DISCUSSION
The effect of having an extra Y chromosome can be varied. Previous studies on extra Y chromosome concluded its relationship with tallness and aggression. They also found their occurrence among mentally subnormals and criminals. XYY men can show agitated, spontaneous behaviour and difficulty in emotional control. These characteristics when combined with a lowered intellectual function and the accompanying lack of educational attainment can lead to increased criminality. But closer studies of development of XYY men found that the majority of men with XYY syndrome lead normal lives. They go to ordinary schools, have successful careers and live until old age. The majority of men with XYY syndrome, around 75%, are in employment in a wide range of jobs. Many men with XYY syndrome marry, have normal sex lives and have children, as men with the normal number of chromosomes. They also do not appear to be at any higher risk of having a son with XYY syndrome themselves. Most men with an extra Y chromosome will never know they have extra Y chromosome as they never have a reason to get their chromosome checked. However they were found experiencing problems such as learning difficulties or behavioural problems.

Keeping in view the above facts, the present study was undertaken to screen the taller males of normal population of North Indian region to see the prevalence of extra Y chromosome and to see the level of aggression in them. The study was planned as the studies done so far were on subnormal and criminal persons only and they were tall and aggressive. In the present study the subjects from the normal population were selected on the basis of height only. The results of the study are discussed as follow:

As per table I and figure XII the 500 taller males of height ≥ 180cm in the age range of 21 to 55 years were selected. The sample size was decided on the basis of 1:325 ratio of finding XYY men in taller males of normal population. These subjects were further divided into three groups on the basis of their height. In the first group, there were 223 males of height 180-185cm while in the second group there were 182 males of height 185.1-190cm. 95 males constituted the third group with height of 190.1cm and above. The tallest male found in the study was of height 202cm in group three. The mean age of the subjects in group three was higher than
those included in other two groups. Each group made on the basis of height included the subjects from the age range of 21-55 years of age. Further there was no statistically significant difference of age in all the three groups.

In a study conducted by Tartaglia N also the subjects were selected on the basis of age from 1-55 years for screening of extra Y chromosome. In the present study, the 21-55 years of age group was chosen as the males attain their maximum height by the age of 21 and the bone mineral density shows changes by 60 years of age in males. As the taller height is the main characteristic of the XYY men and their frequency is 1:325 in taller males of normal population, so 500 taller males were taken for the study. In addition, the average height of the men in India is defined as 163.4cm±7.5cm. Therefore, the tall males will be of height 178.4 cm and above. In the present study, the males of height 180cm and above were taken.

The Buss and Perry questionnaire for aggression was tested to check its reliability for calculation of aggression of the subjects of present study. The values of the cronbach’s alpha test (in table II) shows the reliability of this questionnaire for the estimation of aggression in the present study. Further, the questionnaire was also translated in the local vernacular language - Hindi (Annexure-2). A similar Turkish study with Buss and Perry questionnaire was also found. The author checked the reliability of the Buss and Perry questionnaire by applying Cronbach’s alpha test and the questionnaire was also translated in the local language.

The aggression level was calculated in the subjects by adding half value of standard deviation in the mean score of the total aggression calculated in the subjects. All the subjects were categorised under low aggression, medium aggression and high aggression groups. There were 30.4% subjects found with high aggression (table III and figure XIII). Gary Elliott also mentioned the categorisation of the aggression levels as low, medium and high for total aggression score as well for the four factors of the aggression in his book. Further the aggression levels were also calculated as per the four factors of the aggression questionnaire: physical (Figure XIV), Verbal (Figure XV), Anger (Figure XVI) and hostility (Figure XVII).

The table V shows the mean values of the four parts of the aggression in 500 subjects of the study. The verbal aggression was found to be more in the subjects of the present study. The chi square test showed the significant difference in the values
of these factors. Comparing the mean values of different factors of the aggression, it was found that the difference in these values was significant with value for verbal aggression being the highest (table VI).

