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[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, et al. Caries-preventive effect of fluoride toothpaste: A systematic review. *Acta Odontol Scand* 2003;61:347-55.

### Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone iodine antiseptics. State of the art. *Dermatology* 1997;195 Suppl 2:3-9.

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[8] World Health Organization. Oral health surveys - basic methods, 4<sup>th</sup> edn. Geneva: World Health Organization; 1997.

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[9] National Statistics Online—Trends in suicide by method in England and Wales, 1979-2001. [www.statistics.gov.uk/downloads/theme\\_health/HSQ20.pdf](http://www.statistics.gov.uk/downloads/theme_health/HSQ20.pdf) (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

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## To Assess the Knowledge of Blood Donation among Voluntary Blood Donor at Blood Bank, Krishna Hospital Karad (Maharashtra, India)

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PRABHUSWAMI HIREMATH

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\*Krishna Institute of Nursing Sciences  
Karad, Maharashtra, India

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### Abstract

The theme of the 2012 World Blood Donor Day campaign, "Every blood donor is a hero" focuses on the idea that every one of us can become a hero by giving blood. Today, Blood Transfusion Services constitute a crucial part of any healthcare delivery system. Adequate and safe supply of blood and blood components is essential, to enable a wide range of critical care procedures to be carried out in hospitals. The objective of the present study was to identify the level of knowledge of blood donation among voluntary blood donors attending blood bank of Krishna Hospital Karad and to correlate the knowledge with socio-demographic variables. 100 voluntary Blood donors between the ages of 18 and 55 years were selected by Non probability Convenient Sampling technique. Descriptive Survey Design was employed for study. Structured knowledge questionnaire was given to assess their knowledge on Blood Donation. The study sample consisted of 64 males (64%) and 36 females (36%). The overall knowledge on blood donation among respondents was observed as good 10%, average 56%, and poor 34%. In males the overall knowledge level was found good among 9%, average 52% and poor 39%. In females, good knowledge level was observed among 14%, average 49%, and poor 37%. Education and gender was significantly associated with knowledge of blood donation where as education religion blood group and age were not statistically significant. In

the present study researcher concluded that there is need for health education regarding blood donation, which will ultimately increases the awareness among general population to motivate for voluntary blood donation.

**Keywords:** Tobacco; Blood donation; Knowledge.

### Introduction

Today, Blood Transfusion Services constitute a crucial part of any healthcare delivery system. Adequate and safe supply of blood and blood components is essential, to enable a wide range of critical care procedures to be carried out in hospitals. India with a population of about one hundred and twenty crore is naturally the country which requires lot of blood to save lives of citizens. It has been quoted that there is need of 8 million units of blood every year in our country. Out of this, only half that is around 4 million units of blood can be obtained from voluntary blood donors. Rest all comes from replacement blood donation from relatives or paid donors. On 14 June, countries worldwide celebrate World Blood Donor Day with events to raise awareness of the need for safe blood and blood products and to thank voluntary unpaid blood donors for their life-saving gifts of blood. The theme of the 2012 World Blood Donor Day campaign, "Every blood donor is a hero" focuses on the idea that every one of us can become a hero by giving

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Corresponding author: Prabhuswami Hiremath, Krishna Institute of Nursing Sciences Karad, Maharashtra, India.

blood. While recognizing the silent and unsung heroes who save lives every day through their blood donations, the theme also strongly encourages more people all over the world to donate blood voluntarily and regularly. Transfusion of blood and blood products saves millions of lives each year. In the most developing countries, however, preventable deaths still occur due to inadequate supply of safe blood and blood products. Most of this burden falls on women and children as a consequence of pregnancy-related complications, malnutrition, malaria and other infectious diseases. Trauma, including road traffic accidents and injuries due to armed conflicts increase the demand for blood. Despite its vital role in saving life, blood transfusion may expose the recipient to a number of adverse effects which can be life-threatening. These include the transmission of infections such as HIV/AIDS, hepatitis B and hepatitis C which are of immense public health importance due to their high prevalence in the African Region. The objective of the present study was to identify the level of knowledge of blood donation among voluntary blood donors attending blood bank of Krishna Hospital Karad and to correlate the knowledge with socio-demographic variables.

## Material & Methods

This study was carried out in a Krishna Hospitals Blood Bank, Karad. The Blood Bank recognized and registered as a Regional Blood Transfusion Center under State Blood Transfusion Council of Maharashtra. Hundred voluntary Blood donors between the ages of 18 and 55 years were selected by Non probability Convenient Sampling technique. Non experimental Descriptive Survey Design was employed for study. Samples those who are present at the time of data collection, who know Marathi, Hindi & English language and both sex were include in study. Those who are not willing to participate were excluded from the study. Informed consent was obtained from the samples then knowledge questionnaire was given to assess their

knowledge on Blood Donation. Data was analyzed with descriptive statistics (frequency, percentage, mean & standard deviation) and inferential statistics (chi square ( $X^2$ )) is used to determine the association between selected demographic variables and knowledge of blood donor.

## Result

The response was gathered from a total of 100 respondents voluntarily participated in the survey. The study sample consisted of 64 males (64%) and 36 females (36%). The mean age of male donors was 30 years and the mean age of female students was 26 years.

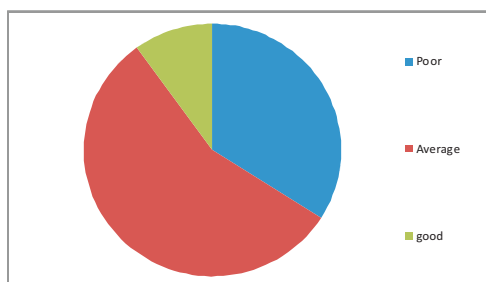
Among 100 donors, 49% have donated blood only once and 51% donated blood whenever there is a need. Majority (67%) of donors among respondents donated blood

**Table 1: Distribution of samples according to socio-demographic characteristics**

Sl no	Description	Frequency	%
Age:			
a)	16-25 years	42	42
b)	26-34 years	38	38
c)	35-44 year	20	20
d)	45 years above	Nil	
Gender:			
a)	Male	64	64
b)	Female	36	36
Education:			
a)	Below Primary	22	22
b)	Primary	18	18
c)	Secondary	34	34
d)	Graduate	26	26
Blood Group:			
a)	A +ve	22	22
b)	A -ve	Nil	Nil
c)	B +ve	22	22
d)	B -ve	Nil	Nil
e)	AB +ve	22	22
f)	AB -ve	Nil	Nil
g)	O +ve	34	34
h)	O -ve	Nil	Nil
Religion:			
a)	Hindu	24	24
b)	Muslim	14	14
c)	Christian	10	10
d)	Others	02	02

**Table 2: Knowledge of Voluntary Blood Donors related to Blood Donation**

Knowledge	Frequency	Percentage
Poor	34	34%
Average	56	56%
Good	10	10%
Total	100	100%



voluntarily, 30% had donated blood only for relatives or friends. A total of 33 (33%) men and 21 (21%) women had donated blood at least once in the past.

