

Research Article**Perception about Penis Length, Penile Erection and Quantity of Semen among Young Adult Men of Pondicherry, India-Community Based Cross Sectional Study****K N Prasad^{*1}, P S Vinoth Kumar², Poovitha³**¹Professor, Department of Community Medicine, Shri Lakshmi Narayana Institute of Medical Science, Kudapakkam, Pondicherry, India²Post Graduate Student, Department of Community Medicine, Shri Lakshmi Narayana Institute of Medical Science, Kudapakkam, Pondicherry, India³Biostatistician, Department of Community Medicine, Shri Lakshmi Narayana Institute of Medical Science, Kudapakkam, Pondicherry, India***Corresponding author**

Dr. K N Prasad

Email: drknprasad2@gmail.com

Abstract: The psychological factors towards the perception of one own sexual organ is very important of the good sexual health in the era of widespread social networks and internet. The information on perception about penis size, erection and quantity of semen in Indian situation is rarely available. The objective of the study is to find the perception of penile length, penile erection and quantity of semen among collegiate young adult men. It is a Community based Descriptive Cross sectional survey in the selected 16 colleges on different education courses during October 2013 to February 2014 by using the pilot tested, self administered anonymous questionnaire. The detailed information was collected on their satisfaction regarding the penis size, erection, quantity of semen and related variables. Analysis was done using SPSS software package. The number of young adults participated in this study was 686, unmarried and the response rate to all the questions was more than 90%. Nearly 90 percent of the subjects in this study were satisfied with their penis size, erection and quantity of semen however residents of rural and hostel inmates were not satisfied with their quantity of semen. Nearly 29 percent of the participants had experience of sex during their education period. Conclusion is young adult men in this study are overall satisfied with their penile size, erection and semen quantity.**Keywords:** Penis Length, Penile erection, Semen quantity, India, Perception, Collegiate adults, Community based.

INTRODUCTION

The psychological aspects of the individual's attitude towards penile size are crucial in order to have good sexual health. Larger penis size has been equated with a symbol of power, stamina, masculinity, and social status. Most of the men during their teenage or early young adulthood underestimate their penile length, size or structural strength of erection [1-5]. For a significant number of men concerns regarding penile size can affect body image and confidence but the issue of penis size is less important to women [6-9].

Reinforcing false self perception about size, physical structure is always as attraction to men and self appraisal and declaring or denying is also common habit among men. When people speak on penis size, majority will typically refer to the length of the penis than width. It is important that length is more important than width of the penis for the young men and usually may adults many not acknowledge this [10-12]. Almost half of men in the study (45%) believed they had a small penis, yet the researchers reported that small

penis size was actually rare. Penis size shame (also known as "small penis syndrome") is found in men who have a normal-sized penis but experience shame about its size? Men tend to view penis size as much more important than women do [11, 12].

Topic is extremely difficult issue because it involves real feelings of pain and suffering on the part of those males who believe that their genitals are too small to satisfy women in bed. it strikes the heart of male virility and sense of masculinity issue. Though it is well known that men's penises come in many shapes and sizes, larger penis size has been equated with a symbol of power, fertility, stamina, masculinity, and social status [1, 13-15]. In addition, men's penis size was significantly related to satisfaction with other body traits, including one's face, overall physical attractiveness, and comfort in a swimsuit. Many studies reveal that is it normal for men to underestimate the size of their genitals because of obsession and leads to performance failure during sexual intercourse [1, 6].

The widespread and free availability of pornographic visual materials made an impact of under estimation of their own sexual organs and functions. The judgement of these depends on visual perception as depicted in porno or observation of the same among the peer groups. To date, the penis' connection to masculinity and virility is continually perpetuated throughout popular media thus, it is not surprising researchers have found many men are unsatisfied or feel shame about their penis size and researches has intimated a link between penis size and social-sexual health outcomes[2,4,6,16].

The size of penis remain as question among men that what is the normal size of the penis? Is their penis size is normal and whether they can have good sexual happiness or satisfy their partner? Many studies were conducted on the penile length among the middle aged men and few studies among adults in colleges or universities [17-22]. However such studies are lacking within Indian context, hence the study is proposed to know the perception on penile length, erection and semen quantity among adult men in Pondicherry in Southern India.

METHODOLOGY

Study design and period

A cross sectional, descriptive, community based survey was undertaken in Pondicherry among the collegiate individuals. The study was approved by the Institutional Ethical committee (Human studies) of the institute and conducted between .October 2013 to February 2014.