Buss and Perry when applied this questionnaire to see the sex difference for anger in males and females they found no sex difference. But the various scales correlated differently with various personality traits. It was suggested that along with overall aggression scores individual components should also be assessed.\textsuperscript{110}

Bhateri and Singh also used Buss and Perry aggression questionnaire to find out the gender difference in aggression and they found no significant difference between males and females.\textsuperscript{37} Dutt et al also used this questionnaire to see the magnitude of different components of aggression among school children in rural area of West Bengal.\textsuperscript{111} In another study Sharma and Marimuthu used this questionnaire on different communities of India. It was found that 17.7\% of the youth had high mean of aggression and males were found more aggressive than females.\textsuperscript{112}

Buss and Perry questionnaire for aggression was also used in a survey on undergraduate students from Indian Institute of technology Ropar to explore the link between self-esteem and aggression which concluded a strong correlation between self-esteem and aggression.\textsuperscript{92}

The number of educated and uneducated subjects was also calculated in the present study (Table VII). There were 82.4\% educated subjects in the present study which may be a reason of less physical, anger and hostility part of aggression in the present study. Sharma R K and Sharma R also observed that uneducated people were more aggressive physically than educated people.\textsuperscript{113}

Table VIII shows the distribution of subjects of different height groups according to their scores of aggression. There were maximum number of the subjects with high aggression in the tallest group of the taller males. The $\chi^2$ was statistically highly significant. Hence, aggression was found associated with height as it was found increasing with increase in height in the present study (Figure XVIII). Scaramella TJ and Brown WA also found an association between the aggression and the taller hockey player males.\textsuperscript{20} The study found the high levels of
testosterone in these players which is a male androgen that influences the behaviour like aggression in males. The testosterone levels were not checked in the present study. This can be taken up as a topic for another study too.

In the present study, certain demographic factors were also included to see their effect on the aggression (Annexure I, section C). The subjects were grouped according to their S/E status (Table IX). The four groups were made on the basis of S/E status - low, middle, upper middle and high. There were only 5.6% subjects in high class. In rest of the groups, there was almost equal number of subjects. The maximum number of the subject of low S/E group were showing high aggression level after aggression estimation with aggression questionnaire. The $\chi^2$ was statistically highly significant suggesting that the S/E status had an association with aggression and with fall in S/E status, there was increase in aggression in the present study (Figure XIX). In another study done to see the correlation between aggressive behaviour and SES, robust correlation was found among children and adolescents.

The subjects of the study belonged to four different religions. There were only 9 and 2 subjects from Muslim and Christian religion respectively (Table X). The majority of the subjects of the study were from Hindu religion followed by Sikh religion. As statistically insignificant difference was observed amongst subjects of different religion, the study suggested that there was no correlation between aggression and religion (Figure XX). According to some other researchers religion had always been a cause of war between two different culture groups. And many of these wars had a political background too. Watkins S.J. conducted a study on 274 females and 202 males to see the correlation between religion and aggression and reported a correlation between religion and aggression.

Majority of the subject included in the study were from urban background. The subjects of the both groups of background had almost equal distribution in the high aggression group (Table XI). The difference between groups was statistically insignificant. So, there was no correlation found between aggression and background in the present study (Figure XXI). A study conducted by Sawalkar found that emotional intelligence development was dependent on training and the surrounding environment. Aggression is a negative emotion and leads to harmful decisions. Emotional intelligence development helps in controlling aggression.
study conducted on rural and urban students reported insignificant difference between aggression level among rural and urban area students.\textsuperscript{117} In an another study conducted by Kaur M and Kaur J, the similar results were seen.\textsuperscript{118}

There were almost equal number of subjects with and without property. The subjects who had no property were more aggressive than the subjects who had property (Table XII). A statistically highly significant difference was found which showed its correlation with aggression (Figure XXII). No related study in the literature was reported regarding association between property and aggression.

Table XIII showed that 65.6\% subjects of the study were in debt out of which 52.3\% subjects were found having high level of aggression. In comparison, only there were only 18.9\% subjects with high level of aggression from the group without loan. The difference amongst two groups clearly indicated was value was statistically highly significant. Hence, this factor was found associated with the aggression in the present study (Figure XXIII). No similar study was reported showing effects of loan on aggression.

The association of aggression levels in the subjects with and without parental dispute was also studied (Table XIV). In the present study, majority of the subjects did not face any parental dispute. But in the cases with parental dispute, the majority of the subjects had maximum level of aggression. The presence of statistically highly significant difference amongst the two groups clearly indicated that the parental dispute is associated with the aggression (Figure XXIV). Edleson J L also reported an association between aggression and domestic violence. Children who witness violence between adults in their homes had become more visible in the spotlight of public attention.\textsuperscript{119}

In the present study only 38 subjects were reported with childhood trauma (Table XV). Out of these 38 cases 14 had maximum aggression, 16 had medium aggression and only 8 presented with low aggression. The difference was statistically insignificant which suggested that the childhood trauma had no association with aggression (Figure XXV). The probable reason for this could be that only few subjects disclosed that they faced any childhood trauma. Sansone et al identified five types of childhood trauma: witnessing violence, physical neglect, emotional abuse, physical abuse, and sexual abuse. He also found that the childhood trauma had a
strong correlation with aggression. In guidelines for medico-legal care for victims of sexual violence, it was reported that most of the victims do not disclose the trauma they face.