Knowledge of blood donation among donors was measured by using 50 questions. The overall knowledge on blood donation among respondents was observed as good 10%, average 56%, and poor 34%. In males the overall knowledge level was found good among 9%, average 52% and poor 39%. In females, good knowledge level was observed among 14%, average 49%, and poor 37%. Education and gender was significantly associated with knowledge of blood donation where as education religion blood group and age were not statistically significant.

## Discussion

**Table 3: Association of Knowledge of blood donation with socio-demographic Variables**

Sl no	Demographic variables	Significant
a)	Age	Significant
b)	Gender	Not significant
c)	Education	Highly significant
d)	Blood group	Not significant
e)	Religion	Not significant

The population-based cross-sectional study was conducted at Gangtok in the state of Sikkim, India, on 300 subjects to analyze the factors of knowledge of prospective blood donors that may influence their perception and awareness about blood donation. They found that 46% of the study populations have high knowledge score. The knowledge about blood donation was found to be statistically significant with the occupational status and the education levels <sup>(1)</sup>.

A Descriptive cross sectional study was conducted at Northern Nigeria to determine the knowledge and blood donation practices among adults. A result shows that the knowledge of the respondents on blood donation was low. Less than half 46.2% knew some indications for blood transfusion. 22.6% respondents had donated blood in the past but only 1% of these were VBD while 95% were donations based on blood needs by family members, relations and friends. Few respondents 12% had received blood transfusion in the past, and the main source of blood transfused was paid commercial donors 44.6%. The fear of HIV screening was a major hindrance and limitation to voluntary blood donation among respondents. They suggested that gaps in knowledge & practice of VBD can be addressed through public awareness campaigns, and motivational programs such as free medical services for voluntary blood donors <sup>(2)</sup>.

Okpara R A (1989) also recommended in his study that more positive steps should be taken to educate the population about blood donation and transfusion because the most common reason for non-donation and non-acceptance of blood transfusion is religious belief<sup>(3)</sup>.

Many of review reported that have reported fear of complications, fear of hospitals, lack of knowledge & awareness, false beliefs and religious traditions as the main reasons for not donating blood (Fernandez Montoya, 1996; Hosain et al., 1997; Wiwanitkit, 2000; Boulware et al., 2002; Glynn et al., 2003; Olaiya et al., 2004)<sup>(5,6,7)</sup>.

Mousavi F (2011) assessed the knowledge of Iranian population on blood donation and found mean knowledge score of 8 which is highly significant with Age, gender and level of education<sup>(4)</sup>.

## Conclusion

The knowledge on blood donation can affect one's willingness to donate blood and ultimately, this could help improve the number of blood donors. The study will help to know the factors contributing to decrease in number of young blood donors, which is vital in formulation of effective interventions. In the present study also researcher concluded that there is need for health education in the fields of blood donation, which will ultimately increases the awareness by increase in advertisements and use of media among general population to motivate for voluntary blood donation.

## Reference

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## Nurse Researcher and Allocation Concealment

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**SAMPOORNAM W**

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Lecturer, Department of Mental Health  
Nursing, Dhanvantri College of Nursing,  
Thiruchengode (Taluk), Namakkal  
District- 637303.

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### Abstract

Allocation concealment is defined as the procedure for protecting the randomisation process so that the treatment to be allocated is not known before the patient enters into the study. Hiding the allocation sequence from those performing randomization is known as "Allocation Concealment". The primary purpose of randomizing patients into treatment arms is to prevent researchers, clinicians and patients from predicting and thus influencing, upcoming group assignments. Allocation concealment is a strict implementation of the schedule must be secured through an assignment mechanism that prevents biases that could stem from foreknowledge of treatment assignment.

Enclosing assignments in sequentially numbered, opaque, sealed envelopes can be a good allocation concealment mechanism if it is developed and monitored diligently.

Unpredictability is assured through the process of concealment which is critical in preventing selection bias that is the potential for investigators to manipulate who gets what treatment such manipulation in clinical trials has been well documented. Unclearly concealed and inadequately concealed trials compared to adequately concealed trials, exaggerated the estimates of an intervention's

effectiveness by 30% to 40%, on average. Finally note that the issues of randomization and concealment should be kept separate from blinding and they are completely different.

**Keywords:** Randomization; Allocation concealment; Sequentially numbered opaque sealed envelopes; Nurse researcher.

### Introduction

Concealment of randomisation is specified in the design section of Evidence Based Nursing abstracts of treatment studies. Concealing the knowledge of upcoming group assignments prevents researchers from (unconsciously or otherwise) influencing which participants are assigned to a given intervention group [1].

Allocation concealment refers to the stringent precautions taken to ensure that the group assignments of patients are not revealed prior to definitively allocating them to their respective groups [9]. Concealment has been shown to be more important in preventing bias than other components of allocation such as generation of the allocation sequence [2]. Persons creating the allocation scheme should not be involved in ascertaining eligibility, administering treatment or assessing outcome.

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**Corresponding author: Sampooram W**, Lecturer, Department of Mental Health Nursing, Dhanvantri College of Nursing, Thiruchengode (Taluk), Namakkal District- 637303. E- Mail: sampooramwebster@yahoo.in.



The actual process of generating the randomization scheme and the steps taken to ensure concealment should be described in detail. Whether it is a simple coin toss or the use of sealed opaque envelopes or a sophisticated off-site centralized randomization centre [5].

Although there are many approaches to randomize that are known to effectively conceal the randomization sequence, the use of sequentially numbered, opaque, sealed envelopes (SNOSE) is an effective and cheap method [3].

Enclosing assignments in sequentially numbered, opaque, sealed envelopes can also be a good allocation concealment mechanism if it is developed and monitored diligently. Investigators should ensure that the containers or envelopes are opened sequentially and only after the participant's name and other details are written on the appropriate label or envelope [9].

#### *Definition*

Concealment allocation can be defined as the process by which the researcher is blinded to the randomized sequence which was generated. The person who enrolls participants in the trial should not be the same person who generates the allocation sequence [7].

#### *Methods or schemes of allocation concealment*

1. Sequentially numbered, opaque, sealed envelopes (SNOSE)
2. Sequentially numbered containers
3. Pharmacy controlled
4. Central randomisation

#### *Sequentially numbered, opaque, sealed envelopes (SNOSE)*

Randomizing participants using sequentially numbered, opaque, sealed envelopes (SNOSE) is the most accessible and straightforward method of maintaining allocation concealment

and does not require the use of specialized technology.

