

CORRELATION BETWEEN TIME OF HAVING SEX OF MARRIED COUPLES AND OF GIVING BIRTH TO THE CHILD AND ITS IMPLICATION ON SEX RATIO. A CASE OF THREE PROVINCES; MUCHINGA, NORTHERN AND LUAPULA OF ZAMBIA

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ABSTRACT

The study was undertaken to determine whether there was correlation between time of having sex of married couples and the time for giving birth to the child. Three research questions were raised and answered by administering questionnaires. Questionnaires were used to collect data from 92 married people from the three provinces of Zambia and the clinic. The five points Likert rating scale was used in determining whether there was correlation between time for sex and time for birth. Data was analyzed using simple frequency counts, percentages and analysis of variance. The results of the study showed that there was correlation between time for sex and birth and Zambia like any country has almost the same sex ratio. The reason for this correlation was that most married couples have sex mainly at night when they were free from their busy schedules of work.

Keywords: Time For Sex, Birth, Married People, Sex Ratio.

1. INTRODUCTION

The population of every country including Zambia consists of the males and females. The increase in population of any country is determined by the number of babies born and who survive up to old age. Babies are born because of sex and people have sex at different times of the day.

According to research findings, many babies in United States of America are born during the day time while in England, they are born at night. Most babies in the United States are born on a weekday, with the highest percentages delivered between 8 a.m. to 9 a.m., and from noon to 1 p.m., according to a report published Friday by the National Center for Health Statistics (<https://www.washingtonpost.com> › news ›). For many pregnant women who had cesarean deliveries is not too much of a surprise. Most births in the United States take place in hospitals. And as C-sections and induced labor have increased during the past few decades, more deliveries take place during the day, to maximize coordination and care with doctors and hospital staff.

But what happens if the baby isn't born in the hospital, but in the home, where most out-of-hospital births occur? Babies who are born outside hospital are most likely to be born in the wee morning hours of the day which is between 1 a.m. and 4:59 a.m. According to (<https://blogs.scientificamerican.com> › sa-visual ›), in the U.S., 32 percent of births are C-section surgeries, another 18 percent are the result of induced labors and 50 percent are "natural" (vaginal deliveries without induction). If we break down the data by the method of delivery, we see a distinct rhythm for each type of delivery method. Together, these three intersecting patterns create

the overall minute-per-day pattern we see: fewer births at night, a huge spike in the morning and a broader afternoon bump.

Where nature is taking its course, infants are more likely to be born when it's completely dark out, according to National Center for Health Statistics, part of the U.S. Centers for Disease Control and Prevention (<https://www.washingtonpost.com/news>). The patterns of birth are changing because of rising rates of intervention, such as C-sections and inductions a situation which has not spared Zambia as a country. The ratio between the males and females is known as sex ratio which is the ratio of males to females in the population. For Hesketh and Xing, (2006), the “sex ratio at birth” is defined as the number of male live births for every 100 female births. In other words, it is the demographic concept that measures the proportion of males to females in a given population. It is usually measured as the number of males per 100 female. The ratio is expressed as in the form of 105:100 which means there are 105 males for every 100 females in a population. In the absence of manipulation, the sex ration at birth is remarkably consistent across human population, with 105: 100 male births for every 100 female births. This slight excess of male births was first documented in 1710 by John Graunt and colleagues for population of London (Campbell. 2001) and many studies of human populations have confirmed their findings. A key study of births for the period 1962 to 1980 in 24 countries in Europe showed a sex ratio of 105: 107. Other people define sex ratio as the proportion of male births to female births. For some countries, sex has remained the same for some years because of certain reasons while other it has either gone up or down. It has been observed that the timing of conception has an effect on the sex of the child with males more frequently conceived at the beginning and at the end of the menstrual cycle(James, 1987), a situation which has resulted in human populations having more male births than female births. The sex ratio for most of the countries in the world at birth is fairly standard in the sense that it is around the ratio of what has been accepted internationally which is 105 males per 100 female births according to the (<http://www.columbia.edu>demography>populationRatio.html>). This is what the World Health Organisation (WHO) estimates as the ‘expected’ sex ratio at birth. In the absence of gender discrimination or interference the expected sex ratio is around 105 boys born per 100 girls, although this can range from around 103 to 107 boy per 100 girls (Ritcher and Roser, 2019).