Vangelisti also quoted the parental partiality as a cause of aggression. In the present study only few subjects with parental partiality were reported and out of them 52.6% subjects were found to be highly aggressive indicating the association between parental partiality and aggression (Table XVI and Figure XXVI).

According to table XVII majority of the subjects of the present study had liking for the weapons/arms. The χ² value was found statistically insignificant, means the liking for arms was not related with aggression in the present study (Figure XXVII). Similarly in the table XVIII for the types of arms the χ² value was statistically insignificant hence was not related to aggression in the present study.

Dozens of studies by Bushman had confirmed the "weapons effect": People act more aggressively in the presence of a weapon, especially when something agitates them. Researchers of Harvard found that drivers with guns in the car were more likely to engage in road rage, closely tailing other drivers and making obscene gestures.

Further 24.4% cases of adolescent stage trauma were reported in the present study (Table XIX and Figure XXVIII). Out of them 36.9% cases were found to have high level of aggression. The study suggested that the adolescent stage trauma had effect on the aggression in the present study as shown by the statistically highly significant difference amongst the two groups. Kathleen in her report “The Effects of Psychological Trauma on Children and Adolescents” mentioned that the development of the capacity to regulate affect may be undermined or disrupted by trauma, and children exposed to acute or chronic trauma may show symptoms of mood swings, impulsivity, emotional irritability, anger and aggression, anxiety, depression and dissociation in them.

In an attempt to see the association between peer pressure and aggression, the present study found 214 subjects who were under influence of peer pressure and out of them 35.5% subjects were found with high level of aggression (Table XX and Figure XXIX). The presence of increased peer pressure was found to cause
aggression in the subjects of the present study as depicted from statistically highly significant difference between the two groups. Eldeleklioglu in his study on 202 students from different Turkish public high schools aimed at finding the relationships between aggressive behaviours, peer pressure, parental attitudes, and gender, found a significant and positive relationship between the aggression and the peer pressure.125

In the present study poor health has been found to be associated with aggression. 10 cases of health problems (physical) were reported out of which 40% were found to be more aggressive (Table XXI and Figure XXX).

On studying the association between aggression and the drinking habits of the subjects, it was seen that nearly one third subject of the study were habitual drinkers and out of remaining two third more than half of the subjects were non-drinkers. Majority of the subjects with habitual drinking habit were found highly aggressive as per the AQ. Clearly suggesting that the habitual drinking was associated with cause of aggression in the present study (Table XXII and Figure XXXI). Researchers have found the association between alcohol consumption, violence, and aggression and the role of the brain in their regulation.126 Alcohol may encourage aggression or violence by disrupting normal brain function. Alcohol weakens brain mechanisms that normally restrain impulsive behaviours, including inappropriate aggression.127 In various studies used the animal models, it was found the alteration in certain chemicals and hormones after taking alcohol which causes aggression. Serotonin, a chemical messenger in the brain, act as a behavioral inhibitor. Decreased serotonin activity was found associated with increased impulsivity and aggressiveness. Testosterone, a steroid hormone is responsible for the development of male primary and secondary sexual characteristics. High testosterone concentrations in criminals were found associated with violence, suspiciousness, and hostility.128,129

Similarly, regular smoking habits has been found to be associated with aggression, as shown by p value (Table XXIII). More than one third person were reportedly smokers in present study and almost 50% of these smokers were found highly aggressive (Figure XXXII). Kevin Caldwell from Department of Neurosciences, University of New Mexico has quoted that the regular smoking
habits may cause aggression. In a study done by Cherek, it was found that some particular doses of smoking may act as suppresser of aggression.

According to Hindu mythology, the human behaviour is divided into 3 types as per diet - Satwik, Rajas and Tamas. Tamas food makes us lazy, indifferent, dull and less refined. According to Hindu culture, these foods are not good and should be consumed to the minimum. Hence, generally these are told to make a person more violent and angry. Eating sativik food with a little bit of rajas food makes us calm, active, less irritated and less violent. Melvyn also found in his study the effect of presence or absence of certain nutritional elements present in the diet on aggressive behaviour. In the present study, almost two third subjects were vegetarian and remaining nearly one third were non-vegetarian and vegetarian. But the results showed that the diet had an effect on aggression in the present study (p < 0.05) (Table XXIV and Figure XXXIII).

