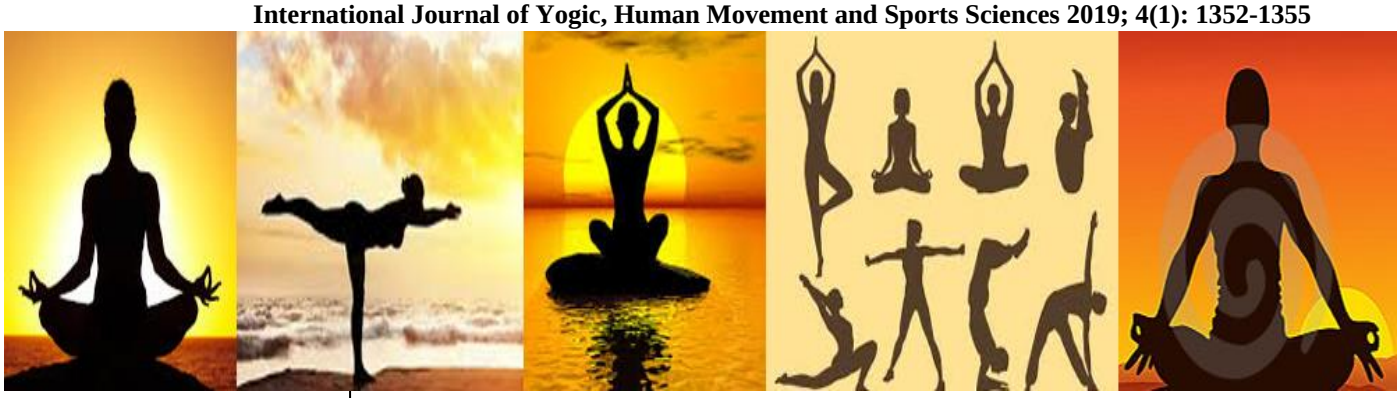
International Journal of Yogic, Human Movement and Sports Sciences 2019; 4(1): 1352-1355



ISSN: 2456-4419
Impact Factor: (RJIF): 5.18
Yoga 2019; 4(1): 1352-1355

www.theyogicjournal.com
Received: 22-11-2018
Accepted: 23-12-2018

Ajay Kumar
Research Scholar, Dept. of Physical Education, Kurukshetra University Kurukshetra, Haryana, India

Dr. Arvind Malik
Prof. Dept. of Physical Education, Kurukshetra University Kurukshetra, Haryana, India

Correspondence
Ajay Kumar
Research Scholar, Dept. of Physical Education, Kurukshetra University Kurukshetra, Haryana, India

Analyses the percentage of force medial foot between the rural and urban primary school students of Haryana