#### *Methods used to preserve SNOSE allocation concealment*

- a) Unrestricted (simple) randomization
- b) Stratifies randomisation on one factor
- c) Permuted blocks
- d) Conducted at more than one study site.

#### *Materials required [For a typical 50 patient trial]*

Obtain 50 identical, opaque, letter-sized envelopes, 50 sheets of standard size paper, 25 letter size sheets of single sided carbon paper and two rolls of household aluminium cooking foil. Complete the kit by purchasing a tupperware-style plastic container large enough to hold all 50 envelopes.

#### *Steps involved in SNOSE method*

##### *Step 1: Initial preparation*

Cut the aluminium foil into 50 sheets that are the same width as the envelope and twice its height. The carbon paper should be cut into 50 envelope sized sheets. Separate the 50 sheets of standard size paper into two sets of 25 sheets. On one set of 25, print or write Treatment A and on the second set, print or write Treatment B. If the trial is not blinded (Treatment A vs. Treatment B) to avoid confusion you should write the exact name of the assigned treatment (instead of Treatment A or B).

##### *Step 2a: Preparing 'Treatment A' envelopes*

Select one sheet of standard sized paper marked 'Treatment A' and fold to fit the envelope. Next place one sheet of carbon paper on top of the folded 'Treatment A' allocation paper with carbon side facing the paper and fold one sheet of foil over both sides of the carbon-'Treatment A' paper combination. Place the completed insert into a blank envelope

with the carbon paper closest to the front of the envelope. If the completed insert is placed into the envelope properly, the double foil wrapper ensures the envelope is truly opaque and cannot be read by holding it up against a strong light source. If the carbon paper is positioned properly, writing on the front of the envelope is transferred to the actual treatment allocation paper inside. The carbon paper is important for establishing an audit trail that can be used to prevent violations of allocation concealment. Complete all 25 'Treatment A' envelopes, seal each envelope and sign your name in pen over top of the envelope seal.

*Step 2b: Preparing 'Treatment B' envelopes*

Prepare the 'Treatment B' envelopes as in Step 2a. After Step 2b is complete, there should be one pile of 25 sealed 'Treatment A' envelopes and a second pile of 25 sealed 'Treatment B' envelopes. Do not mix 'Treatment A' envelopes with 'Treatment B' envelopes and do not write on the envelopes except for signing your name over the seal.

*Step 3a: Unrestricted (simple) randomization*

Combine the 25 sealed 'Treatment A' envelopes with the 25 sealed 'Treatment B' envelopes and shuffle as you would a deck of cards. Once you are satisfied that the deck of envelopes is shuffled very thoroughly, with a firm hand mark a unique number on the front of each envelope sequentially from one to fifty in pen. The carbon paper inside the envelope will transfer this number to the allocation paper inside. Place these envelopes into the plastic container in numerical order, ready for use.

*Step 3b: Stratified randomization one factor*

Stratified randomization is used to ensure that important prognostic factors such as age, disease severity or other patient characteristics are balanced across intervention groups. First create and seal 25 'Treatment A' envelopes and 25 'Treatment B' envelopes as outlined in Step 1, Step 2a and Step 2b. Next obtain two Tupperware style plastic containers and mark

one as 'Treatment A' and the other as 'Treatment B'.

Assume the previous research documents and shuffle 'Treatment A' and 'Treatment B' thoroughly. Once you are satisfied that envelopes are shuffled very thoroughly mark a unique identifier on the front of each envelope sequentially. The carbon paper inside the envelope will transfer the identifier to the allocation paper inside. Place the envelopes in numerical order in the container marked 'Treatment A', ready for use. Follow the same procedure for 'Treatment B'.

*Step 3c: Permuted block randomization in a stratified trial*

Block randomization is simply a process that can be used to ensure balance in a clinical trial after the enrolment of each block of patients. In Step 3a, because one prepared 25 'Treatment A' envelopes and 25 'Treatment B' envelopes at trial completion (after enrolling 50 patients) one would be certain of having similar numbers in each group.

Permuted blocks are useful for maintaining similar treatment group sizes in small, stratified or multi-centred trials when the number of patients that will be recruited within each strata or centre is uncertain. Unfortunately recent research suggests that it may be possible to subvert or anticipate the randomization sequence in unblinded trials that are block randomized using a uniform block size [2]. For this reason, the researchers strongly recommend using at least two or more different block sizes.

*Step 3d: Permuted blocks in a stratified trial with two (or more) study sites*

The patient trial will be conducted at two sites which will be stratified on one factor and will use permuted block randomization within strata. First based on the best guess estimate the maximum number of patients any one site will enrol in any single strata. It is better to over-estimate than to run out of envelopes half way through the trial. To set up the



randomization kit for Site 1 repeat Step 1, Step 2a and Step 2b. For Site 2 repeat the same procedure. Note that four Tupperware-style plastic containers will be required to hold the randomization kits.

Block randomization will not guarantee that an identical number of patients will be enrolled into each arm of the trial but it will ensure that similar numbers of patients are enrolled into each arm. There are no requirements that group sizes must be identical. The primary purpose of varying the block size is to prevent the study participants from guessing the upcoming randomization sequence.

#### *Advantages of SNOSE method*

- Low cost
- High reliability
- Allocation details received quickly
- Audit trail created (allocation paper)

#### *Disadvantages of SNOSE method*

- Research assistant must be able to access envelopes consistently
- Vulnerable to breach of allocation sequence
- Participant personal information transferred to allocation paper

#### *Nurse researcher's role in allocation concealment*

Beginning with the October 1999 issue of *Evidence-Based Nursing*, allocation concealment and blinding have been given more attention. *Allocation concealment*, shields those involved in a trial from knowing upcoming assignments in advance. Without this protection, investigators have been known to change who gets the next assignment, making the comparison groups less equivalent.

Nurse researcher should know the steps and process involved in allocation concealment in order to prevent the bias. Nurses should not confuse allocation concealment with blinding. Allocation concealment concentrates on

preventing selection and confounding biases, safeguards the assignment sequence *before and until* allocation, and can *always* be successfully implemented. By comparison, blinding concentrates on preventing study participants and personnel from determining the group to which participants have been assigned (which leads to ascertainment bias), safeguards the sequence *after* allocation, and cannot always be implemented [4].

Prompt exercise and implementation of allocation concealment would bring strong evidence based practice in nursing.

### **Conclusion**

By describing assessments of allocation concealment and blinding, abstracts included in *Evidence-Based Nursing* will help readers to discern those trials that have made superior efforts to minimise bias. Judging the quality of allocation concealment and blinding reflects current empirical research and to apply the principles of evidence-based practice to reporting of study findings. Adequate allocation concealment emerges from the analyses as crucial to reducing bias. Without it the whole point of randomization vanishes and bias may distort results.