The response for the fear for death was almost equal amongst all the subjects out of which, 36.1% of the subjects with fear for death were highly aggressive (Table XXV). The statistical difference was quite significant suggests that the fear for death was associated with aggression in the present study (Figure XXXIV). Becker LC et al also reported association of fear for death with aggression.

In guideline for the parents, it was reported that jealousy among siblings may be there to prove their individuality or if they feel they were getting unequal amount of parents’ attention, leading to aggressin. Table XXVI and Figure XXXV shows the association between the aggression and jealousy among siblings. 25.6% subjects had jealousy among siblings while 74% had no jealousy among siblings. Two subjects did not give any answer for this question. High level of aggression was reported among the majority of subjects with jealousy and in less number of subjects without jealousy. This factor was found associated with aggression in the present study (p < 0.05).

Similarly, the jealousy among friends has been associated with aggression in the present study where almost one third subjects had jealousy among friends and remaining had no jealousy among friends. Two subjects did not give any answer for this question. 37.7% and 27.4% of subjects had high level of aggression among the subjects with jealousy and without jealousy respectively. (Table XXVII and Figure
XXXVI). Parker JG also found that jealousy among friends was associated with aggression. He found self-esteem as a reason among a number of other reasons for jealousy.

In order to study the association between obsession and aggression, the present study found that almost one third subjects were found obsessive while almost two third had no obsession (Table XXVIII and Figure XXXVII). One subject did not give any answer for this question. 34% and 28.9% of subjects had high level of aggression among the subjects with and without obsession respectively. This factor was not found associated with aggression in the present study (p > 0.05). No related study was found.

Table XXIX and Figure XXXVIII showed a significant association between aggression and the criminal cases against the subjects themselves. Very few subjects were reported with criminal records against them and majority of them had high level of aggression (p<0.05). In addition, there was significant association between aggression and presence of criminal cases against the parents of the subjects (Table XXX and Figure XXXIX). Similarly the presence of criminal records among the subjects’ siblings was also found to be associated with aggression (Table XXXI and Figure XL). On observing the number of criminal records against subjects, it was seen that only one subject had maximum number of criminal records against him (Table XXXII). No related study was found regarding criminal records against parents, siblings, subject himself and number of records.

Further the good and bad habits of the subjects were recorded to see their effect on aggression (Table XXXIII and XLI). The 251 subjects had good habits and 249 had bad habits. The distribution of the subjects for three groups of the aggression was almost equal for both the habits. This factor has not found with aggression in the present study (p>0.05).

The screening of the number of Y chromosomes was done by two methods 1) fluorescent staining followed by 2) chromosomal analysis. Fluorescent staining was done with fluorescent stain - Quinacrine Dihydrochloride. Figure XLII showed the buccal smear slide of the tallest subject of the study, stained with fluorescent stain Quinacrine Dihydrochloride. Arrow in the figure points at the presence one Y body/chromosome inside the nucleus of the buccal cells, stained with the fluorescent
stain. Fig XLIII is the contrast form of Fig XLII and arrow shows the Y body/chromosome. The arrow shows the presence of only one Y chromosome. The Y chromosome was found at the periphery.

In a study the nuclei in 700 metaphase slides from blood samples of 70 normal males of 7 families were examined to access the exact location of Y chromosome. The males of these 7 families were found carriers of a long Y chromosome, small length, an average length Y and a satellite Y chromosome. The Y chromosome was peripheral in 75 to 90 per cent of the metaphase plates from each individual investigated. The long Y were more peripheral than the small ones while the average length Y chromosome had an intermediate position, whereas the satellited Y chromosome was located within the small group. The difference between the location of the long and the small Y chromosomes was highly significant. It was hypothesised that a heteromorphic Y might affect the non-random orientation of metaphasic chromosomes and favour meiotic nondisjunction and aneuploidy.\(^{101}\)

The confirmation of presence of number of Y chromosomes was done by chromosomal analysis, by preparing metaphase slide. Fig XLIV shows the metaphase slide of the same subject showing the presence of single Y chromosome (in circle). There was only single Y chromosome present in all the subjects of the study.

