13 | 17 |
| Takkellapadu | 8 | 23 | 9 | 3 | 3 | 4 |
| Venigalla | 3 | 18 | 7 | 7 | 8 | 23 |
| Koppuravuru | 7 | 17 | 4 | 4 | 5 | 3 |
| SK | 22 | 22 | 27 | 11 | 12 | 14 |
| SJRR | 33 | 20 | 28 | 21 | 3 | 10 |
| SKS | 22 | 21 | 12 | 15 | 7 | 21 |
| P | 38 | 11 | 17 | 6 | 0 | 0 |
| KSR | 9 | 9 | 18 | 3 | 6 | 6 |
| SCMP | 24 | 9 | 9 | 7 | 3 | 5 |
| Total | 175 | 157 | 137 | 87 | 60 | 103 |

III. RESULTS AND DISCUSSION

A percent variation of the male and female students, those suffering from Achluophobia was shown in table 3 and figures 1 and 2.

Table 3 Percentage of Male and Female Students with Achluophobia

| Classes → Schools | 8th | | 9th | | 10th | |
|----------------------|-------|--------|-------|--------|-------|--------|
| | Male | Female | Male | Female | Male | Female |
| Ponnekallu | 9.78 | 7.61 | 7.69 | 12.82 | 14.61 | 19.10 |
| Takkellapadu | 12.50 | 35.94 | 19.15 | 6.38 | 6.38 | 8.51 |
| Venigalla | 3.53 | 21.18 | 10.29 | 10.29 | 7.77 | 22.33 |
| Koppuravuru | 9.21 | 22.37 | 5.97 | 5.97 | 9.43 | 5.66 |
| SK | 12.29 | 12.29 | 16.88 | 6.88 | 6.38 | 7.45 |
| SJRR | 24.81 | 15.04 | 22.40 | 16.80 | 3.23 | 10.75 |
| SKS | 22.00 | 21.00 | 12.77 | 15.96 | 5.93 | 17.80 |
| P | 41.30 | 11.96 | 20.48 | 7.23 | 0.00 | 0.00 |
| KSR | 17.31 | 17.31 | 22.78 | 3.80 | 10.71 | 10.71 |
| SCMP | 25.81 | 9.68 | 11.84 | 9.21 | 3.95 | 6.58 |

Male 8th class

Highest percent of P school students (41.30) were marked the Achluophobia (Figure 1A), followed by SCMP (25.81%), SJRR (24.81%). The lowest percent was noticed with Venigalla (3.53%).

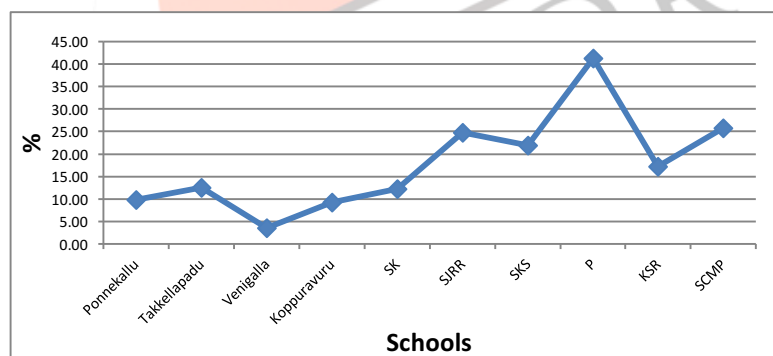


Figure 1A-8th Male Students with Achluophobia

9th Class

22.78% of KSR school students had expressed the Achluophobia (Figure 1B), followed by SJRR school students (22.40%) and Takkellapadu (19.15%). Comparatively, the problem is low in Koppuravuru (5.97%).

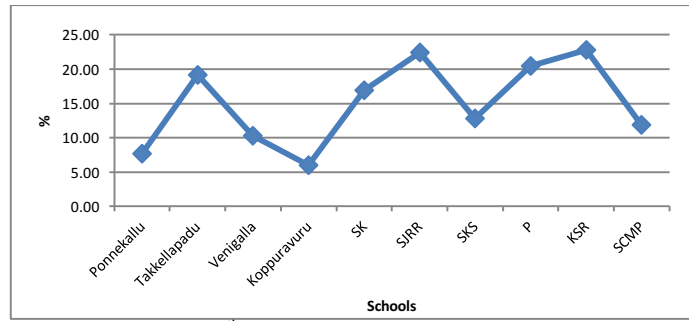


Figure 1B-9th Male Students with Achluophobia

10th Class

Highest percent of Ponnekallu students (14.61) were marked the Achluophobia (Figure 1C), followed by KSR (10.71%) and Koppuravuru (9.43%). No student was opted the phobia from P School.