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## Study of Self Concept as Predictor of Anxiety among Adolescents

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SEEMA RANI

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Assistant Professor  
Rufaida College of Nursing  
Jamia Hamdard-110062

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### Abstract

**Objectives:** To find out the self concept & anxiety levels of adolescents and seek the relationship between anxiety & self concept levels.

**Methodology:** The study was conducted in Poonam Nagar, Mumbai in the year 2009. Subjects included 150 adolescents, both boys and girls in the age group of 13 -18 years selected by convenient sampling. Data collection instruments included Dr. N.K. Dutta Self Concept Scale and Sinha Anxiety Scale. Descriptive and inferential statistics were employed for analysis of data.

**Results:** Obtained self concept scores ranged from 215 – 379 with a mean score 287.60 and standards deviation 21.02. Anxiety scores ranged from 11-86 with a mean of 35.98 and standard deviation 18.38. Co-efficient of correlation (r) between self concept and anxiety score was .82. Mean anxiety score for high self concept adolescents was more than low self concept ones. t-value of 9.53 at 0.05 levels was found to be statistically significant.

**Conclusions:** There is need of saving the 22% of future citizens of Indians i.e. adolescents from undue stress and anxiety. Schools and hospitals should be adequately equipped with guidance and counseling.

**Keywords:** Anxiety; Self concept; Stress; Adolescent.

### Introduction

Adolescence is one of life's fascinating and perhaps most complex stages, a time when young people take on new responsibilities and experiment with independence. They search for identity, learn to apply values acquired in early childhood and develop skills that will help them become caring and responsible adults.

Every adolescent has an opinion about his own self. This opinion of him regarding his own worth, as a person i.e. "who he is", may color much of his thinking and his personality. A confident and positive self concept may strengthen the ability of the individual to deal with the life problem in an effective and efficient way<sup>1</sup>.

Self concept is defined in terms of self-as-object. It is an important aspect of personality and that individual differences along this dimension are as meaningful as difference in attitudes, motives and abilities.

In the development of self concept, children often build up two distinct concepts. First self concept comes from external experiences and contacts with others. The child has specific concepts relating to his body, his appearances and how he compares his abilities of different types with the children, with whom he

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Corresponding author: Seema Rani, Assistant Professor, Rufaida College of Nursing, Jamia Hamdard-110062.

E-mail: Seema9rani@yahoo.co.in.

associates. This type of concept is formed first because the child's earlier experiences which are objective. It is known as objective concept. Another type of self is based on his own thoughts, feelings and emotional experience. It is known as subjective concept<sup>2</sup>.

Anxiety is the physical state producing tension and arousal which accompanies more specific physical motive components. Anxiety is a consequence of conflict. Quite often anxiety reactions are displayed tendencies in pathological developmental trends within the personality of the individual which leads to misvaluation of environmental problems to severe conflicts and to inefficient personal and social adjustment.

Freud views anxiety as consciously felt unpleasant experience different from pain. So far as it has physiological concomitants and it discharges itself through definite pathways in a response to a situation of danger<sup>3</sup>.

The present articles will place emphasis upon studies investigated into the correlation between anxiety and self concept. The investigator found that not much of the work in the field has been done in India. But it has also been observed that some allied studies have already been undertaken in foreign countries during the last 25 or 30 years. In India the value and importance of self concept has not been disseminated to the professionals working in the field of health so far.

In the present study, the investigator has chosen adolescents in the age group of 13-18 years because this period of life is sensitive as it is brought with changes, difficulties and special problems. Hence this study was contemplated to assess the self concept as a predictor of anxiety among adolescents. Objectives of the study were to assess the self concept and anxiety levels of adolescents. Study aimed to seek the relationship between anxiety and self concept levels of adolescents. Study also found the difference in the anxiety level of adolescents belonging to low and high self concept level<sup>4</sup>.

## Methods and Materials

The research approach to the study was quantitative survey. The study was conducted in the homes of adolescence living in Poonam Nagar, and urban colony in Mumbai during the period from July 25 to October 25, 2009. This locality houses largely local Marathi population and few migrant families who came to metropolitan city in search of job and finally settled over for more than 20 years. The population of the study comprised of adolescents while the sample consisted of 150 adolescents, both boys and girls, in the age group of 13 - 18 years, living in Poonam Nagar, Mumbai. To collect the data, convenient sampling technique was used.

### *Data collection instruments were*

1. *Dr. N.K Dutta Self Concept Scale*: There are 104 items in the scale. The five point rating scale was used to assess the perceived self. Scoring scheme for the scale ranged from 'seldom' - (1), 'sometimes' (2), 'usually' - (3), 'almost always' - (4) and 'always' - (5).
2. *Sinha Anxiety Scale*: There are 100 items in the scale, which are descriptive statements of various situations. Against each statement, subjects were to write 'true' or 'false'. Score of the 'Anxiety Scale' was regarded as a good estimate of individuals' manifest anxiety. Each true was regarded as 1 and false as 0. Low score i.e. below 25<sup>th</sup> percentile was regarded as indicative of poor motivation, sluggishness and low anxiety level. Very high score i.e. above 75<sup>th</sup> percentile was considered as symptomatic of high state of anxiety. The middle range score were regarded as subjects with moderately good drive level to stimulate performance.

Both the scales included personal profile of adolescents such as name, age and sex, name of the school/college in which studying, family income, marital status, and family occupation.



After 1 week of administering Dr. N.K Dutta Self Concept Scale, Sinha Anxiety Scale was administered to all 150 subjects. Confidentiality of the information provided by the subjects was maintained.

Descriptive and inferential statistics were employed for statistical analysis. Mean, Standard deviation, Co-efficient correlation and t-value were calculated. A probability value of  $< 0.05$  was considered statistically significant.

## Results

The findings of the study have been given below:

Self Concept and anxiety scores indicate and a wide dispersion of self concept and anxiety among adolescents (table 1).

**Table 1: Range, Mean and Standard Deviation of Self Concept and Anxiety Scores of Adolescents**

**n = 150**

Variable	Possible Range of Scores	Obtained Range of Scores	Mean	Standard Deviation
Self Concept Score	104 - 520	215 - 379	287.60	21.02
Anxiety Score	0 - 100	11 - 86	35.98	18.38

**Table 2: Co-efficient of Correlation (r) between Self Concept and Anxiety Scores of Adolescents**

**n = 150**

Variable	Mean	S.D.	R
Self Concept Score	287.60	21.02	.82
Anxiety Score	35.98	18.38	

For d (f) 148 at .05 level

**Table 3: Comparison of Anxiety between high & low self concept level adolescents**

**n = 150**

Group	Mean Anxiety Score	S.D.	t - value
High Self Concept	52.44	9.08	9.53
Low Self Concept	15.28	6.56	

For d (f) 148 at .05 level

To determine the relationship between the self concept and anxiety scores, co-efficient of correlation was computed by 'Pearson Product Moment'. The same findings are presented in Table 2.

