A Study to Identify the Factors That Predict the Sex of the Baby in Government Hospital, Coimbatore

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Abstract- Background: ***Predicting the sex of a baby has been surrounded by myths and traditional beliefs for centuries. While the genetic determination of a baby's sex is well-established, this study explores various biological, social, and behavioral factors that may have an associative role.***

Objective: ***To identify the factors contributing to the prediction of the sex of the baby among postnatal mothers in a government hospital in Coimbatore.***

Methods: ***A descriptive cross-sectional study was conducted among 296 postnatal mothers. Data were collected on maternal age, menstrual cycle regularity, consanguinity, physical built and personality traits of both parents, LMP month type, and delivery dates. Chi-square test was used to assess associations between these factors and the sex of the baby.***

Results: ***The analysis showed no statistically significant association between the baby's sex and maternal age, menstrual regularity, consanguinity, personality traits, LMP month, or delivery date. However, a statistically significant association was found between the father's physical built ($\chi^2=0.01$, $p<0.05$), and the combination of the father's personality and physical built ($\chi^2=0.02$, $p<0.05$) with the sex of the baby.***

Conclusion: ***While most traditional and physiological factors did not show significant associations, the father's physical built and combined personality-physical traits showed some predictive potential. However, these findings should be interpreted with caution due to the lack of biological plausibility, and further studies are required to validate these associations in a scientifically rigorous manner.***

INTRODUCTION

“Boy? or Girl?” this is the common question that arises in all minds when a mother gets pregnant. From ancient days there has been so many different ways to predict the sex of the baby. How well can rings, dreams, or countenance foretell boy or girl? Some people swear by old wives' tales as foolproof methods for pregnancy prognostication. They're as old as pregnancy itself, these boy-or-girl prognostications, and nurses and midwives have heard them all over the years. Some of them are as follows

- Dangling a ring -- usually her wedding ring -- on a string over the pregnant woman's belly. If it swings back and forth, it's a boy. If it moves in a circle, it's a girl. "The ring over the belly is a biggie," says Tara Voto, RN, BSN, a labor and delivery nurse at St. Barnabas Hospital in Livingston, N.J. "I probably hear that one more than any other."
- The heartbeat theory. "Fetal heart rates range between 110 and 160," explains Patricia Crane, MSN, CNM, director of the nurse-midwifery service with the University of Michigan Health Systems. "If your baby's heart rate averages in the 110 to low 130s range, the thought is that it's more likely a boy, and if it's in the mid 140s to 160 range, it's more likely a girl. Mid-130s to 140s is unpredictable -- and where a lot of heart rates fall."

  A study done in 1993 at the University of Kentucky seemed to prove this theory right, finding that the fetal heartbeat could be used accurately to predict the sex of 91% of boys and 74% of girls. But subsequent studies all disagree. "I also tell my patients that there must be other atmospheric conditions that affect this because you have a run of babies where this theory tends to work, and then suddenly you can't get one right to save your life!" Crane says.
- The "linea nigra" -- the dark line that some women get running from the pelvic bone, mid-abdomen, to the belly button or as far as the xyphoid (the bottom-most part of the rib cage in the center or tip of the sternum). "The theory goes that if the linea nigra runs to the belly button, it's a girl, and if it goes all the way up to the xyphoid, it's a boy," Crane says.

- The Drano test. "Apparently if you take old Drano, manufactured before a particular year in the 1980s, and mix it with the pregnant woman's urine, it turns brownish if it's a girl or bluish-green for a boy," Crane says.
- If the woman looks prettier during her pregnancy, it's a boy. If you're having a girl, you tend to lose some of your looks, because she's taking your beauty," Voto says.
- Chinese gender prediction calendar is one of the other methods used to predict the gender of the baby. This forecasting tool seems above 90% accurate when it comes to the gender predictions, but some other people just consider it as a fun way to guess the gender of the unborn children. In fact, no scientific evidence is produced to prove the authenticity of this forecast tool or ensure that this Chinese calendar really works in every situation. However, this superstitious act has still grown strong in every woman who desperately wants to verify the genders of the unborn children, and since it's quite easy to use the chart, people would love to give it a try even just once

In fact, many of the traditional tales about how to predict the baby's sex seem to flip-flop depending on who's doing the telling. Never the less there are so many other factors that do contribute to the sex of the baby. The physical built of parents, their personality, consanguinity, etc., could also contribute to the same. Thus a study was conducted to identify the various other factors that contribute to the prediction of sex of the baby.