Quinacrine dihydrochloride is a fluorescent stain used for the fluorescent staining of the buccal smear for the screening of the presence of extra Y chromosome. Invention of the fluorescent technique, during the halcyon years of 1955 to 1961, brought a new revolution in identification and the classification of the chromosomes in human genetics.\(^{102}\) Quinacrine mustard was first time used by Caspersson et al in 1968 for staining the chromosomes of Chinese hamster and bean. The fluorescence distribution was found constant for each pair of chromosomes which reflected the differences in the chemical composition of different portions of the chromosomes. The alkylating group of the quinacrine mustard was found having an affinity for the N-7 atom of guanine.\(^{96}\) When Lore Zech stained the human chromosomes with quinacrine mustard, the distal portion of the long arms of the Y chromosome were stained intensely.\(^{137}\) Female nuclei showed no fluorescent body
on staining with quinacrine while XY male nuclei showed one body and XYY male showed two Y bodies.\textsuperscript{138}

Close H G and his colleagues used this technique to find the incidence of sex chromosomal abnormalities in mentally subnormal subjects with height ranging from 178 cm – 183 cm by buccal smear screening followed by the chromosomal analysis.\textsuperscript{49} Hunter H in his survey in eighteen hospitals and collected the data of analysis of 1811 mentally handicapped males. In his study he found 12 males with extra Y chromosome. He stained the buccal mucosa of these subjects with quinacrine dihydrochloride followed by chromosomal analysis.\textsuperscript{57}

Baker D et al also did the buccal smear staining followed by chromosomal analysis to screen 876 prisoners and mentally retarded males to find the extra Y cases.\textsuperscript{56} English C J also screened the mentally handicapped males for the extra Y chromosome only by karyotyping.\textsuperscript{55} Gosavi et al did chromosomal analysis for the screening of the males murderers of central jail, Nagpur for screening of the presence of extra Y chromosome in them.\textsuperscript{52} Franks R C et al also used buccal smear staining method followed by the chromosomal analysis to screen a case of phenotypic sex reversal associated with XYY.\textsuperscript{139}

Geraedts made use of the fluorescent staining technique for the identification of number of Y chromosomes in the human spermatozoa.\textsuperscript{140} Bobrow M and Pearson P L also used fluorescent stain for the staining to find out structural abnormalities of chromosome number 4, 5, 17 and 18.\textsuperscript{141}

Francois et al, Schwinger et al, and Mukherjee et al used this technique in their experiments, independently. They used hair follicle and tissue culture cells for the staining of sex chromosomes.\textsuperscript{142-144} Okada et al also used this method for morphological observations of chromatin in human white hair roots for sex determination. The feulgen, giemsa and quinacrine mustard fluorescent stains were used.\textsuperscript{145} Singh et al also used root sheath of hair for sex determination.\textsuperscript{95}

Though the extra Y chromosome was not found in the present study but aggression was definitely found. As discussed in the beginning, the aggression was found related to the height which increased with increase in height. Because of the absence of extra Y chromosome no correlation between extra Y chromosome and
aggression could be found. The men with extra Y chromosome may or may not have correlation with aggression and tallness.

The very first case announced by Avery Sandford and colleagues during 1961 in hospital at New York, with XYY syndrome had phenotypically normal characteristics. He was noticed by chance when he was examined as his wife delivered a Down syndrome child, as the doctors were looking for the cause of this. Hartl also mentioned in his book that men with XYY syndrome are phenotypically normal and might have mild mental disability.146

Kumar et al also reported one XYY male among the normal population. He was tall but had no antisocial trait.80 Some have reported the existence of XYY genotype with and without tall stature, mental retardation, aggressive behaviour, hypogonadism and genital anomalies.27

An 18-year-old male with an XYY karyotype was reported with short stature, normal intelligence and normal personality, which was in contrast to the XYY syndrome that is characterized by tall stature, mental subnormality and aggressive behaviour.147 Another case of XYY was reported because of his short height. He was reported only because he had an unusual short height and disturbed behaviour.148 On comparison of XYY men in penal institutions with the Klinefelter syndrome (XXY), the author found little difference between their behaviour and criminal records. So, he concluded that XYY men have been stigmatized falsely and that their involvement in crimes and antisocial behaviour may not be significantly different from the normal individuals.56