The computed 'r' value of .82 (table 2) indicates a highly positive significant correlation between self concept and anxiety of adolescents. The result is in accordance with hypothesis formulated for the present study i.e. there will be positive correlation between self concept and anxiety of adolescents.

In order to study and compare the level of anxiety between low self concept and high self concept level adolescents, mean, standard deviation & 't' value were computed. The results of the same are presented in table 3.

In high self concept category, there were 35 subjects i.e. those scoring 308.62 and above (Mean + 1S.D.). In low self concept category, there were twenty eight subjects, i.e. those scoring 266.62 and below (mean -1S.D.).

The above result shows that the mean anxiety score for high self concept adolescents is more than low self concept adolescents. The obtained difference was found to be statistically significant as evident from 't' value of 9.53 at .05 level. This is in accordance with the hypothesis no. 2 formulated for the present study i.e. there will be statistically significant differences in the anxiety level of adolescents belonging to the low and high self concept groups.

The results not only support the hypotheses formulated but are also in accordance with the various studies carried out in this field.

## Conclusion

The present study has revealed that anxiety and self concept levels are wide ranged among adolescents in Poonam Nagar, Bombay. Obtained anxiety score range is 11-86 and self concept score range is 215-379. This may be attributed to adolescents' transition from childhood to adulthood. They grow physically, sexually and cognitively as well. They create

their concepts of themselves, form and protect their self esteem and identity. High levels of stress and anxiety are related to their self concepts<sup>5</sup>.

Kureshi, Afzal Husain (1979) administered a self concept Q-Sort Task and Taylor Manifest Anxiety Scale to 100 under-graduate students. They found 0.84 correlation coefficient between self concept and anxiety. Results confirmed the hypothesis that self concept and anxiety are highly interrelated<sup>6</sup>.

In the present study it is found that correlation between self concept and anxiety is .82 which means that self concept and anxiety are highly positively correlated to each other. Thus the result of this study is in accordance with the results of the other studies done in the area.

The present study also aimed at finding the difference in anxiety level of adolescents categorized into high self concept and low self concept groups. Findings revealed that anxiety is significantly high among the adolescents belonging to the high self concept as compared to the low self concept group ( $t$  - value being 9.53).

Today's world is the world of stress and anxiety. With the increase in specialization and competition in the modern era, the phenomena of anxiety caused by day to day problems have crept into the life of every human being including those of adolescents. Social threats, high expectations of parents and teachers, fear of being left out of the group, increased awareness, exposure to mass - media, stress of changes going on within their own bodies, abstract thinking capacity makes the adolescents worst hit. According to Perkins, 2001, there are four basic abstract questions that adolescents begin to ask themselves. They are

- Who am I? (Pertaining to his/her sexuality and social roles)
- Am I normal? (Do I fit with a certain crowd?)
- Am I competent? (Am I good at something that is valued by peers and parents?)

- Am I lovable & loving? (Can someone besides my parents love me?)

Adolescents start answering to these questions to themselves i.e. forming self concept and in this process anxiety creeps into them. They face demands and expectations, as well as risks and temptations, that appear to be more numerous and complex than those adolescents faced only a generation ago (Feldman & Elliot, 1990; Hamburg, 1993). They do not remain unaffected by constant tension and worry about future, career and trying to keep up to the expectations of the family.

The above discussion shows that the results obtained in the present study are in accordance with the hypotheses formulated and are also supported by research work carried out in this field. Adolescents forming about 22% of entire population of India and future citizens of nation should be saved from undue stress & anxiety<sup>7</sup>. Their problem and environment stressors should be reduced to minimum. With parents and teachers, it becomes an utmost duty of health care personnel & administrators to address to their issues and help inculcate in them the healthful coping strategies to face the reality of life. This will directly reduce the physical, mental and psychosomatic illnesses including suicide rate among adolescents. Health care administrators must ensure adequately equipped guidance and counseling centers in schools & hospitals. Also they should conduct frequent sessions for counseling the parents.

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## A Study to Assess the Self-Concept of Adolescents with Orthopedic Impairment

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ARSHI ANJUM KHAN\*, VEENA SHARMA\*\*, URMILA BHARDWAJ\*\*\*

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\*Lecturer, Prakash Institute (PIPRAMS),  
College of Nursing, Greater Noida, G.B.  
Nagar-201308.

\*\*Associate Professor, Faculty of Nursing,  
Jamia Hamdard, New Delh-110062.

\*\*\*Associate Professor, Faculty of Nursing,  
Jamia Hamdard, New Delh-110062.

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### Abstract

**Introduction:** It is believed that an individual is disabled not because of his or her physical handicap, but because of the physical barriers prevalent in our society. The present study was undertaken by the investigator for identifying the self-concept of adolescents with orthopaedic impairment with a view to develop and evaluate guidelines for teachers to improve the self-concept of adolescents with orthopaedic impairment. **Methodology:** The sample for the study comprised of 60 adolescents with orthopaedic impairment and 30 teachers working in institutes for physically handicapped selected through purposive sampling technique and total enumeration technique, respectively. The Conceptual framework of the study was based on Stuart Stress Adaptation model related to self-concept responses. Structured questionnaires were used to assess the self-concept of orthopedically impaired adolescents and knowledge of teachers regarding self-concept of the adolescents. **Results:** The study revealed that majority of the adolescents with orthopaedic impairment had average level of self-concept. The intellectual self-concept was found to be the most affected area out of

all other (i.e moral, educational, temperamental, social and physical) areas of self-concept; but there was no significant relationship between level of self-concept and variables, viz; age, gender and cause of orthopaedic impairment in adolescents with orthopedic impairment. Maximum numbers of subjects' i.e.65% were from the age group of 17-19 years. The major cause of orthopaedic impairment in majority of the subjects (53%) was illness such as polio. In the second part of the study, guidelines developed for improvement of self-concept of adolescents with orthopaedic impairment were effective as evidenced from knowledge gain by teachers.

**Key words:** Self-concept; Adolescent; Orthopaedic impairment.

### Introduction

The self-concept is an image which an individual has of himself or herself (Burns, 1982). Much of the psychological development of a person is bound up with the emerging sense of self, but in spite of its importance, the phenomenon of the self is one of the most difficult tasks to explain. Physical ability could be said to be crucial to the way an individual becomes conscious of, and develops a unique

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**Corresponding author:** Arshi Anjum Khan, Lecturer, Prakash Institute (PIPRAMS), College of Nursing, Greater Noida, G.B.Nagar-201308.

identity. It facilitates conceptualization by receiving stimuli, interpreting information and enabling response. It is also of paramount importance in the area of general mobility, maintaining body functions, and enhancing the whole early learning processes of social interaction, the building of self-esteem and the achievement of life goals. Therefore, the physical component plays an important role in the development of an individual (Cohen, 1978)<sup>1</sup>, it could be argued that physical handicap probably affects self-concept formation most profoundly.