According to research findings the striking pointy is that in every single country of the world there are more boys born than girls but is it true for Zambia that there are more baby boys born than girls, and that more babies are born at night because of most married couples have sex at night. The research was conducted to answer this question.

Statement of the problem

Many students and pupils do not know the time of day when most of babies are born and if there is correlation between time of sex and time of birth for most of the babies. In addition to this, there are few students who know the sex ratio of their countries and the importance of knowing sex ratio of their countries. There is little information on what time of the day when most married couples have sex and reason why they have sex at such time of the day and the importance of having sex at such a time. It is for this reason that a research was conducted to provide information on such issues.

The objectives of the study were:

(i) To find out whether there is correlation between the time of sex for married couples and time of birth of the child in Zambia.

- (ii) To find the time of the day when married couples have sex.
- (iii) To establish whether Zambia has the same sex ratio like any other country in the world.

Research Questions

The following questions were generated to guide this study:

- (i) Is there correlation between time of sex of married couples and time of birth of the child in Zambia?
- (ii) At what time of the day do most married couples have sex?
- (iii) Does Zambia have almost the same sex ratio like any country?

2. THE LITERATURE REVIEW

Research findings have shown that most babies in the United States are born on a weekday, with the highest percentages delivered from 8 a.m. to 9 a.m and from noon to 1 p.m according to a report published by the National Center for Health Statistic (Lena H, Sun. 2015) while in United Kingdom, babies are most likely born at 4am, according to Philippa Roxby Health reporter (BBC News 15th June 2018). Four o'clock in the morning is the time most babies are born spontaneously in England, with the majority arriving between 01:00 and 07:00.

According to Dr Peter Martin, lecture in applied statistics at university college London, there was an evolutionary reason for spontaneous births being concentrated at night, reason being that our ancestors lived in groups that were active and dispersed during the day and come together to rest at night. So a night time labor and birth probably afforded the mother and new born baby the advantage of greater protection from outside threats (<https://www.standardmedia.co.k>)

Research are being conduct to find the answers to question like why most women give birth at night and early morning. Research conducted over a ten-year period by the city university of London, in collaboration with the university college of London and the NCT found the most common time to give birth is...4am. Long-term experience and research has shown that human births without obstric intervention are mostly like to occur at night or in the early hours of the morning (<https://www.thehits.co.nz>the-latest>study.html>). The study led by the city university London found the time and day that women give birth can vary significantly depending on how labour starts and the mode of giving birth. Only just over half of mothers now have births after labours which start spontaneously in other words without being included by drugs or a caesarean. Researchers found births most likely to happen between 1am and 6:59am, peaking at 4am with a trough in the afternoon. Selective obstetric intervention in preceding days could be an explanation but more research would be needed to investigate this. For T.J Mathews, M.S.: and Sally C. Curtin. M.A. (2013), no induced vaginal deliveries were more likely to occur from 11:00 pm, through 6:59am than were induced vaginal or caesarean deliveries. Noninduced vaginal deliveries had the most even distribution across the hours of the day, fluctuating close to the average of 4.2%. According to Jarrell (2002), significant reductions in the ratio, indicating fewer male births have been identified in some countries, including Canada (Allan et al .1997), the united states (Allan et al1997: Marcus et al..1998). Denmark (Moller .1996). Holland (van der pal-de Bruid .1997). Germany (van den Brock .1997).and England and wale (Manning et al1997). Not all countries have identified reduction in sex ratio. Australia has reported no change in the sex ratio (Lancaster & Day 1998) while Ireland has reported an increase in the proportion of male births to females over similar time periods (Moynihan & Breathnach, 1999).