OBJECTIVES

1. To identify the factors contributing to the prediction of sex of the baby.

RESEARCH METHODOLOGY

This study was conducted in Government hospital, Coimbatore among 296 postnatal mothers to identify the factors that predict the sex of the baby. Informed consent was taken from the study participants. Data were collected on various aspects such as age of the mother, regularity of menstrual cycle of mothers, month of LMP, duration of pregnancy, difference in date of delivery and EDD, consanguinity, personality of husband and wife and physical built of husband and wife. The ethical guidelines were followed throughout the study.

RESULTS AND DISCUSSION

1. Association between age classification, menstrual status of mothers, consanguinity and sex of the baby.

N=296

	MALE		FEMALE		χ^2
AGE (years)					
less=20	40	13.5%	27	9.1%	0.2
21-25	69	23.3%	73	24.6%	
26-30	32	10.9%	41	13.9%	
more than30	6	2%	8	2.7%	
MENSTRUAL STATUS					
Regular	122	41.2%	112	37.8%	0.09
Irregular	25	8.4%	37	12.6%	
CONSANGUINITY					
Yes	45	15.3%	55	18.6%	0.25
No	102	34.4%	94	31.7%	

Based on age classification of mothers majority 24.6% were female babies born for mothers in the age group of 21-25 years whereas 23.3% were male babies and least 2% were male babies born for mothers in the age group more than 30 years whereas 2.7% were female babies.

Based on menstrual regularity majority 41.2% were male babies born for mothers with regular menstrual cycle whereas 37.8% were female and least 8.4% were male babies born for mothers with irregular menstrual cycle and 12.6% were female babies.

Majority 34.4% were male babies born for non consanguineous parents whereas 31.7% were female babies and least 15.3% were male babies born of consanguineous parents and 18.6% were female babies.

There was no statistical significance between age classification, menstrual status of mothers, consanguinity and sex of the baby.

2. Association between personality of husband, wife, both and sex of the baby.

N=296

	Personality	MALE		FEMALE		χ^2
HUSBAND	Introvert	34	11.6%	47	15.9%	0.09
	Extrovert	113	38.3%	101	34.2%	
WIFE	Introvert	51	17.2%	56	18.9%	0.6
	Extrovert	96	32.5%	93	31.4%	
BOTH	Both introvert	12	4%	22	7.4%	0.22
	Both extrovert	74	25%	68	22.9%	
	Husband introvert and wife extrovert	40	13.6%	33	11.2%	
	Husband extrovert and wife introvert	21	7.1%	26	8.8%	

Data pertaining to personality, majority 38.3% were male babies born of extrovert husbands whereas 34.2% were female babies and least 11.6% were male babies born of introvert husbands and 15.9% were female babies, majority 32.5% were male babies born of extrovert wives whereas 31.4% were female babies and least 17.2% were male babies born of introvert wives whereas 18.9% were female babies , majority 25% were male babies born of extrovert husband and extrovert wives whereas 22.9% were female babies and least 4% were male babies born of introvert husbands and introvert wives whereas 7.4% were female babies.

However, there is no statistical significance between personality of husband, wife, both and sex of the baby.