According to the Census of India 2001, there are 2.19 crore people with disabilities in India and this constitutes 2.13% of the total population. This includes persons with visual, hearing, speech, locomotor and mental disabilities. Seventy-five per cent of persons with disabilities live in rural areas, 49% of disabled population is literate and only 34% are employed. The earlier emphasis on medical rehabilitation has now been replaced by an emphasis on social rehabilitation.

*Disability data as per the Census of India 2002*

Movement	51 %
Seeing	14 %
Hearing	15 %
Speech	10 %
Mental	10 %

{Source: National Sample Survey Organization (2002). [2]}

With the increasing population of India, the proportionate number of orthopedically impaired population also has a definite trend to increase. Rapid industrialization of the cities, street accidents, use of drugs and pills during pregnancy, air crashes, bomb explosions, etc. are liable to increase the number of orthopaedically impaired in an incredible manner. These various factors either alone or in combination can lead to orthopaedic impairment in a newborn or it can develop later in life stages. Orthopaedic impairment affects the self-concept formation profoundly,

especially if it happens in the vulnerable development stage of life, that is, adolescence.

At the adolescent age, an individual is actually conscious of the way he or she looks to others and is highly aware of his or her deviations from the normal in himself or herself and others. At this time, any physical impairment such as hearing or visual impairment, muscular or skeletal impairment, birthmarks, ears that stick out etc., assumes greater importance. Increasing awareness of these differences especially accompanied by unkind comments and taunts from other children may cause him or her to feel inferior and less desirable; this is especially true if the defect interferes with his or her ability to participate in childhood games and activities. Orthopaedic impairment is one of such defects, which affects the mental health of a child greatly (Barbara, 2001).

The study on orthopaedic disability and socioemotional functioning by Yagmurlu<sup>3</sup> (2009) indicated that regular engagement in sports significantly predicted self-concept of adolescents with orthopaedic disability, and the predictive value of playing sport was significant even after differences in participants' age, sex and severity of the disability were taken into account. Emotional stability and sociability of adolescents with disability were predicted by sports playing but to a low degree. Study findings underline the importance of understanding social aspects of disability, and the positive association between playing sports and an individual's positive beliefs about oneself. [3]

The present study intended to explore the self-concept of adolescents with orthopaedic impairment because change in body image does affect the self-concept of an individual and those who have orthopaedic impairment undergo changes in the appearance and function of the body, which may in turn affect their self-concept. The main objectives of the study were:

- i. To assess the self concept of adolescents with orthopedic impairment.

- ii. To find the relationship between self-concept and selected variables, that are, age, gender, and cause of orthopedic impairment.
- iii. To develop and administer guidelines for teachers working in institutes for physically handicapped for improvement of the self-concept of adolescent with orthopedic impairment. To assess the knowledge of teachers regarding self-concept and
- iv. To check the utility and acceptability of the guidelines on improvement of self-concept of adolescents with orthopedic impairment for the teachers working in institutes for physically handicapped.

## Methodology

To accomplish the objectives of the study, a quantitative research approach was considered the most effective. The study had two parts. For the first part, that is, assessment of the self-concept of adolescents with orthopaedic impairment, descriptive research design seemed to be most appropriate. For the second part, that is, for assessment of teachers' knowledge before and after administration of guidelines regarding self-concept and strategies used to improve the self-concept of adolescents with orthopaedic impairment, pre-experimental pre-test – post-test research design was used.

The study was conducted in two institutes for physically handicapped in Delhi after seeking formal administrative approval. The institutes were:

- Akshay Pratishthan Institute for Physically Handicapped, Vasant Kunj, New Delhi
- Vocational and Rehabilitation Centre for Physically Handicapped, Kar-Kar Dooma, Delhi

The sample for the study comprised of 60 adolescents with orthopaedic impairment and 30 teachers working in institutes for physically handicapped. Adolescents were selected through purposive sampling technique and

teachers were selected through total enumeration technique. The following instruments were developed in order to generate the data:

- A structured self-concept measuring scale to assess the self-concept of adolescents with orthopaedic impairment.
- A structured questionnaire to assess the knowledge of teachers working in institutes for physically handicapped regarding self-concept.
- A structured opinionnaire to determine the acceptability and utility of guidelines on improvement of self-concept of adolescents with orthopaedic impairment for teachers working in institutes for physically handicapped.

To ensure the content validity of the structured self-concept measuring scale, it was submitted to nine experts from the field of nursing, psychiatry, psychology and education. The reliability of structured self-concept measuring scale was calculated by using the Cronbach's alpha formula and the tool was found to have a reliability of 0.56. The reliability of structured knowledge questionnaire was calculated by Kuder Richardson-20 (KR-20) formula. The reliability coefficient was found to be 0.85. Thus, the questionnaire was found to be reliable.

The guidelines were prepared keeping in view the self-concept of adolescents with orthopaedic impairment and to equip the teachers working in institutes for physically handicapped with knowledge to improve the self-concept of adolescents with orthopaedic impairment. The data collection was carried out in different stages as explained in Table 1.

## Results

Descriptive and inferential statistics was used to analyse and interpret the obtained data. The summary of the findings of the study is given below:



### Data Collection Process

Group	Day	Pre-test	Activity/Intervention	Post-test
Group-1 (Adolescents)	1-6		Assessment of self-concept	
Group-2 (Teachers)	1-6	Administration of knowledge questionnaire		
Group-2 (Teachers)	14		Administration of guidelines	
	18			Administration of knowledge questionnaire and opinionnaire

#### *I. Findings on sample characteristics; of adolescents under study:*

Majority of the subjects, that is, 39 (65%) adolescents were from the age group of 17 to 19 years. 32 (53%) had orthopaedic impairment because of illness, such as poliomyelitis.

#### *II. Findings on assessment of self-concept of adolescents with orthopaedic impairment:*

Majority of the adolescents, that is, 40 (66.66%) had average level of self-concept; 11 (18.33%) had good self-concept, whereas 9 (15%) had poor self-concept. The intellectual self-concept was found to be the most affected area out of all other (i.e moral, educational, temperamental, social and physical) areas of self-concept.

#### *III. Findings related to relationship between self-concept scores of adolescents with orthopaedic impairment and selected variables like, age, gender and cause of orthopaedic impairment:*

There was no significant relationship between level of self-concept and variables, namely, age, gender and cause of impairment of adolescents with orthopaedic impairment.