Survey Settings

The data for this cross sectional survey was collected from colleges of Pondicherry. There were 60 colleges consists of Engineering, Medical, Arts, Commerce, Business Management , Polytechnics, Science and Law institutions in Pondicherry and about 4690 number were male students. Among the above colleges 16 colleges were selected to represent the each course so that the results will provide many details about the objectives of the study. The permission from the respective college administration and authorities were taken before starting the survey.

Selection of age group

The onset of age at first masturbation or solitary masturbation among male individuals starts either in early or middle adolescence period and few during late adolescence period. The majority of the subjects would have experienced the first solitary masturbation by late adolescence period and early adulthood. It is expected that the individuals may share or provide information about penile size, erection and quantity of semen during this age or after completion of 16 years. The response rate would be higher and able to understand the question on sexual activity of the men or recollect them.

Hence the age group was selected from late adolescence period and young adulthood. The survey was planned to include the individuals aged between 17 and 26 years. Ten years group shows the similar behaviour and practices considering the exposure to similar socio educational background, cultural background, entertainment, media and environment.

Sample size and Sampling techniques

Sample size was estimates to be 650 including non response rates of 20%. A Multi phase, stratified random sampling technique was applied in selection of 650 sample subjects for the survey. In the first stage, all the colleges having different courses (Engineering, Medical, Dental, nursing, Science, Arts and Polytechnic) were listed. Colleges from each course or category were selected using the lot method in the second stage. Third stage included the selection of class /semester from each college as per the second stage by random. The list of the male students present in the lecture hall on the day of the survey was prepared and male students were segregated from female students.

Data Collection Procedure

All students in the class room were invited to participate in this survey by the investigators. During the class period devoted to the survey, investigators informed the students regarding the study with the objectives concerning their sexual attitude, activities and practices. Procedure for the survey was explained to the students in the local (Tamil) and English languages, assessing the potential respondents that the participation is voluntary and anonymous, assured them that their responses would be kept confidential. They were requested to share the information by recollection method on the variables mentioned in the questionnaire. The anonymous questionnaire was distributed to students in the lecture halls along with Consent forms and requested to return the signed, completed anonymous questionnaire to a sealed box. No incentives of any kind were offered to the participants.

Data

Self administered survey instruments was anonymous in nature which was pre tested , semi open ended questions consisted of two pages questionnaire with 18 questions on 5 parts Socio demographic factors, sexual behaviours, sexual activities, sexuality perceptions and life style practices focussing on young adult men groups at the collegiate level of education was administered to all the voluntary subjects in the lecture hall. Anonymity regarding the name and place was planned in this study to get the correct and confidential information. Each questionnaire would take 15 minutes to complete by the students. If necessary, the investigators guided the subjects in case of doubt about understanding the variables.

Variables

The subjective satisfaction about their penis length in flaccid or while erection, strength of the penile erection and quantity of semen while ejaculating during masturbation or sexual intercourse were collected as binomial response in the self administered questionnaire. These variables are considered as primary variables for analysis.

The degree category was included in the analysis of graduate students of Arts, Commerce, Science and Business administration.

Validity

The consistency of the data was evaluated among the 5 percent of the subjects and the kappa score was

observed to 0.8 in this study. Hence the validity of the data is acceptable for analysis and conclusion.

Data analysis and Statistical tests

The data were analysed using SPSS version 20 for frequency, percentage, proportions, chi square test and significance of associations at the level of $p < 0.05$.

RESULTS

There were 686 participants in this study, aged between 17 to 29 years. The majority of the subjects were aged less than 20 years (56%) , Engineering students (48.6%) , residents of rural area (55.6%) and 54.5% were staying in hostels.

Table1. Participants’ response rate to questions on penis length, penile erection and quantity of semen

Age group in years	Total	Penis Size		Penile Erection		Semen Quantity	
		Yes	No	Yes	No	Yes	No
<20	385	362(94)	23 (6)	358 (93)	27(7)	336 (87)	49(13)
20-21	77	75 (97)	2 (3)	74 (96)	3	73 (95)	4 (5)
22-23	95	91(96)	4 (4)	90 (95)	5	89 (94)	6 (6)
24-25	72	70 (97)	2 (3)	72 (100)	0	72 (100)	0
>25	57	56 (98)	1	56 (98)	1	54 (95)	3 (5)
Education							
Engineering	334	305(91)	29(9)	299 (90)	35(10)	277 (83)	57(17)
Medical	123	123(100)	0	123(100)	0	123(100)	0
Degree	151	150(99)	1	151(100)	0	150 (99)	1
Diploma	45	44 (98)	1	44 (98)	1	44 (98)	1
Law	33	32 (97)	1	33	0	30 (91)	3(9)
Residential							
Rural	382	363 (93)	19 (7)	363 (93)	19	352 (89)	30
Urban	304	291 (96)	13 (4)	287 (94)	17	272 (89)	32
Home							
Home	312	292 (94)	20 (6)	289 (93)	23 (7)	286 (92)	26 (8)
Hostel	374	362 (93)	12 (7)	361 (93)	13 (7)	338 (85)	36(15)
Experience of Sexual Intercourse							
Yes	183	175 (96)	8 (4)	175 (96)	8 (4)	171 (93)	12 (7)
No	446	419 (94)	27 (6)	419 (94)	27 (6)	403 (90)	43 (10)