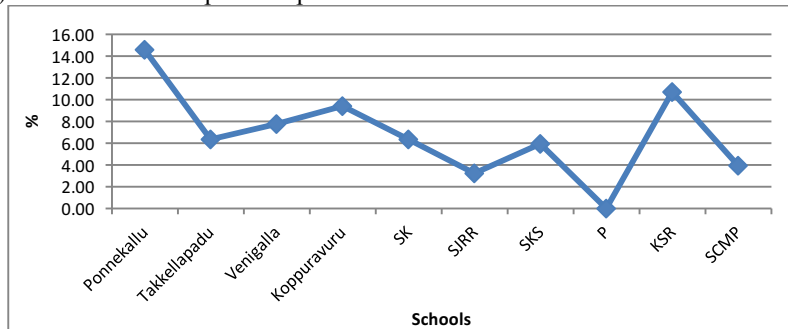


Figure 1C-10th Male Students with Achluophobia

Female

8th Class

35.94% of Takkellapadu students were pointed Achluophobia (Figure 2A), followed by Koppuravuru (22.37%) and Venigalla (21.18%). The lowest percent was observed with Ponnekallu (7.61%).

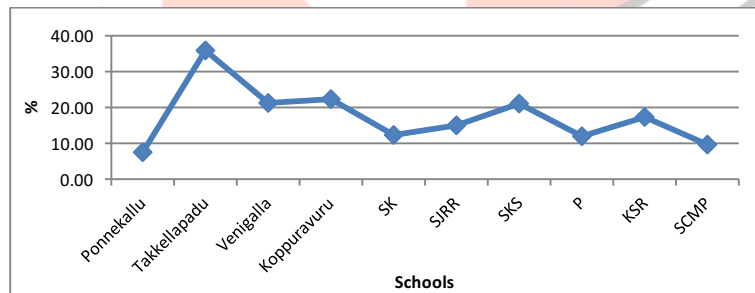


Figure 2A-8th Female Students with Achluophobia

9th Class

Highest percent of SJRR (16.80) school students had Achluophobia (Figure 2B), followed by SKS (15.96%) and Ponnekallu (12.82%). The lowest percent was observed in KSR students (3.80%).

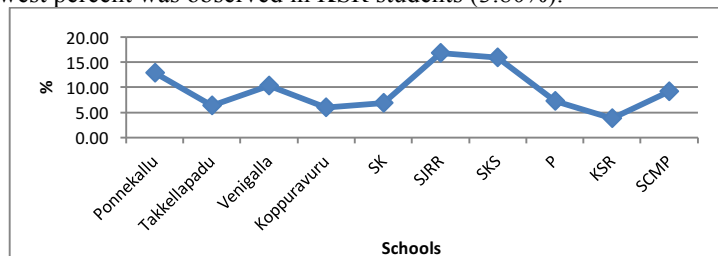


Figure 2B- 9th Female Students with Achluophobia

10th Class

22.33% of Venigalla students were suffering from Achluophobia (Figure 2C), followed by Ponnekallu (19.10%) and SKS (17.80%). No student was expressing the phobia from P school.

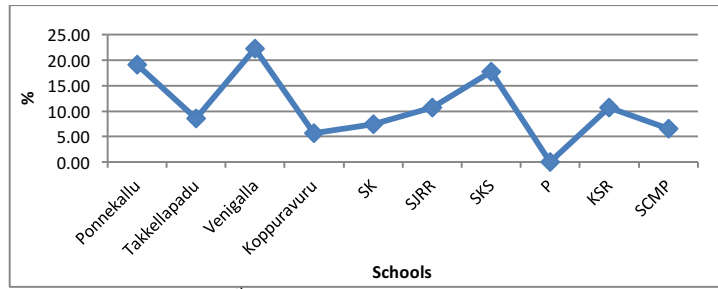


Figure 2C-10th Female Students with Achluophobia

**Comparative study
Male (8th to 10th)**

Comparison of Achluophobia among 8th to 10th class male students was shown in table 3 and figure 3). Among the male students, high percent of P, 8th students (41.30%) had Achluophobia followed by SCMP (25.81%), and SJRR (24.81%). The lowest percent was observed with SJRR, 10th class students (3.23%).

