

## RESEARCH PAPER

# Family violence linked to children's height and weight

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## ABSTRACT

The present cross sectional investigation is based on a sample of 850 children (430 boys and 420 girls) ranging in age from 8 to 16 years to study the impact of domestic violence on the weight and height of children. The data have been collected from different schools of Ludhiana city. To assess the domestic violence in the families of school children 'family violence scale' was followed. Height and weight of children were taken by following standard techniques. Students 't' test was calculated to see the impact of domestic violence on weight and height of children. The children both boys and girls from low domestic violence families were significantly heavier and taller than children from high domestic violence families.

**Key Words :** Family violence

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Domestic violence is conceptualized as 'One partner's attempt to control, dominate or humiliate the other partner a variety of means viz., physical, sexual, psychological, economic and spiritual abuses' (Jaffe *et al.*, 2003). Domestic violence is a global phenomenon and not restricted to any geographical area though regional variations may exist. Various religions, castes and societies, overtly or covertly, have supported subjugation of women in one form or the other; therefore, gender violence cannot be traced only to individual male dominance but should be linked to larger social and familial structures that are based on patriarchy and exploitative relationships. Violence is an act of aggression usually found in interpersonal interactions or interpersonal relations and is situated in the socio-economic and political content of power relations (Kelker, 1991). Everybody including men, women and their children can be the victims of domestic violence in a family. Though chances of men being victims of domestic violence are very less in patriarchal society, the women and children are at a larger risk.

When we talk about the impact of domestic violence on children's development, we are considering the effects on children of living in a home where spousal abuse is occurring. In every society, the child suffers incalculable harm which

may be mental, emotional, physical and sexual at the hands of those who are supposed to mould them into wholesome personalities. The victims who are thus, scared of life may either belong to childhood or adolescence. Nair (1997) and Sunny (2003) reported that witnessing domestic violence can cause long term effects, the children have more physical and mental problems. Veeraraghavan (1995) opined that whatever may be the type of violence, the effect of various forms of violence in the family are often very disastrous both in terms of immediate effects that are quite visible as well as long term effects that are often less visible. Laurance (1997) studied the family conflict linked to children's height and well being and reported that children raised in an atmosphere of domestic tension are almost twice as likely to be below average height as those brought up in happier circumstances. Montgomery *et al.* (1997) opined that acute stress stimulate production of human growth hormone which controls metabolism and is essential for growth. Children are known to be the worst victims of the growing menace of domestic violence. That is why most rightly this issue is becoming the focus of societal attention. Keeping this in mind, the present research investigation was undertaken with the following objectives :

- To study the impact of domestic violence on weight

and height of school children ranging in age from 8 to 16 years.

– To study the gender differences in high domestic violence families.

## RESEARCH METHODOLOGY

The present investigation was conducted on a sample of 850 children (430 boys and 420 girls) ranging in age from 8 to 16 years. The data were collected from different schools of Ludhiana city. Background information of the subjects was gathered. Family violence scale (Bhati and George, 2001) have

Age group (years)	Boys		Girls	
	Low	High	Low	High
7.500-8.499	20	24	17	22
8.500-9.499	19	21	20	19
9.500-10.499	19	29	20	28
10.500-11.499	19	22	25	24
11.500-12.499	20	35	26	29
12.500-13.499	27	30	23	23
13.500-14.499	21	28	20	28
14.500-15.499	21	22	26	28
15.500-16.499	22	31	20	22

been administrated on each subjects. On the basis of obtained scores two groups were formed *i.e.* low domestic violence and high domestic violence group. Age wise distribution of sample has been shown in Table A. Anthropometric measures like weight and height have been recorded on each subject by following standard techniques. The data thus collected have been subjected to statistical analysis. The computation of mean, standard deviation, standard error of mean and test of significance ('t' test) have been applied.

## RESEARCH AND REMONSTRATION FINDINGS

Table 1 shows that children from low domestic violence families were significantly heavier than children from high domestic violence families ranging in age from 8 to 16 years. The weight range for boys from low domestic violence families was 22.85 kg at 8 years to 54.32 kg at 16 years of age and from 21.75 kg at 8 years to 49.10 kg at 16 years in high domestic violence families. Thus the total gain of 31.47 kg in boys of low domestic violence families and 27.35 kg in boys of high domestic violence families has taken place.

A similar trend of increase in weight was observed in the girls belonging to three groups. The weight increased from mean value of 22.50 kg at 8 years to 48.50 kg at 16 of girls in

Age group (years)	Low domestic violence families		High domestic violence families		t value
	Mean	SD	Mean	S.D.	
<b>Boys</b>					
8	22.85	2.30	21.75	3.43	1.218
9	24.63	2.53	24.14	5.33	0.364
10	29.29	2.69	26.97	2.37	2.521*
11	33.74	3.74	28.53	3.15	4.658*
12	34.13	5.91	30.90	4.40	2.303*
13	37.81	5.62	33.42	4.59	3.246*
14	43.46	7.89	38.83	5.50	2.581*
15	47.57	6.75	42.14	6.03	2.786*
16	54.32	6.81	49.10	3.56	3.636*
<b>Girls</b>					
8	22.50	2.48	20.86	2.26	2.147*
9	24.33	4.31	23.33	3.28	0.821
10	26.48	3.61	24.03	2.04	2.984*
11	30.48	4.61	26.85	2.17	3.209*
12	32.44	5.80	28.81	3.82	2.772*
13	39.54	7.29	32.33	4.86	3.951*
14	41.40	3.40	37.56	2.56	4.469*
15	46.79	4.52	40.83	4.29	4.385*
16	48.50	5.94	42.89	5.37	3.216*

