

Arm Span and Relation with Menarche

Dr. Kankana De

PhD. Research Scholar, Department of Anthropology, Vidyasagar University, India

***Corresponding author**

Dr. Kankana De

Article History

Received: 13.09.2017

Accepted: 20.10.2017

Published: 30.10.2017

DOI:

10.36347/sjahss.2017.v05i10.008



Abstract: Body composition is influenced by nutritional status, genetic factors, but it is hard measure with accuracy. upper arm muscle area by height derived to assess nutritional status, quantitative measurement help to study nutritional intake by body composition even in clinical diagnosis, epidemiological study, UAMA(upper arm muscle area) is linearly relate with total body fat and found protein mal nutrition, upper arm fat and upper arm muscle area help them. Height and arm span is measured by international society of kinanthropometry. waist circumference and hip circumference are measured by measuring tape. Mean age at menarche is collected by retrospective method. To take measurements of individual's standard anthropometric measurement are taken. Data analysis done Spss19 version, data is entered in Microsoft excels. Mean age at menarche is collected by retrospective method. To measure height anthropometric rod is used. Weight is measured by weighing machine. India has population groups having diverse life styles. Excellent opportunities for growth studies exists in India, as different population groups have contrasting nutrition, socio-economic status and a host of other conditions which influence growth and development of children. Because of the fast changing scenario in the income sources, food habits, health care facilities and type of social life people are living, it is necessary to have a baseline data on Punjabi bania girls of middle class families to find out correlation between various maturity indicators. Arm span of study group is related to mean age at menarche it's shown weak but positive correlation, it proves that longer arm span will decrease mean age at menarche. Height and arm span has positive but weak relation. conicity index has negative impact with arm span.

Keywords: Upper arm area muscle area, conicity index, body composition, arm span, menarche.

INTRODUCTION

Body composition is influenced by nutritional status, genetic factors, but it is hard measure with accuracy. upper arm muscle area by height derived to assess nutritional status, quantitative measurement help to study nutritional intake by body composition even in clinical diagnosis, epidemiological study, UAMA (upper arm muscle area) is linearly relate with total body fat and found protein mal nutrition, upper arm fat and upper arm muscle area help them, UAMA is sensitive indicator of assessing nutrition status of children. Physical growth and nutritional status help to study human variation, arm span, it measure straight distance between two ductile. WHR is used as a measurement of obesity, which in turn is a possible indicator of other more serious health conditions[1] For counselling adolescent Anwasha clinic is situated for

adolescents[2], it is shown arm span will increase with advancing age at menarche. Age at menarche is influenced genetic, environment and socio-economic factor[3]. Find relation with menarche and anthropometry and arm span and with Height

MATERIALS AND METHOD

Height and arm span is measured by international society of kinanthropometry, waist circumference and hip circumference are measured by measuring tape.

RESULT

Arm span and menarcheal status has negative relation with arm span and height in this study. Arm span and conicity index has negative relation.

Table-1: Correlations between Arm span, menarcheal status and height

		Arm span
Arm span	Pearson Correlation	1
	Sig. (2-tailed)	
	Sum of Squares and Cross-products	26369.769
	Covariance	26.423
	N	999
Height	Pearson Correlation	.399**
	Sig. (2-tailed)	.000
	Covariance	9.867
	N	999

** . Correlation is significant at the 0.01 level (2-tailed).

Table-2: Menarcheal status of study group

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	874	37.5100000	4.76000000	.16100000	37.1970000	37.8300000	24.30000	53.00000
2	125	31.4200000	4.45000000	.39000000	30.6400000	32.2100000	23.90000	42.50000
Total	999	36.7500000	5.14000000	.16200000	36.4300000	37.0700000	23.90000	53.00000

Table-3: Correlations between arms span and mean age at menarche

		Arm span	Mean Age at Menarche
Arm span	Pearson Correlation	1	.346**
	Sig. (2-tailed)		.000
	N	999	886
Mean Age Menarche	Pearson Correlation	.346**	1
	Sig. (2-tailed)	.000	
	N	886	896