It was only Jacob’s proposal that extra Y men must be more hostile than normal men. To test this idea, she conducted a study on aggressive males and that too in prisons and mental hospitals. According to her, there is 1:28 ratio of these men with extra Y chromosome in prisoners and mentally subnormals. Following Jacob’s idea many other researchers conducted studies on men with extra Y chromosome to find out their correlation with aggression and tallness. Most of the studies done at that time were on prisoners and mentals, who were already aggressive.27
A study conducted by Patricia A. Jacobs, Muriel Brunton and Marie M. Melville reported the communication between dangerous, violent or criminal propensities of mentally subnormal males with the presence of extra Y chromosome. 3.5% of the males of the population studied were with extra Y chromosome. Close et al conducted a study on aggressive mentally subnormal males at an English hospital during which Oral mucosa was studied to see the presence of extra Y chromosome followed by chromosomal analysis. The extra Y chromosome was found in these mentally subnormal and tall males.

Nielsen and Christensen found 35 males with extra Y chromosome. They reported that out of these 35 males: 15 males were criminals, 7 were from psychiatric hospitals, 4 from medical clinics, 5 were conscripts and 4 were new borns. It was also found that all the 35 males with extra Y chromosome had more than average height, minor vertebral abnormalities, abnormal seminiferous epithelium, minor EEG abnormalities and a mean intelligence level significantly below the expected. In another survey done by Hunter on 1,811 mentally handicapped males from eighteen hospitals, 12 cases of XYY males were found. They were found to have low intelligence, poor secondary sexual characteristics development and poor emotional control. Marinello et al conducted a survey of XYY males among different selected male populations and found XYY males in mental hospital, prisons but none in normal population group. An another study done by Jacobs with her colleagues found 9 males with XYY in 315 men with dangerous, violent and criminal propensities at state hospital, Scotland. Abdullah reported 7 males with extra Y chromosome among 197 mentally subnormal patients with aggressive behaviour who were also found to be unusually tall.

Baker D et al conducted a cytogenetic study to screen the mentally ill males with antisocial behaviour. He found 7 males with XYY and 8 with Klinefelter’s syndrome. He observed that the XYY males were 3 inches taller than the Klinefelter males. A cytogenetic study conducted by Gosavi S. R. et al on 140 criminals of Nagpur central jail showed a definite association between criminal behaviour and XYY chromosome. He found that those criminals with extra Y chromosome were tall too.
The previous studies for extra Y chromosome were always done on mentally subnormal males and criminals who were aggressive and tall. There was no study correlating these factors together in normal population so far. Though in present study, aggressive score increased with height but it was not unusually overt or no subnormal behavior was reported in any of the subjects.

So far, Theilgaard has done the best study on XYY men and aggression. She did comparison of XYY men and XY men of normal population. Theilgaard after close studies of XYY individuals of general population casted doubt on direct linkage between XYY and criminal behaviour. In her review studies, she found that height is the only constant characteristic associated with the XYY men. Testosterone levels were also found contradictory in her review study as some researchers found higher than normal and some found low levels, which has been found responsible for aggression in men. She also found that the learning skills have wide spectrum in XYY. No particular behavioural characteristics can be attributed to the XYY pattern. She also found that XYY males can be hard to manage, but they are not mainly dangerous.

Some mistaken evaluations due to experiments conducted on mentally sick patients from hospitals and criminals from prisons had manipulated the results of this chromosomal anomaly, as a killer of 8 student nurses was claimed falsely to be victim of XYY syndrome.

The previous theory suggested that extra Y chromosome is the reason of aggressive behaviour and tallness. Though Theilgaard have observed aggressiveness does not certainly translate into brutality and illegal behaviour. By her it was also suggested aggression to be assessed in its constructive and obstructive aspects which means adding winning, headship, supremacy and negative attributes of bitterness and violence. So it can be commented that Extra Y chromosome is not the sole criteria for tallness and aggression. Other factors also contribute in tallness and aggression which may be pathological, environmental and social.

In nut shell the present study was undertaken as no such study was done so far on the males of North Indian region to see the prevalence of finding extra Y chromosome and its association to aggression. The most of studies reported from other regions so far were also only on the criminals and subnormals. As the ratio of
finding extra Y chromosome is more in taller males (1:325) of normal population, taller males were selected from the normal population with height $\geq 180$cm. No extra Y chromosome was found in the subjects of the present study but aggression was found in them and that too was not in an overt manner. Aggression was found linked with height in the present study, as it was found increasing with the increase in height. The verbal aggression was found more than the other factors of the aggression. A number of demographic factors were found associated with aggression.