#### *IV. Evaluation of the knowledge of teachers working in institutes for physically handicapped regarding self-concept and strategies used to improve the self-concept of adolescents with orthopaedic impairment:*

As represented in figure 1 above, most of the teachers obtained a higher post-test knowledge score than the pre-test knowledge score, suggesting an increase in knowledge after the administration of the guidelines.

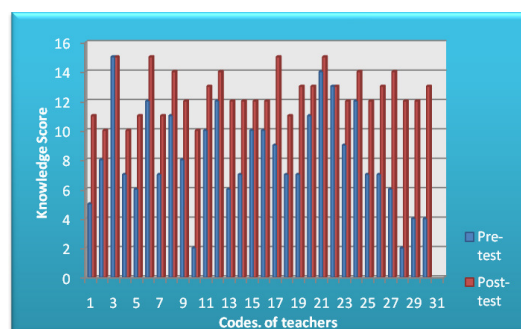
#### *V. Evaluation of the guidelines for improvement of self-concept of adolescents with orthopaedic impairment in terms of acceptability and utility of the guidelines for the teachers working in institutes for physically handicapped:*

64%, that is, more than 50% subjects expressed that they strongly agreed with the statements given in opinionnaire.

### Discussion

The present study focussed on the self-concept of adolescents with orthopaedic impairment and it was found that two-third

**Figure 1: A Column Graph Comparison of Pre-Test and Post-Test Knowledge Scores Obtained by Teachers Working in Institutes for Physically Handicapped**



of adolescents with orthopaedic impairment had average level of self-concept. Ittyerah and Kumar (2007) conducted a study on the actual and ideal self-concept in disabled children, adolescents and adults, which indicated that children had a more positive self-concept than adolescents and adults.<sup>[4]</sup>

Cohen (1978) found that the physical component of self-concept is an important factor in the development of the individual. Similar findings were observed in the present study, wherein the physical component was found to be the second most affected area of self-concept of adolescents with orthopaedic impairment.<sup>[1]</sup>

Although a structured self-concept assessment scale was administered by interview, the adolescents were also asked to express their feelings in relation to their orthopaedic impairment and also give suggestions. They expressed a desire to play games and sports especially as they watched others play on television or otherwise. Yagmurlu (2009) also indicated that regular engagement in sports significantly predicted self-concept of adolescents with orthopaedic disability and the predictive value of the playing sport was significant even after difference in participant's age, sex and severity of the disability were taken into account.<sup>[3]</sup>

Another open-ended question brought out few suggestions given by adolescents with orthopaedic impairment. The suggestions as listed below were incorporated in the guidelines as recommendations.

- Institute can make arrangement for home pick and drop facility with special buses with ramps, or with a helper who can help adolescents to board the bus.
- The door of bus should be wider for letting in adolescents using wheelchairs.
- Institute can also provide hostel facility to avoid daily travelling.
- All public transports and public physical facilities should have ramps to make them accessible for people with orthopaedic impairments.

- Educational institutions should have ramp/lift.
- Adolescents with orthopaedic impairment and especially with wheelchair face difficulty in using toilets. It would be better to provide western seat toilet rather than Indian seat.
- The door to enter the toilet should be wide enough to let a wheel chair in. Toilet should have side rail for support to facilitate transfer from wheelchair to toilet seat and back. All public places should have such toilet facilities separated and earmarked for people with orthopaedic impairment.

### *Implications*

The findings of the study have several implications in the field of nursing:

- School nurse can administer the guidelines for improvement of self-concept of adolescents with orthopaedic impairment as they will be useful to improve the self-concept of adolescents with orthopaedic impairment in institutes for physically handicapped.
- In Psychiatric Nursing more emphasis should be given on family education especially how to deal with adolescents with orthopaedic impairment in family.

### **Conclusion**

The self-concept is an image which an individual has of himself or herself and the physical component plays an important role in the development of an individual. As adolescents are considered at high risk and it is a commonly held belief that adolescence is a time of conflict and turmoil, adolescents, especially with orthopaedic impairment, are at risk for low self-concept, which puts direct impact on all aspects of their life. Every individual is highly influenced by the teacher in his/ her life, so a teacher can play a vital role in improving the self-concept of an



adolescent with orthopaedic impairment. Hence the study was done to assess the self-concept of adolescents and to assess the knowledge of teachers working in institutes for physically handicapped regarding self-concept, and the guidelines were developed accordingly for teachers and administered to improve the self-concept of adolescents with orthopaedic impairment. This intervention was found effective as evident from significant knowledge gain by teachers working in institutes for physically handicapped.

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## Eagle's Syndrome with Co-morbid Unspecified Anxiety Disorder

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ANUBHAV RATHI\*, M.S.BHATIA\*\*, ANURAG JHANJEE\*\*\*

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\*Senior Resident,

\*\* Professor & Head,

\*\*\*Senior Resident,

Department of Psychiatry, University College of  
Medical Sciences & Guru Teg Bahadur Hospital,  
Dilshad Garden, Delhi-110095

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### Abstract

Eagle's syndrome or stylalgia is a disorder related to the abnormally elongated styloid process (>30 mm). It is characterized by pharyngeal pain localized in the tonsillar fossa, radiating to the oesophagus, to the hyoid bone, painful head rotation and lingual movements. The pain is exacerbated by swallowing and chewing. Other symptoms include foreign body sensation (globus hystericus) and voice change lasting for only a few minutes. A variety of additional symptoms have been reported such as clicking jaw, unilateral pain, pain radiating to the neck, to the tongue, chest or temporo-mandibular joint (TMJ) and facial paraesthesia, hypersalivation, sometimes visual problems, dysphagia and pharyngeal spasm. However no psychiatric co-morbidity has been reported till date. We hereby discuss a case of a middle aged male presenting to psychiatry OPD with symptoms suggestive of Eagle's Syndrome and unspecified anxiety disorder.

**Keywords:** Eagle's syndrome; Anxiety disorder.

### Introduction

Watt W. Eagle in 1937 first described stylalgia, which was later called the Eagle syndrome [1]. Stylalgia (elongated styloid process, long styloid process syndrome, Eagle's syndrome) is related to abnormal length of the styloid process, to mineralization of the styloid ligament complex<sup>1</sup>, or to calcification of digastric muscles [2].