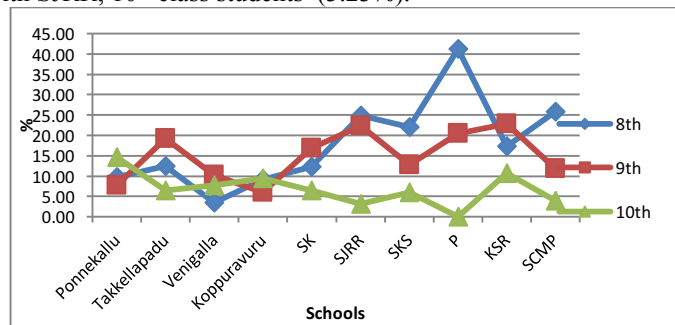


Figure 3. 8th to 10th class male students with Achluophobia

Female (8th to 10th)

In the case of female students, high percent of Takkellapadu students (35.94) had an Achluophobia (Table 3 and Figure 4), followed by Koppuravuru (22.37%), Venigalla (22.33%). The lowest percent was observed with KSR 9th class students (3.80%).

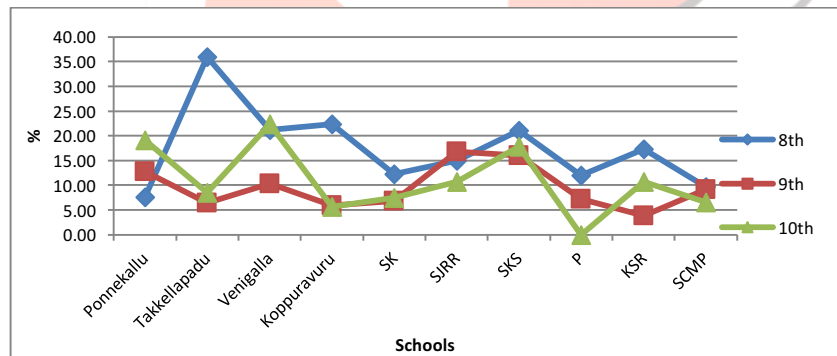


Figure 4. 8th to 10th class Female students with Achluophobia

Comparison of Achluophobia between Male and Female

Comparison of Achluophobia among 8th to 10th class male and female students was shown in table 4 and figure 5). Highest percent of P (21.83) male had expressed Achluophobia, followed by SJRR (18.23%) and KSR (17.65%). The lowest percent was observed with Venigalla (7.03%). In the case of female students, highest percent of Takkellapadu (18.99) had chosen, followed by Venigalla (18.75%) and SKS (18.27%). The lowest percentage was observed with P (6.75%).

Table 4 Comparison of Achluophobia Between Male and Female Students (%)

| Schools | Male | Female |
|--------------|-------|--------|
| Ponnekallu | 10.81 | 13.13 |
| Takkellapadu | 12.66 | 18.99 |
| Venigalla | 7.03 | 18.75 |
| Koppuravuru | 8.16 | 12.24 |
| SK | 11.57 | 8.92 |
| SJRR | 18.23 | 14.53 |

| | | |
|------|-------|-------|
| SKS | 13.14 | 18.27 |
| P | 21.83 | 6.75 |
| KSR | 17.65 | 9.63 |
| SCMP | 14.69 | 8.57 |