Figures in parenthesis indicates percentages

Table 1 shows the overall response rate was more than 90 percent to the questions on perception of subjects on their penile length , penile erection and quantity of semen, however the response rate shows little variation between different age groups, educational background, residential status and their

experience of sex with partner. Nearly ten percent of the subjects were responded as not satisfied with penile length, size, erection and quantity of semen. The differences in response rates on these questions were not statistically significant ($p > 0.05$)

Table 2: Perception of satisfaction by the young adults on penis length, penis erection and quantity of semen

Age group in years	Penis Size		Penile Erection		Semen Quantity	
	Yes	No	Yes	No	Yes	No
<20	324 (89)	38(11)	306(85)	52(15)	266(79)	70(21)
20-21	67 (89)	8 (11)	72(97)	2(3)	57 (78)	16(22)
22-23	82 (90)	9 (10)	84(93)	6(7)	73(82)	16 (18)
24-25	66 (92)	4 (8)	65(90)	7(10)	64 (88)	8 (12)
>25	54 (95)	2 (5)	54(95)	2(5)	51(94)	3(6)
Education						
Engineering	266 (87)	39(13)	254 (85)	45(15)	202(73)	75(27)
Medical	116 (94)	7 (6)	120 (97)	3 3)	111(90)	12(22)
Degree	140 (93)	10 (7)	142 (94)	9(6)	131(87)	19(18)
Diploma	43 (99)	1	43 (98)	1	44(100)	0
Law	28 (86)	4 (14)	22 (67)	11(33)	23 (77)	7 (23)
Residential						
Rural	337 (90)	26 (9)	330 (87)	33(10)	291(75)	61(18)
Urban	256 (88)	35(12)	251 (87)	36(13)	220(81)	52(19)
Home						
Home	367 (91)	25 (9)	352 (87)	27(13)	309(77)	67(23)
Hostel						
Hostel	226 (78)	36(22)	229 (80)	32(20)	202(69)	46(31)
Experience of Sexual Intercourse						
Yes	164 (93)	11 (7)	164 (94)	11 (6)	150(88)	21(12)
No	366 (87)	53(13)	366 (87)	53(13)	324(80)	79(20)

Figures in parenthesis indicates percentages

Table 2 depicts the individual's subjective perception about their penis length, penile erection and quantity of semen that was responded these questions. Regarding the length of penis, nearly ten percent of subjects aged less than 24 years, 13 percent of engineering course students and more than 20 percent of hostel subjects were not satisfied. Fifteen percent of subjects aged less than 20 years and engineering students, nearly 20 percent of hostel inmates were not satisfied with their

penile erection strength. More than 20 percent of subjects aged less than 22 years, 25% of engineering and law graduate students, rural residents and 31 percent of hostel inmates subjects were not satisfied with the quantity of semen as they had experienced during masturbation or sex. The satisfaction their penis size, erection and quantity of semen were found to be statistically significant between different education courses ($p < 0.05$).

Table 3: Multiple responses on perception about penis length, penile erection and quantity of semen by the young adults

	Penis length		Penile Erection		Quantity of semen		
	Yes	No	Yes	No	Yes	No	Total
Penis length	-	-	38	21	30	27	116
Penis Erection	48	-	-	-	29	33	110
Quantity of Semen	85	-	79	-	-	-	164
Total	133		117	21	59	60	

Table 3 shows the individual perception about their penile length, erection and quantity of semen reflecting the not satisfied with the penile erection and semen quantity with the penile length.

