

Survey of Dominant and Recessive Character in Sonai college

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Abstract :

The classroom is the great source for the collection of phenotypic characters these generation is responsible to their next progeny. Phenotypic characters are common, visible and easily observable from external appearance of human being. Dominant and recessive characteristics of phenotypic behavior, which is observed in male and female with few exceptions. Some common and important phenotypic characteristics are discuss in this paper. Examples-This study aimed at determining the incidence of 20 characteristics – 10 dominant- window's peak ,black hair curly hair ,brown eye, long eyelash, free earlobe , large nose, broad lips, rolling tongue, dimples present, cleft chin ,hairs on fingers ,right handedness, normal skin with melanin. 10 recessive – straight hair line, light black hair, straight hair, blue eye, short eyelash, color blindness, attached earlobes, small nose, thin lips, cannot able to roll of the tongue, dimples absent, smooth chin, no hairs on fingers, left handedness, albino skin and the data is collected from surrounding around 200 students (young once) are observed for the study of probability of phenotypic characters with the help of physical examination and questionnaires. The dominant and recessive characters determine by combination of different alleles. The study found that there was no significant difference between the number of dominant and recessive characters with most of the traits showing the same pattern of expression in either sex dominant and recessive characters are totally depends on the genetic expression . mendelian traits plays important role in identification and characteristics of human being from their morphological characteristics. The present study of inheritance was conducted to across random population for the morphological traits.

Keywords: Trait, Dominant Character, Recessive Character, Phenotypes

Introduction :

The theory of mendelian inheritance is use scientific study of external characters of human being use to identify the dominant and recessive characters . The first scientific explanation regarding inheritance was given by Gregor Johann mendel is popularly known as mendel's laws of inheritance. [2] Human population provides and exclusive opportunity to study the morphogenetic variation among the

endogamous population living in different geographical and ecological circumstances.[8] In this study some human traits which are more prevalent in our community have been focused. Inheritance is one of the most important genetic term in which the genetic information transformed from parents to offspring.[10] The external appearance of an individual for any trait is called phenotype.

In this study, we discuss some human traits which are more prevalent in our community. When one learns about dominants and recessive alleles, there is a often a misconception that dominant alleles are the most common and they will tend to crowd out the recessive alleles to course of time. [1] The frequency of a character in a population is related to whether its phenotypic effect is favourable or unfavourable . It was only attempt to study the expression of some traits in a population of sonai college.

The main objective of this study were to assess the frequently expressed morphogenetic traits among the population of selected students of sonai college and also to check which trait is more dominantly or recessively expressed in the population.

Material and Methods

The students of a sonai college were the target area of this research. This college were the target area of this research. This college was located in Newasa taluka under Ahmednagar district. The survey method was chosen include the individuals name, and trait, whether it is a dominant or recessive based on the phenotypic expression. A total of 200 students are observed for 20 different morphogenetic traits such as widow's peak, hair color, hair pattern, eyelash, earlobe, lips, tongue rolling, dimples, hairs on fingers, skin color, eye color from the random population. Out of 200 students 100 male or 100 female. The observed data were plotted in excel for determining the probability of dominant characters between male and female students through chi- square test.

Result Widow's peak

This characters was found in male students and this is a dominant phenomenon and female were showed less with this characters.[6]

Hair color

The black hairs were found the highest in male students as compare female students hair is light black.

Eyelashes

This characters was the highest in female students than the male.

Earlobe

This character was found more in female students as compare to male students. free or unattached earlobe is dominant.[5]

Hair arrangement

Curly hair shown in female students more than male students. Curly hair is dominant over straight hair.

Lips

Lips are the very attractive part of human face . Male is a normally Broad lips than the female.

Rolling tongue [9]

Tongue rolling ability may be due to a single gene with the ability to roll the tongue a dominant trait and the lack of tongue rolling ability a recessive trait. This ability was found more in female students and less than male students in sonai college campus.

Hairs on fingers

Normally males have remarkable testosterone sex hormone so that they showed more hairs on their fingers.

Handedness

The gene for right –handedness is dominant and gene for left hand is recessive. Genetically most people of the world they have higher power in their right hand than the left hand .

Crossing of Thumbs

In a relaxed interlocking of fingers, left thumb over right results from having one or two copies of the dominant version of the gene. people with two recessive place right thumb over left.

Skin color

The pigment is responsible for dark coloration in the skin and there at least three genes, which control for human skin color. Normally we have lots of melanin in the skin either we have fair-skinned or brown skin. Melanin helps to protect harmful rays from the sun or other radioactive source.

Dimples

Cheek dimples occur due to a change in particular facial muscle. There is some genetic component.[7]

Observation Table

Sr. No	No. of students Analyzed		Parameters	No. of dominant genetic traits		No. of recessive genetic traits	
	Male	Female		Male	Female	Male	Female
1	10	10	Widow's peak	07	05	03	05
2	10	10	Hair color	06	03	04	07

3	05	05	Eyelashes	03	04	02	01
4	05	05	Earlobe	03	03	02	02
5	10	10	Hair arrangement	04	07	06	03
6	05	05	Lips	03	02	02	03
7	10	10	Rolling tongue	08	03	02	02
8	10	10	Hairs on fingers	07	02	03	08
9	05	05	Handedness	04	02	01	03
10	10	10	Crossing of Thumbs	06	05	04	05
11	10	10	Skin color	08	04	02	01
12	10	10	Dimples	03	06	08	04

Table 1: Dominant and recessive characters of male and female students

Discussion :

A total of 200 individual were observed for morphogenetic traits- widow's peak, hair color, eyelash, earlobe, lips, tongue rolling, dimples, hairs on fingers, skin color, eye color, handedness, crossing of thumbs, hair arrangement from the random population. It shows that some typical dominant characters were not expressed but the expression of recessive character was prevalent as in case of attached earlobe. Presence of unattached earlobe is dominant character in population but per our study the absence of earlobe was more prominent in the population.

Conclusion:-

This type of study we easily understand for the treatment of genetic diseases in the family through the pedigree analyses.

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