** . Correlation is significant at the 0.01 level (2-tailed).

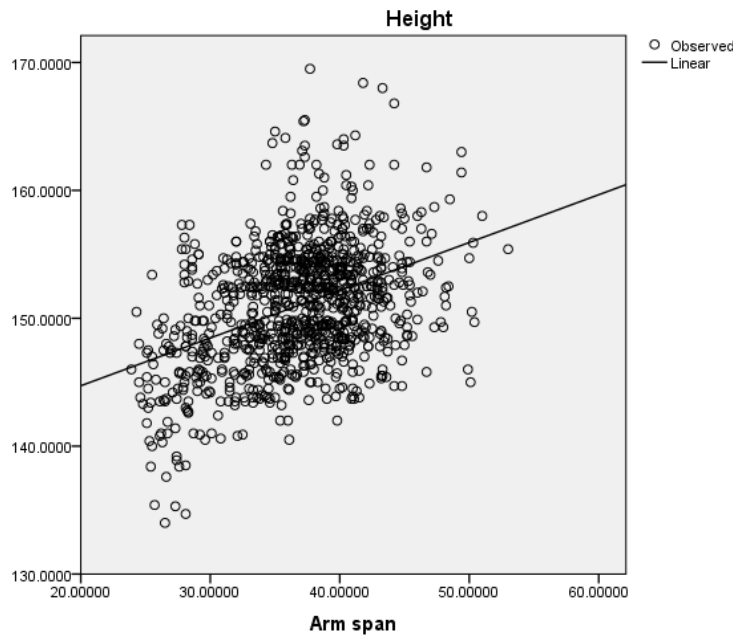


Fig-1: Graphical presentation of height and arm span and height

Table4: Correlations of Arm span and conicity index

		Arm span	Conicity index
Arm span	Pearson Correlation	1	-.072*
	Sig. (2-tailed)		.023
	N	999	999
Conicity index	Pearson Correlation	-.072*	1
	Sig. (2-tailed)	.023	
	N	999	1009

*. Correlation is significant at the 0.05 level (2-tailed).

The height and arm span were well correlated and could be used interchangeably in young women. The correlation decreased with advancing age. Since arm span does not change with age, therefore conclude that there was a decrease in height among women of increasing age using arm span as the reference of the previous height. In 77 % children there arm span is 0-5 cm greater than arm span. In girls and boys, the arm span is shorter than height before puberty and greater than height after midpuberty. Males experience their growth spurt about two years later [4], on average, than females. Arm span exceeds height by 5.3 cm (2.1 in) in the average adult man and by 1.2 cm (0.5 in) in the average adult woman. Among pregnant women about two third of pregnant women suffer from blood deficiency and half of the common young women are anaemic [5]. Menarche is the major indicator of growth and maturation during puberty in girls. Rohrer Index (RI) or Index of Corpulence was computed using standard equations and classifications are done following international standards [6].

India has population groups having diverse life styles. Excellent opportunities for growth studies exists in India, as different population groups have contrasting nutrition, socio-economic status and a host of other conditions which influence growth and development of children. Because of the fast changing scenario in the income sources, food habits, health care facilities and type of social life people are living, it is necessary to have a baseline data on Punjabi bania girls of middle class families to find out correlation between various maturity indicators. Waist-height ratio is a best discriminator of hypertension, dyslipidaemia [7], post menarcheal girls have higher anthropometric than premenarcheal girls[8].

CONCLUSION

Arm span of study group is related to mean age at menarche it's shown weak but positive correlation, it proves that longer arm span will decrease mean age at menarche. Height and arm span has positive but weak relation. Conicity index has negative impact with arm span.

REFERENCES

1. Kankana D. Study of nutritional status by waist circumference and waist hip ratio journal of health and Medical informatics. [2017; vol 1 issue 8.
2. Kankana D. Management control system: A case study of rural hospital of salboni block, Paschim Medinipur, Westbengal Annals of clinical and laboratory Research. 2017; Vol 5 no1:150
3. Kankana D. Comparison menarcheal status of adolescent girls Journal of Pregnancy and child. 2017; Health vol 4 issue1.
4. Kankana D. Effect of parents' economic status on teenage school girls' growth. Epidemiology (Sunnyvale) 2017; VOL 7:291.
5. Kankana D. Health awareness among tribes rural India journal of molecular genetics Medicine D. 2017; 11: 244.
6. Kankana D. Health status evaluation of adolescent girls by rohrer index Journal of Community Medicine and health education. 2017; 7 (2), 1-5.
7. Kankana D. Waist Circumference and waist hip ratio and body mass index help in assessing nutritional status and central obesity of adolescent Global journal of Archaeology and anthropology. 2017; 1 (1), 1-3.
8. Kankana D. study variation of Anthropometric variables at time of puberty Journal of General practice (los angels). 2017; 5 :1(1-3)