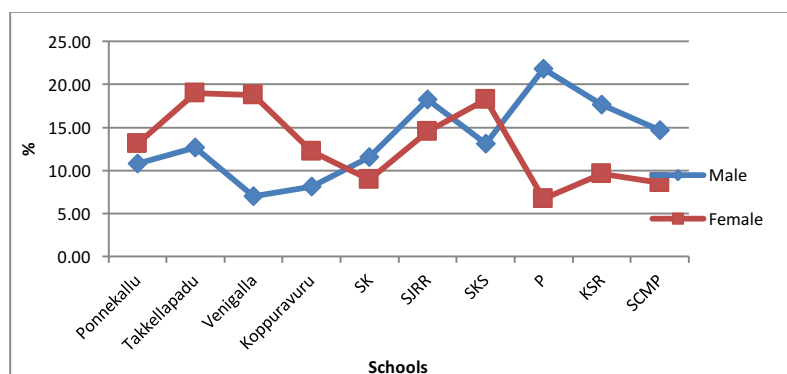


Figure 5 Achluophobia among 8th to 10th class male and female students

The fear of darkness is one of the most common fears among children, with a peak between four and six years. From the age of nine it starts to decrease in the majority of children. In some cases it persists and develops into a specific phobia (Orgiles et al., 2008).

According to Kopcsó and Lang (2014) 71 per cent of respondents reported to have experienced fear of dark at least rarely. Women - compared to men - indicated imagination as the source of their fears, and were more likely to use avoidance, attention detraction and social support as coping. University students - compared to secondary school students - reported negative information as to the origin of their fears, and preferred avoidance as a mode of coping with them. Contents of fear showed no significant difference between either genders or age groups. In a pathway model we found that gender had a direct effect on the frequency of fear of the dark. The pathway model could prove to be an important empirical base for the treatment of fears and anxieties.

Treatment Methods

Fear of darkness is called Achluophobia. At the neurobiological level, significant advances have been made in identifying fear circuits and mechanisms; dysfunctions in these circuits/mechanisms can lead to chronic psychiatric disorders. Indeed, available treatments that aim to reduce pathological fear are associated with decreased symptom severity, but up to 40% of patients show only partial long-term benefit, while most of them fail to achieve complete remission (Singewald et al. 2015).

It appears that the amygdala is central to two phenomena that may support pathological innate fear: fear sensitization (Garcia, 2017).

For the diagnosis, some kind of structured or semi-structured interview is commonly used to assess the criteria established by the World Health Organization (1994) or by the American Psychiatric Association (APA). The evaluation of the severity of the subjective perception of fear, or the frequency of somatic complaints associated with anxiety disorders in childhood (Hofflich et al., 2006), is done by auto applied procedures, interviews, or assessment scales. By the review of the published studies, it is clear that, currently, we have diverse instruments of assessment of darkness phobia, but in most cases the tests are not standardized (Orgiles et al, 2008). The current review and synthesis was designed to provocatively develop and evaluate the proposition that “fear of the unknown may be a, or possibly the, fundamental fear” underlying anxiety and therein neuroticism. The revised criteria are based on logical rhetorical arguments using a constituent reductionist post positivist approach supported by the available empirical data. The revised criteria are then used to assess several fears posited as fundamental, including fear of the unknown (Carleton, 2016).

The main treatment of choice for specific phobias is Cognitive-behavioral (CBT). Behavioral techniques by which survivor is exposed to feared situations (gradually or rapidly) are frequently used. In addition, the patient is taught ways of stopping the panic reaction and regaining emotional control (Abbas and Kiran, 2015).

Some of the useful methods

Exposure-based therapy - (Singh and Singh, 2016)

Cognitive therapy (CT)- (Specific phobia. <http://www.med.upenn.edu>).

Progressive desensitization (Specific phobia. <http://www.med.upenn.edu>).

Relaxation- (Specific phobia. <http://www.med.upenn.edu>).

Hypnosis (hypnotherapy)- (Natural treatment for phobia and anxiety. <http://www.phobicssociety.org>)

Homeopathy- (<http://www.phobicssociety.org>).

Herbal remedies- (Natural treatment for phobia and anxiety. <http://www.phobicssociety.org>).

IV. CONCLUSION

The present study made a comparison of the Achluophobia among 8th to 10th male and female students. Out of the total 1589 male students 372 students have phobia. Similarly, in the case of female students, 347 students out of 1154 expressed the

phobia. Highest percent of P school male students (21.83) and Takkellapadu female students (18.99) had the phobia. There are certain therapies by which Achluophobia is treatable. State Government shall find the suitable mechanism to assess the specific phobias among the students and to treat the phobias.

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