The normal length of the styloid process may vary, however, a 30 mm or longer process is considered anomalous and responsible for the so-called Eagle syndrome. The incidence has been reported to be between 1.4-30% [3, 4]. Eagle's syndrome is characterized by the following symptoms: pharyngeal pain localized in the tonsillar fossa, radiating to the oesophagus, to the hyoid bone, painful head rotation and lingual movements. The pain is exacerbated by swallowing and chewing. Other symptoms include foreign body sensation (globus hystericus) [5] and voice change lasting for only a few minutes. A variety of additional symptoms have been reported such as clicking jaw, unilateral pain, pain radiating to the neck, to the tongue, chest or temporo-mandibular joint (TMJ) and facial

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**Corresponding author:** Dr. M.S. Bhatia, D-1, Naraina Vihar, New Delhi-110028. E-mail: manbhatia1@rediffmail.com, Fax: 00911122590495, Ph: 09868399582.

paraesthesia, hypersalivation, sometimes visual problems, dysphagia and pharyngeal spasm [6].

Though there have been case reports by various authors on Eagle's syndrome [5-8], there have been no report on psychiatric co-morbidity with Eagle's syndrome. We hereby present a case report of a middle aged man presenting with features of unspecified anxiety disorder along with Eagle's syndrome.

### *Case Report*

A 45 year old Muslim Male, educated up-to 7<sup>th</sup> standard, tailor by occupation, married and belonging to low-socio-economic status family presented to psychiatry OPD with chief complaints of persistent pain in left angle of the mandible, radiating to neck along with discomfort while swallowing and chewing and foreign body sensation in throat for past 4-5 years. These complaints would subside whenever the patient would go to his village for holidays and take rest while these problems would get aggravated whenever he would spend long hours working on his sewing machine. Along with these complaints the patient reported intermittent episodes of anxiety associated with sweating, palpitations difficulty breathing and occasional dizziness for past 2 years. These anxiety symptoms would have variable frequency of occurrence and would last for variable duration and would have no specific aggravating and relieving factors and had no particular relation to his pain symptoms. For past two years the patient reported these anxiety symptoms even when he was at his village and not feeling these pain symptoms and throat discomfort. The patient also reported occasional concern about his pain symptoms and at times would worry that he might be developing a throat cancer. Along with this the patient reported occasional sleep disturbance for past 1 year.

The patient reported visiting multiple doctors in the past 4 years ranging from physicians to ENT surgeons and dentists. The patient reported having been told various diagnosis ranging from throat infection to dental caries

and occasional doctor also raised a possibility of possible throat malignancy. The patient reported that he has been prescribed various medications by various doctors for these symptoms but as per the reports of the patient he has never felt any real symptom relief from any of the medications. There is no history of any other co-morbid medical or surgical illness. No history of any similar complaints or any Neuro-psychiatric illness in the family. The patient is married for past 22 years and has 3 children. No evidence of any chronic conflicts or stressors at home.

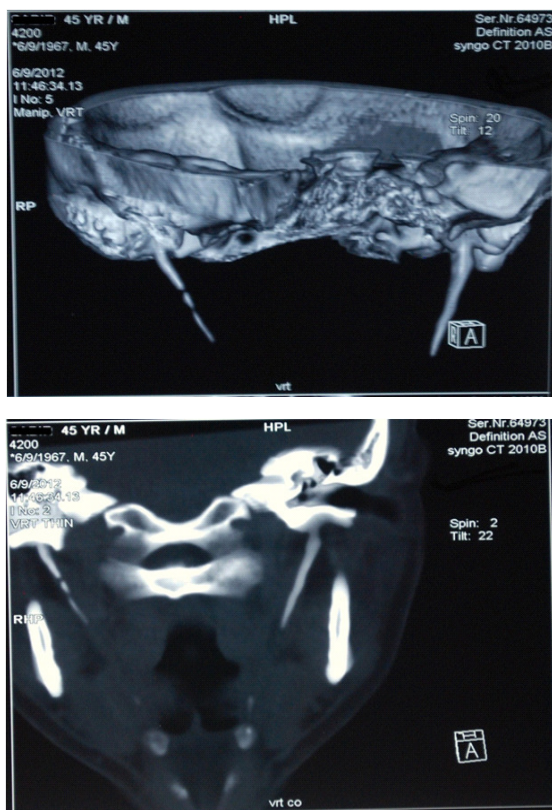
The patient's pre-morbid adjustment was good. The patient shared good interpersonal relationships and was working as a tailor for past 25 years. The patient has history of nicotine dependence (Bidi smoking 1 bundle per day) for past 15 years.

Patient's general physical and systemic examination was within normal limits except for mild pallor. The patient was appropriately dressed for his socio-economic background and his speech and psychomotor activity was within normal limits. He was co-operative and rapport could be established. The patient reported his mood to be anxious and his thinking revealed ruminations about his problem and its implications on his health and future. The patient reported having a recurrent thought that he might be harboring a malignancy and reported being afraid of dying. There was no evidence of any delusions, obsessions, compulsions or any hallucinations. Insight and judgement were found to be intact.

The patient's medical records were evaluated systematically to find out the possible causes of these symptoms. All baseline blood investigations, X-Rays and ultrasonography did not reveal any abnormality. A non-contrast CT Scan head was ordered which revealed elongated left styloid process of length 3.50 cm (Figures 1 & 2). On the basis of patient's symptomatology and CT findings a provisional diagnosis of Eagle's Syndrome with unspecified anxiety disorder was made.

The patient was started on Duloxetine 40 mg/day which was gradually increased to 60

**Figure 1 & 2: Ncct Of Base Of Skull Showing Elongated Left Styloid Process (3.51 Cm ) And Normal Right Styloid Process (2.90 Cm)**



mg/day and was prescribed NSAIDs to be taken if there were acute pain exacerbations. However, the patient reported no improvement in his pain symptoms even after adequate trial of these medications. Thus, the patient was referred to department of ENT for surgical removal of the patient's styloid process.

In the meanwhile patient was psycho-educated about the nature of his problems and the cause of his symptoms and was informed that these symptoms are unlikely to be due to malignancy. The patient was counseled regarding sleep hygiene and was encouraged to follow them for improvement in his sleep. The patient was also taught deep breathing and progressive muscle relaxation techniques and was prescribed tablet Clonazepam 0.25 mg SOS if the anxiety becomes unmanageable.

Over subsequent follow-ups it was observed that even though there was not much relief in

his pain symptoms but he reported decreased frequency and duration of his anxiety episodes and improved sleep quality to a level that he reported no unmanageable anxiety symptoms for past 2 months.

## Discussion

This case highlights the association of anxiety symptoms with Eagle's syndrome and the approach to its management. We hypothesize that the patient developed anxiety and insomnia as a reaction to the confusing array of diagnosis given to him and equally unnecessary repeated investigations he was subjected to and his perceived threat to his life and its implications for his family as a result of the whole process.

Eagle's syndrome is an infrequent diagnosis and is generally not arrived at easily. However the whole process of arriving at a rare diagnosis can be a distressing experience for the patient and his family and can have psychological sequelae. These should be considered and treated at the earliest to reduce the morbidity and the burden of the illness.

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