Ajay Kumar and Dr. Arvind Malik

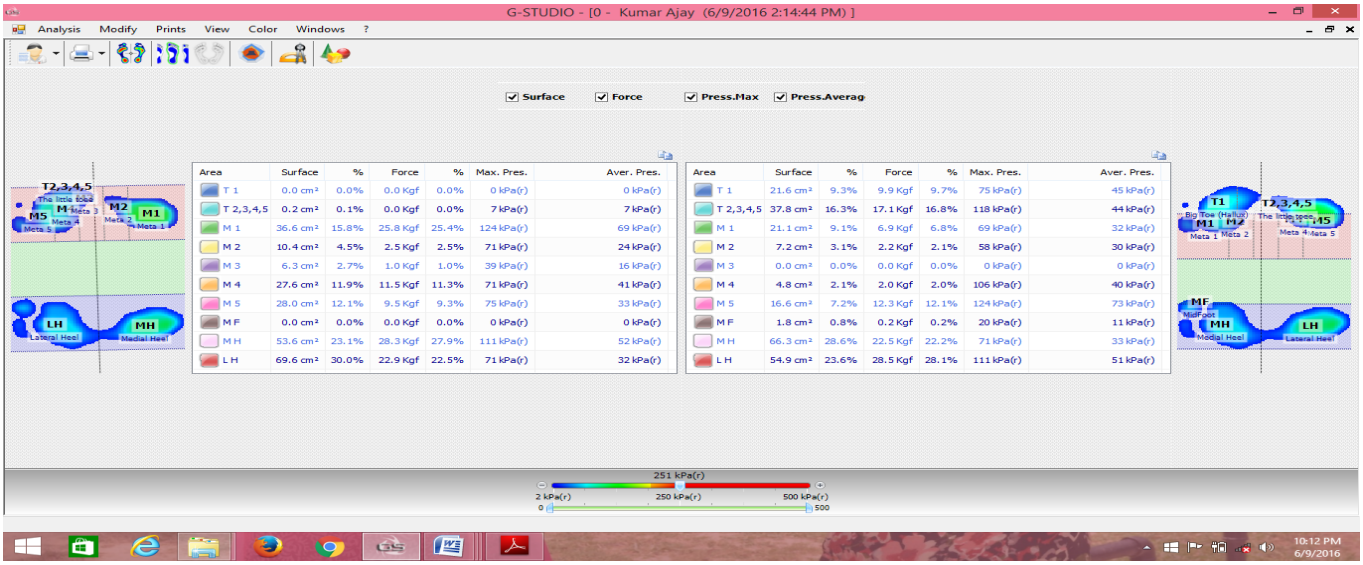
Abstract
Foot structure has a long established connection to foot function within the research field. For this study random sampling technique has been used for the collection of data. The researcher has selected total 1500 individuals as subjects (750 rural students and 750 urban students measured the Static Planter Foot Pressure (PFP) and Body Mass Index (BMI) The subjects were asked to stand on BTS P – Walk modular system (Pressure plate) and the data was recorded for 5 seconds. The F value was found to be 1.268, which is not found to be significant even at (P<0.05) level. Rural and Urban students were bearing equal Percentage of Force Medial Foot of their left foot. The F value was 1.300 which is not found significant even at (P<0.05) level. Rural and Urban students were bearing equal Percentage of Force Medial Foot of their right foot.

Keywords: Average pressure (AP), underweight (UW), normal weight (NW), overweight (OW) and obese

1. Introduction
Pirozzi K *et al*. (2014) in this study they evaluated the effect of BMI on plantar foot pressure. Main purpose this studies to find out the obesity effect on foot function. They explained connection between BMI and PFP (Plantar Foot Pressures) during walk, off load. They compared the PPFP (Peak Plantar Foot Pressures) during experiment situation. The main effect measured the PPP (Peak Planter Pressure) on the flowing parts- (1) Metatarsal 1 (2) Forefoot Midfoot, (3) Midfoot, (4) Heel; Researcher had two variables NW, overweight, obese, and morbidly obese. Researcher used sporty sneaker to a surgical shoe, ankle dynamic walker. The study showed the peak plantar pressures statistically significant increases BMI weight group, despite the off-loading device used. Therefore they concluded that the increase weight and increase plantar pressures and the obesity had negative effect on the growth and development.
Yoon SW *et al*. (2015) [1] studied the effect of metatarsal bar application regarding pressure on the metatarsal bones of the foot. The aims of the study were to find the effect of metatarsal bar on the pressure on all metatarsal bones. Tool used for this study of foot analysis system. The study observed forty female university students with the age twenty. The complete static foot regions were divided in three parts Forefoot, Midfoot, and Rearfoot. With the help of above observed testing maximum, average, and low pressures exerted measured at every part of the foot, along with the static foot pressure division value. Static foot pressure division measured four reasons, 1. Front, 2. Back, 3. Left, and 4. Right. They found maximum pressure, average pressure, and minimum static pressures on the forefoot were significantly down.

2. Method and Procedure
For this study random sampling technique has been used for the collection of data. The researcher has selected a total 1500 individuals as subjects (750 rural students and 750 urban student measured the Static Planter Foot Pressure (PFP) and Body Mass Index (BMI). The subjects of rural students category were who studied in rural Govt. school of Haryana and remaining 750 were urban students category were who studied in urban school of Haryana. The age of all the subjects selected for the present study between 10 to 12 years in all categories.