DISCUSSION

All the men in this study were unmarried. The mean age of 686 participants in this study was 20.8 years (95% CI 18.2 - 23.4). The mean age of Engineering, Medical, Degree, Diploma and Law course students

were observed to be 19.7(95% CI 17.5 - 21.5), 20.7(95% CI 19.1 - 22.4), 23.1(95% CI 20.1 - 26.1), 20.5(95% CI 17.5 - 23.3) and 23.7(95% CI 21.1 - 26.2) years respectively. The question on age at masturbation was answered by 80 percent of the subjects in this study and mean age at sexual intercourse with partner was found to be 22.6 (95% CI 19.7 - 25.4) years [24]. The subjects in this study with experience of sexual intercourse were 183 accounting to 29 percent of the participants.

The overall response rate for the questions on penis size, penile erection and quantity of semen was more than 95 percent and can be considered as good for validity of this study. However the non response rate to quantity of semen was more than 10 % among subjects aged less than 20 years and who were exposed to sexual act with partner. These may be possible that subjects did not visualise the semen flow or does not know what to answer. Residential status reflects the opportunity for the individuals to expose to the knowledge on sexual health through peer groups.

There are many studies reflecting the size of the penis for augmentation purpose among middle adulthood or elderly aged population[16,17,21,25].Some of the studies done among university student or military men reflect unsatisfactory rate of twenty percent on penile length and erection. the findings in this study is similar to these studies conducted elsewhere[1,6,10,18,21,26].

The size of penis is referred in terms of length and girth or width of the penis. The people with wide girth worry for having small length of the penis. The length of the penis is given much importance by the men throughout the world than the girth or width of the penis. In this study attempt has been made to analyse in detail on various factors such as age, education, sexual intercourse experience and residential status of the individuals. More than ten percent in various groups reflects the psychological attitude and comparing their penile length and erection with the visual experience of the pornography materials.

Historically, the size of one's penis has been equated as symbol of power, masculinity, social status, fertility, and stamina. Size is an individual perception on structure while the erection or strength is the functional capacity. The study also found that the size of a man's erect penis was not correlated with the size of his flaccid penis - in other words, men with different lengths of floppy penis may have similarly sized willies when hard. This finding has been supported by a study of 200 Turkish men, in which "flaccid length had little importance in determining erect penile length." The subjective feeling about the functional capacity of their erection of penis has shown in this study that the findings are similar to the response to the penis length [1, 4, 6, 13, 21, 26]. It may be assumed that the engineering and law course students may be spending more leisure time in watching pornographic material or discussion among peer groups on sexual organ structures and functions. Hence the finding shows higher number is not satisfactory with their penile erection and or quantity of semen.

The responses by the individuals to questions were not satisfactory are shown in Table 3. Most of the

young men were not satisfied with their penis size and erection (N= 21), penis size and quantity of semen (N=27) and penile erection and quantity of semen (N=33) where as many are not satisfied with their quantity of semen but having satisfactory penile size.

Limitations

The subjects were requested to give their satisfactory response as dichotomous s on questions about penis size, erection and quantity of semen. Answers to the questions on size of the penis are purely subjective whether question was answered for flaccid or erection status of the penis is doubtful. It would have been ideal to evaluate satisfaction response as scale or scoring method which is meaningful in analysis where the variable is a psychological in nature than the actual structural or physiological issue. The girth of the penis, reason for not satisfaction, onset of erection, maintenance of erection to stimuli etc were not included in this study due to stigma in the community.

CONCLUSION

The good response rate to the personal, psychological and subjective level questions on penis size(length), penile erection and quantity of semen was 90% among young adult men, less than 10 percent adult men with various background variables was not satisfactory on the penis size, erection and quantity of semen. It is necessary to study in various parts of the country on the same variables using the scoring scale or method to know the psychological aspects of satisfaction among adult Indian men.

ACKNOWLEDGEMENT

The authors sincerely thank all the participants for sharing information which is vital to this study. We are grateful to the administrators, Principals and class teachers of the courses in the colleges for co operating in collection of data. We are thankful Dr. ChakradharBaliji N, Dr. Ranjit Kumar M L and Dr. Harish Bhaskaran for helping in data entry and logistic support.

REFERENCES

1. Grov C, Parsons JT, Bimbi DS; The Association between Penis Size and Sexual Health among Men Who Have Sex with Men. Arch Sex Behav., 2010; 39(3): 788–797.
2. Drummond MJN, Filiault SM; The long and short of it: Gay men's perceptions of penis size. Gay and Lesbian Issues and Psychology Review, 2007; 3:121–129.
3. Penis size. Available from <http://www.nhs.uk/Livewell/penis-health/Pages/penis-size.aspx>
4. Lehman P; In an imperfect world, men with small penises are unforgiven. Men and Masculinities, 1998; 1(2):123–137.