Scientists were not sure why there are 105 males born for every 100 females around the world. The following are some of the suggested reasons for this discrepancy in the sex ratio:

- It is possible that over time, nature has compensated for males lost in war and other dangerous activities to better balance the sexes.
- It is likely that a more sexually active gender produces offspring of their own gender. Thus, in a polygamous society (polygamy where one man has multiple wives), he is likely to have a greater proportion of offspring that are male.
- It is possible that female infants are under-reported and not registered with the government as often as male babies.
- Scientists also say that a woman with a slightly more than average amount of testosterone is more likely to conceive a male.
- Female infanticide or the abandonment, neglect, or malnutrition of female infants in cultures where males are favored may occur.

Today, sex-selective abortions are unfortunately common in countries like India and China. The introduction of ultrasound machines throughout China in the 1990s led to a sex ratio of up to 120:100 at birth due to family and cultural pressure to have one's only child as a male. Shortly after these facts became known, it became illegal for expectant couples to know the gender of their fetus (<http://www.thoughtcom.com/sex-ratio-and-population-1435470>). Now, the sex ratio at birth in China has been reduced to 111:100. In the first month of life more boys die, because of the following factors, boys have greater natural weakness at birth and less developed immune system (Vaupel et al . 1979: Wisser and Vaupel 2014) .

When there is imbalance in the sex ratio then the following consequences are likely to occur, for example increased levels of violence. An additional problem is that many of these men are rural peasants of low socioeconomic class and with limited education .for Zeng. Y.Tu .P.Gu. B.. Xu. Y.. Li. B. & Li. Y . (1993). When there is a shortage of women in the marriage market, then women can "marry up." Inevitable leaving the least desirable men with no marriage prospects. It is not in dispute that over the next 20 years in large parts of Asia there will be an excess of males. In parts of China and India, there will be a 12-15% excess of young men (Den Boer. A. M.. 2004). These men will remain single and will be unable to have families ,in societies where marriage is regarded as virtually universal and social status and acceptance depend, in large part , on being married and creating a new family (Hudos V. & Den Boer. A. M., 2004) for example. In china 94% of all unmarried people age 28-29 are male and 97% of them have not completed high school (Zhang 1990). So in many communities today there are growing numbers of young men in the lower echelons of society who are marginalized because of lack of family prospects and who have little outlet for sexual energy. A number of commentators predict that this situation will lead to increased levels of antisocial behavior. Violence and will ultimately present a threat to the stability and security of society (Hudos V. & Den Boer. A. M., 2004).

There is some empirical evidence to fear such a scenario. There is a consistent finding across cultures that an overwhelming percentage of violence crime is perpetrated by young, unmarried, low-status males (Dreze.J. & Keher. R., 2000). In India a study carried out between 1980 and 1982 showed a strong correlation between homicide rates in individual states across the country and the sex ratio in those states, after controlling for potential confounders such as urbanization and poverty. The authors concluded that there was a clear link between sex ratio and violence as a whole, not just violence against women as might be assumed when there is a shortage of females. These analyses were repeated by Hudson and Den Boer (2006), Who showed that the relationship

between sex ratio and murder rates at the level of the Indian state persisted through the late 1990s. In China young male migrant workers are thought to be responsible for a disproportionate amount of urban crime, especially violent crime. It is reported that migrants account 50% of all criminal cases in the major receiving cities for migrants. With some cities reporting up to 80% (Li Q., 2001).

According to Hudson V. & Den Boer. A. M. (2004). There is also evidence that. What single young men congregate, the potential for more organized aggression is likely to increase substantially and at the same time these young men are likely to be attracted to military or military type organizations, with the potential to be a trigger for large –scale domestic and international violence. With 40% of the world population living in China and India, the authors argue that the sex imbalance could impact regional and global security, especially because the surrounding countries of Pakistan, Taiwan, Nepal, and Bangladesh also have high sex ratios.