3. Tools used



Picture 1: Showed BTS G Studio software analyses the Percentage of Force Medial Foot

Picture 2: Showed BTS P-WALK measured the Percentage of Force Medial Foot

Table 1: Shown the (% force Lf MF) Percentage of Force Medial Foot of Left Foot of various Categories of primary school students

Sr. No	Categories	Foot	N	Mean	S.D
1.	Rural U.W (below 18.5)	Left and right foot	674	10.59	15.71
				9.95	14.74
2.	Rural N.W (18.5-24.9)	Left and right foot	65	11.07	16.85
				10.06	13.70
3.	Rural O.W (25-29.9)	Left and right foot	11	19.36	15.51
				14.46	18.12
4.	Rural Obese (30-34.9)	Left and right foot	0	0	0
				0	0
5.	Urban U.W (below18.5)	Left and right foot	422	12.02	16.71
				9.17	14.44
6.	Urban N.W (18.5-24.9)	Left and right foot	265	10.05	14.22
				7.86	12.78
7.	Urban O.W (25-29.9)	Left and right foot	54	10.43	15.09
				11.16	14.81
8.	Urban Obese (30-34.9)	Left and right foot	9	15.22	15.94
				12.77	12.69

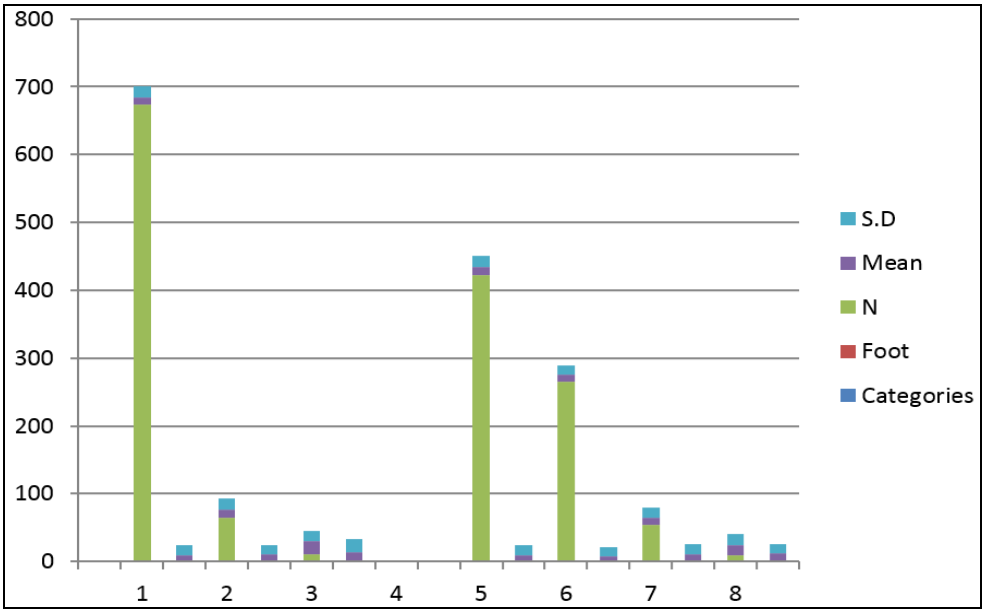


Diagram 1: Showed Percentage of Force Medial Foot of Left and Right Foot of Rural and Urban UW primary school students