3. Association between physical built of husband, wife, both and sex of the baby.

N=296

	Physical Built	MALE		FEMALE		χ^2
HUSBAND	Thin	101	34.3%	77	26.1%	0.01 ($p<0.05$)
	Stout	44	14.5%	67	22.8%	
	Athletic	2	0.7%	5	1.6%	
WIFE	Thin	99	33.5%	102	34.5%	0.8
	Stout	46	15.5%	46	15.5%	
	Athletic	2	0.7%.	1	0.3%	
BOTH	Both thin	74	25%	63	21.2%	0.08
	Both stout	20	6.8%	30	10.2%	
	Husband stout and wife thin	24	8.1%	37	12.5%	
	Husband thin and wife stout	25	8.5%	13	4.4%	
	Husband thin and wife athletic	2	0.7%.	1	0.3%	
	Husband athletic and wife thin	1	0.3%	3	1%	
	Husband athletic and wife stout	1	0.3%	2	0.7%.	

Based on data pertaining to physical built, majority 34.3% were male babies born of thin husbands whereas 26.1% were female babies and least 0.7% were male babies born of athletic husbands whereas 1.6% were female babies, majority 34.5% were female babies born of thin wives whereas 33.5% were male babies and least 0.3% were female babies born of athletic wives and 0.7% were male babies, majority 25% were male babies born of thin husbands and thin wives whereas 21.2% were female babies and least 0.3% were female babies born of thin Husband and athletic wife and male babies born of athletic Husband

and thin wife, athletic Husband and stout wife whereas 0.7% were male babies born of thin Husband and stout wife, 1% were female babies born of thin Husband and athletic wife and 0.7% were male babies born of athletic Husband and thin wife, athletic Husband and stout wife .

Never the less there is a statistical significance with the body built of the husbands and the sex of the baby.

4. Association between personality and physical built of husband and wife with sex of the baby.

N=296

	Personality And Physical Built	MALE		FEMALE		χ^2
HUSBAND	Introvert and thin	28	9.5%	33	11%	0.02 ($p<0.05$)
	Introvert and stout	8	2.8%	12	4.1%	
	Extrovert and thin	74	25%	47	15.8%	
	Extrovert and stout	35	11.8%	52	17.6%	
	Introvert and athletic	2	0.7%	3	1%	
	Extrovert and athletic	0	0	2	0.7%	
WIFE	Introvert and thin	40	13.6%	43	14.6%	0.7
	Introvert and stout	7	2.4%	12	4.1%	
	Extrovert and thin	61	20.6%	62	20.9%	
	Extrovert and stout	37	12.5%	31	10.4%	
	Introvert and athletic	1	0.33%	1	0.33%	
	Extrovert and athletic	1	0.33%	0	0%	

Based on personality and physical built, majority 25% were male babies born of extrovert and thin husbands whereas 15.8% were female babies and least of no babies born of extrovert and athletic husbands and 0.7% female babies, majority 20.9% were female babies born of extrovert and thin wives and 20.6% were male babies and least of no female babies born of extrovert and athletic wives whereas 0.3% were female babies.

There is a statistical significance between personality and physical built of husband and sex of the baby.

5. Association between LMP month type, Difference in DOD and EDD and sex of the baby.

N=296

	MALE		FEMALE		χ^2
LMP month type					
Odd	83	28.1%	76	25.6%	0.3
Even	64	21.6%	73	24.7%	
DOD					
Before-	101	34.1%	97	32.7%	0.7
After+	41	13.8%	45	15.2%	
Same day	5	1.7%	7	2.5%	

Based on month type, majority 28.1% were male babies born during odd month whereas 25.6% were female babies and least 21.6% were male babies born during even month whereas 24.7% were female babies Based on difference between DOD and EDD majority 34.1% were male babies born before EDD whereas 32.7% were female babies and least 13.8% were male babies born after EDD whereas 15.2% were female babies.

There is no statistical significance between the month type, Difference in DOD and EDD and sex of the baby.

CONCLUSION

A descriptive study was done to identify the factors that contribute to the prediction of sex of the baby in Government hospital, Coimbatore. Data analysis shows that there is a significant difference in the association of the physical built of husband with the sex of the baby [χ^2=0.01 ($p<0.05$)] and physical built and personality of husbands with the sex of the baby [χ^2=0.02 ($p<0.05$)].