It has also been suggested that a shortage of women may lead to a rise in homosexual behavior (Park. C. B. & Cho, N. H., 1995), not implying that the shortage of women will produce homosexuality, but rather that an increasing tolerance toward homosexuality, together with the surplus of males, may lead to large numbers of covert homosexuals openly expressing their sexuality. A situation of more males will result into gender imbalance which will lead to a reduction in birth rate. Which may be particularly beneficial in countries trying to control population growth. If the number of women in a society decreases, then their social status is increased and they benefit from their enhanced value Zhang .p. (1990). ultimately .this may lead to more balance sex ratio because couples will choose to have girls. However it has also been argued that the increased value of women could have a negative side, especially in rural society; increased female value may not benefit the woman herself, but rather the males around her. Her father, husband, and in-laws all hold her value, so when her value increases her life is more controlled by them.

3. RESULT PRESENTATION

The number of participants in the sex ratio was 239, out of the 239, 122 said that the first born was a boy and 117 said the first born was a girl resulting in the sex ratio to be 122:117 which if converted to percentage would be 51.05% to 48.95%

Responses on sex of babies and married couples.

The responses from the 92 couples were computed using the five point scale to determine the factors affecting sex ration and time when couple have sex. The mean value for acceptance was $X \geq 3$ otherwise rejected.

Response	score
Strongly agree	5
Agree	4
Not sure	3

Disagree	2
Strongly disagree	1
Total	15

Mean score $15 \div 5 = 3$

The Table 4.1 below is showing the responses from 92 participants

S/N	ITEM	SA	A	NS	D	SD	MEAN
1	Most of African couples would like to have equal numbers of boys and girls.	27	32	7	18	8	3.57
2	Most of the babies are born between 18 00hrs and 06 00hrs.	30	22	20	10	10	3.57
3	Most of expecting mothers are taken to hospital between 18 00hrs and 06 00hrs for delivery.	22	34	17	14	5	3.59
4	Most of Africans couples have sex between 18 00hrs and 06 00hrs.	38	31	9	9	5	3.86
5	Most of African couples do not have preferred numbers of children to have.	30	27	20	11	4	3.74
6	Most of the babies are conceived at night.	24	34	20	6	8	3.65

KEY SA=Strongly Agree, A =Agree, NS =Not Sure, D=Disagree, SD=Strongly Disagree.

Table 4.2 statistics of babies born in June at a hospital

S/N	SEX	MALE	FEMALE
1	Number of babies born in June .2020.	19	20
2	Number of babies born during day time.	6	8
3	Number of babies born at night.	13	12

4. DISCUSSION OF FINDINGS

Time when married couples have sex and birth of children.

The study findings have shown that most married couples have sex at night and many babies are born at night including the data that was collected from the hospital which shows that there is correlation between the time when the couples have sex and the time for the birth of the child. Most of the couples who were involved in the study also believed that babies are conceived at night due to the fact that it was time when couples have sex hence the birth of the child being at night in most cases. Morning sex versus evening sex, it is an age-old conflict. Usually with men on one side and women on the other. Men wake up aroused, so morning is prime time for men but women often prefer evenings, when things have relaxed a bit –after work and chores are done and children are put to bed (<https://www.psychologytoday.com>). One final and underrated reason why having sex every day is great that, it is exhausting which means when it's time for bed, one feels knocked out. As literally every person with a pulse knows, sleep is undoubtedly necessary to stay healthy and happy so if you find something that helps you get quality sleep, you should hold on to it . Some people, personally get the best sleep after they have had a nice go in bed. So this whole

having sex-seven-days-a-week thing is doing wonders for some people for their sleep quality and helping them wake up feeling well-rested, refreshed, and incredibly happy even when they had no their morning coffee (www.insider.com>Health).