Explanation of table-1: the Percentage of Force Medial Foot of Left and Right Foot of Rural and Urban UW primary school students (BMI <18.5). The mean of Percentage of Force Medial Foot of Left Foot of Rural and Urban UW primary school students were 10.59 ± 15.71 and 12.02 ± 16.71. The mean of percentage of force Medial Foot of right foot of Rural and Urban UW is 9.95 ± 14.74 and 9.17 ± 14.44. The mean of Percentage of Force Medial Foot of Left and Right Foot of Rural and an Urban NW primary school student were 11.07 ± 16.85 and 10.05 ± 14.22. The mean of percentage of force Medial Foot of right foot of Rural and Urban NW is 10.06 ± 13.70 and 7.86 ± 12.78. Min/Max values of Rural and Urban NW is 0 and 43.5 and 0 and 65.8.
The mean of Percentage of Force Medial Foot of Left and Right Foot of Rural and an Urban OW primary school student were 19.36 ± 15.51 and 10.43 ± 15.09. The mean of percentage of force Medial Foot of right foot of Rural and Urban OW is 14.46 ± 18.12 and 11.16 ± 14.81.
The mean of Percentage of Force Medial Foot of Left and Right Foot of Rural and an urban obese primary school student (BMI 30-34.9) were 00 ± 00 and 15.22 ± 15.94. The mean of percentage of force Medial Foot of right foot of Rural and Urban Obese were 00 ± 00 and 12.77 ± 12.69.

Table 2: Analysis of Variance (ANOVA) (% Force Lf MF) Percentage of Force Medial Foot of Left Foot of various categories of primary school students

SV	SS	Df	MSV	F value	P
Between Groups	1578.46	5	315.69	1.268	0.275
Within Groups	369656.93	1485	248.93		
Total	371235.38	1490			

Interpretation of table 2: the Percentage of Force Medial Foot of Left Foot of various categories has assessed. The F value is found to be 1.268, is not found to be significant even at 0.05 levels. As F, value is not significant; it indicates that no significant difference exists among the categories of primary school students' percentage of force Medial Foot of Left foot. Hence, hypothesis no. 21 that is "There will be no significant difference in the Percentage of force Medial Foot left foot in the primary school students having different Category of BMI" has been accepted left foot. Hence it is concluded that the Rural and Urban were bearing equal Percentage of force Medial Foot of their left foot.

Table 3: Analysis of Variance (ANOVA) percentage of force Medial Foot of right foot of various categories of primary school students

SV	SS	Df	MSV	F value	P
Between Groups	1330.87	5	266.17	1.300	0.261
Within Groups	303966.62	1485	204.69		
Total	305297.49	1490			

Explanation table 3 the percentage of force Medial Foot of right foot of various categories has assessed. The F value is 1.300 is not found significant even at 0.05 levels that indicates no significant difference exists among the categories of primary students percentage of force Medial Foot of right foot. Hence, hypothesis no. 22 that is "There will be no significant difference in the Percentage of force Medial Foot right foot in the primary school students having different Category of BMI" has been accepted the percentage of force Medial Foot of right foot. Hence it is concluded that the Rural and Urban were bearing equal Percentage of force Medial Foot of their right foot.

4. Discussion

Results of Percentage of Force Medial Foot indicates that the rural and urban students were bearing almost same Percentage of Force Medial Foot on their left foot as the calculated F value was found to be 1.268, which was not found significant even at 0.05 levels of confidence. Similarly the rural and urban students were bearing almost same Percentage of Force Medial Foot on their right foot as the calculated F value was found to be 1.300, which was not found significant at any level.

5. Conclusion

The F value was found to be 1.268, which is not found to be significant even at (P<0.05) level. Rural and Urban students were bearing equal Percentage of Force Medial Foot of their left foot. The F value was 1.300 which is not found significant even at (P<0.05) level. Rural and Urban students were bearing equal Percentage of Force Medial Foot of their right foot.

6. References

1. Yoon SW, Park WS, Lee JW. Effects of body mass index on plantar pressure and balance. 2016; 28(11):3095-3098.
2. Pomarino D, Pomarino A. Plantar Static Pressure Distribution in Healthy Individuals: Percentiles for the Evaluation of Forefoot Loading. 2014-21; 7(4):293-297.
3. Tuna H, Yildiz M, Celtik C, Kokino S. Static and dynamic plantar pressure measurements in adolescents. 2004; 38(3):200-5.
4. Chuckpaiwong B, Nunley JA, Mall NA, Queen RM. The effect of foot type on in-shoe plantar pressure during walking and running. 2008; 28(3):405-11.
5. Jonely H, Brismée JM, Sizer PS Jr, James CR. Relationships between clinical measures of static foot posture and plantar pressure during static standing and walking. 2011; 26(8):873-9.