5. Son H, Lee H, Huh JS, Kim SW, Paick JS; Studies on self-esteem of penile size in young Korean military men. *Asian J Androl.*, 2003; 5(3): 185-189.
6. Lever J, Frederick DA, Peplau LA; Does size matter? Men's and women's views on penis size across the lifespan. *Psychology of Men & Masculinity*, 2006; 7(3):129-143.
7. Tiggemann M, Marytins Y, Churchett L; Beyond muscles: unexplored parts of men's body image. *J of Hlth Psychol.*, 2008;13(8):1163-1172.
8. Smith AMA, Jolley D, Hocking J, Benton K, Gerofi J; Does penis size influence condom slippage and breakage? *Int J STD& AIDS*, 1998; 9(8): 444-447.
9. Davis S, Paterson L, Binik Y; Male genital image: Measurement and implications for medical conditions and surgical practice. *Sexologies*, 2012; 21(2): 43-47.
10. Wylie KR, Eardley I; Penile size and the 'small penis syndrome'. *BJU Int.*, 2007; 99(6): 1449-1455.
11. Veale D, Eshkevari E, Read J, Miles S, Troglia A, Phillips R *et al.*; Beliefs about penis size: validation of a scale for men ashamed about their penis size. *The Journal of Sexual Medicine*, 2014; 11(1): 84-92.
12. Nugteren HM, Balkema G, Pascal A, Schultz WCMW, Nijman J, van Driel M; 18-year experience in the management of men with a complaint of a small penis. *Journal of Sex & Marital Therapy*, 2010; 36(2):109-117.
13. Rosen RC, Riley A, Wagner G, Osterloh IH, Kirkpatrick J, Mishra A; The international index of erectile function (IIEF): a multidimensional scale for assessment of erectile dysfunction. *Urology*, 1997; 49(6): 822.
14. Frederick DA, Buchanan GM, Sadehgi-Azar L, Peplau LA, Haselton MG, Berezovskaya A; Desiring the muscular ideal: Men's body satisfaction in the United States, Ukraine, and Ghana. *Psychology of Men & Masculinity*, 2007; 8(2): 103-117.
15. Costa RM, Miller GF, Brody S; Women who prefer longer penises are more likely to have vaginal orgasms (but not clitoral orgasms): implications for an evolutionary theory of vaginal orgasm. *J Sex Med.*, 2012;9(12):3079-3088.
16. Mondiani N, Ponchietti R, Gontero P, Muir GH, Natali A, Calderara E *et al.*; Penile length is normal in most men seeking penile lengthening procedures. *Int J of Impotence Research*, 2002; 14(4):283-286.
17. Wessels H, Lue TF, McAninch JW; Penile length in the flaccid and erect states: guidelines for penile augmentation. *J Urol.*, 1996; 156(3): 995-997.
18. Fox CA; Sizing up the man: The importance of the penis. *Journal of Men's Health*, 2009; 6(3): 256.
19. Franchen AB, van de Wiel HBM, van Driel MF, Weimar Schultz WCM; What importance do women attribute to the size of the penis? *Eur Urol.*, 2002; 42:426-431.
20. Richters J, Gerofi J, Donovan B; Are condoms the right size(s)? A method for self measurement of the erect penis. *Venereology*, 1995; 8(2):77-82.
21. Lucy J, Tracey M, Audrey M; Size really does matter: Male dissatisfaction with penis size. *Psychology of Men & Masculinity*, 2014; 15(2): 225-228.
22. Nobre P, Gouveia JP, Gomes FA; Sexual dysfunctional beliefs questionnaire: An instrument to assess sexual dysfunctional beliefs as vulnerability factors to sexual problems. *Sexual and Relationship Therapy*, 2003; 18(2): 171-204.
23. Shamoul R; Treatment of men complaining of short penis. *Urology*, 2004; 65(6):1183-1185.
24. Prasad KN, Vinoth Kumar PS, Poovitha; A Community based survey on age at first masturbation (orgasmic experience) among collegiate young adult men in Pondicherry, Southern India. *Int J Current Research*, 2014; 6(5): 6655-6659.
25. Choi IN, Kim KH, Jung H, Yoon SJ, Kim SW, Kim TB; Second to fourth digit ratio: a predictor of adult penile length. *Asian J of Andrology*, 2011; 13(5):710-714.
26. Wylie KR, Eardley I; Penile size and the 'small penis syndrome'. *BJU Int.*, 2007; 99(6):1449-1455.