\*indicates significance of value at P=0.05

**Table 2: Height (cm) of children in low and high domestic violence families ranging in age from 8-16 years**

Age group (years)	Low domestic violence families		High domestic violence families		t value
	Mean	S.D.	Mean	S.D.	
<b>Boys</b>					
8	127.63	4.75	125.07	5.06	1.717
9	137.37	5.66	127.84	6.90	1.755
10	138.07	4.36	136.09	4.35	1.540
11	144.18	9.34	136.89	4.58	3.242*
12	149.20	10.24	142.27	6.32	3.109*
13	151.56	8.82	146.28	8.20	2.341*
14	158.59	10.56	153.14	4.78	2.564*
15	159.61	7.35	155.27	5.01	2.270*
16	168.72	5.86	162.48	5.25	4.066*
<b>Girls</b>					
8	125.26	3.00	123.85	3.79	1.258
9	130.67	6.84	128.38	4.10	1.275
10	134.74	7.28	130.87	4.68	2.240*
11	138.38	9.03	134.39	2.79	2.071*
12	140.84	9.21	136.63	6.49	1.978
13	147.05	8.54	144.77	7.38	0.970
14	153.17	5.45	144.34	6.36	5.023*
15	155.25	6.80	151.03	4.61	2.292*
16	158.37	10.47	152.35	11.35	2.372*

\*indicate significance of value at P=0.05

low domestic violence families and from 20.86 kg at 8 years to 42.89kg at 16 years in girls of high domestic violence families. Thus the total gain weight was 26 kg and 22.03kg in low and high domestic violence group, respectively. Maximum annual increase has occurred earlier between 12-13 years and of high magnitude (7.10kg) in girls of low domestic violence families as compared to girls from high domestic violence families in whom maximum annual increase has occurred between 13-14 years and of low magnitude (5.23kg).

For weight the differences were found to be statistically significant from 10 to 16 years in boys and in girls differences were found to be statistically significant from 8 to 16 years

except 9 years. Montgomery *et al.* (1997) also reported that stress in childhood reduces the functioning of growth hormone which begins a cycle of disadvantage at every stage.

Table 2 shows that children from low domestic violence families possessed greater length than children from high domestic violence families ranging in age from 8 to 16 years. Of those boys who experienced low domestic violence, the height increased from a mean value of 127.63cm at 8 years to 168.72cm at 16 years. The height increased from 125.07 at 8 years to 162.48cm at 16 years of boys who experienced high domestic violence. A total gain of 41.07 cm in boys from low domestic violence families and 36.41cm in boys from high

**Table 3: Gender differences in weight and height of children from high domestic violence families ranging in age from 8-16 years**

Age	Boys				Girls				t-value	
	Weight		Height		Weight		Height		Weight	Height
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.		
8	21.75	3.43	125.07	5.06	20.86	2.26	123.85	3.79	1.030	0.916
9	24.14	5.33	127.84	6.90	23.33	3.28	128.38	4.10	0.576	0.295
10	26.97	2.37	136.09	4.35	24.03	2.04	130.87	4.68	3.434*	4.245*
11	28.53	3.15	136.89	4.58	26.85	2.17	134.39	2.79	2.113*	2.56*
12	30.90	4.40	142.27	6.32	28.81	3.82	136.63	6.49	2.007*	3.514*
13	33.42	4.59	146.28	8.20	32.33	4.86	144.77	7.38	0.835	0.694
14	38.83	5.50	153.14	4.78	37.56	2.56	144.34	6.36	1.102	5.857*
15	42.14	6.03	155.27	5.01	40.83	4.29	151.03	4.61	0.770	2.763*
16	49.10	3.56	162.48	5.25	42.89	5.37	152.35	11.35	5.066*	5.227*

domestic violence families had taken place from 8 to 16 years of age.

In case of girls from low domestic violence families the height had increased from a mean value of 125.26 cm to 158.37 cm and in girls from high domestic violence families it has increased from 123.85cm to 152.35 cm from 8 to 16 years of age. Thus the total gain in height is 33.11cm in girls from low domestic violence families as compared to 28.50cm in girls from high domestic violence families. For height the differences were found to be statistically significant from 10 to 16 years in boys, but in case of girls differences were found to be statistically significant from 11 to 16 years except 12 and 13 years. The adolescent spurt in stature was also earlier in boys from low domestic violence families. Laurance (1997) also reported that children raised in an atmosphere of domestic tension are almost twice as likely below average height as they brought up in happier circumstance. Asling-Monemi *et al.* (2009) also reported that indicates that exposure to any form of violence has negative effect on length of children.

Table 3 shows the gender differences in weight and height of children from high domestic violence families, it was found that boys were heavier than girls at all age level. The differences in weight are statistically significant at 10 to 12 years and 16 years in high domestic violence families. Kumar (1989), Kaur (1990), Khongesdier (1996) and Singal *et al.* (1998) also reported that boys are heavier than girls. This table also shows that boys were taller with bigger trunks than girls at all age levels except at 9 years. However, significant differences in height were observed from 10 to 16 years except 13 years.. Khongesdier (1996) reported that from 3 to 15 years of age boys are taller than girls at all ages except at 11 and 13 years of age.

#### Conclusion :

Slow growth in childhood is associated with family violence. This may be because slow growth is a sensitive marker of emotional disturbance and chronic stress.

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