The following were the reasons why most couples have sex at night: most couples are free from the economic activities, this is when they quiet free time to be together as a couple, free from disturbances from children and other people as they go to bed to sleep. Traditionally African couples believe in having sex at night as they relax together in bed. According to some research findings, most marital sex occurs around bedtime. More than half of sexual encounters occur between the hours of 10:00pm and 2:00 a.m. with a smaller additional peak at 6:00 a.m. when couples are likely to be waking up (Refinetti, 2005). Couples are more likely to have sex on weekend nights suggesting that work schedules dictate patterns of sexual activity to some extent. Married people are more likely to make love at the time they go to bed because they are available to each other and this explains why married couples generally sleep together in the first place. Sleeping together for a couple strengthens the pair bonding and relationship. Lying down in close physical contact also promotes intimacy by increasing oxytocin production. This is the “cuddling hormone” that promotes relationship strength for many mammals, including powerful mother-infant bonds (Barber, 1995). Spending time in close proximity thus contributes to the strength of pair bonds not just in humans but in many mammals, including the humble prairie vole (Insel & Hulihan, 1995). For pair-bonded species, a close relationship is criteria for success in raising offspring. Indeed, females prefer to mate with their partners and may refuse to mate with unfamiliar males. This pattern applies to human who satisfy most of the criteria for being a pair-bonded species (Barber, 2002). In this context, it is understandable that sexual relationships occur most often during bedtime hours when prolonged physical contact can promote feelings of closeness and intimacy.

Sex ratio

The sex ratio – the number of males relative to females – at birth and in childhood are male-biased in almost every country including to Zambia. Most countries have a sex ratio at birth which is around the expected range of 105 boys for every 100 girls. In the human species the ratio between males and females at birth is slightly biased towards the male sex. The “natural” sex ratio at birth” is often considered to be around 105. This means that at birth on average .there are 105 males for every 100 females and if converted to percentage, the ratio would be 51.2% to 48.8%which is almost as the sex ratio of male children to female children in Zambia according to the research findings. Zambia has almost the same natural sex ratio due to the fact that the married couples do not have preferred sex of the child and would like to have some number of children as the study shows. When nature is not disturbed, the number of newborn males is slightly more than that of newborn females. Thus, the sex ratio of total population of a country is expected to be around 105 males for every 100 females.

Although there are slightly more male births, the mortality rate of infant boys is higher than girls because boys are more likely to be born prematurely as the result of induced preterm birth. Boys tend to have a more birthweight than girls which increases the risk of prolonging the period of delivery meaning that more boys are induced before the end of the pregnancy term and as a result of the preterm births, boys are likely to die. Although boys are, on average, heavier than girls than girls at birth, they are less physiologically mature at birth. This means they are at higher risk of the having delayed physiological function (such as lung function) and adverse neurological outcomes.

Studies have suggested that even in the case of straightforward pregnancies. Lung maturation in boys lags that of girls by approximately one week.²⁰ Boys have weaker immune systems. There are two key hypotheses for this, the first hypothesis being the Y-chromosome in boys increases their vulnerability. Biological, males and females are differentiated by chromosomes: females have two X chromosomes (XX) and males one X and one Y chromosome (XY). Having two X chromosomes means that the newborn has a stronger immune system because X chromosomes a larger number of immune-related genes. This means that, since females have two X chromosomes, they have a stronger immune response; boys on the other hand, are more vulnerable to X-linked infections.²⁷ This makes males more vulnerable to many infectious diseases This second hypothesis is that boys are more susceptible to specific genetic diseases where the defective genes are carries on either the X or Y chromosomes; this is because boys have only one X chromosome so a single recessive gene on that X chromosome results in the disease. Other than the above hypotheses, sex hormones may be another key reason for weaker immune systems in males. Males have much higher amounts of testosterone which seem to inhibit two major parts of the immune system -B and T-lymphocytes. Estrogen, on the other hand, acts as an effective regulator of this. This state of affairs is not restricted to childhood: the female advantage is carried into adulthood and this is the part of reason why women tend to live longer than men. The major reason for having fewer men in the world lie in the biological differences between the sexes, especially differences in maturity, sex chromosomes, and hormones.

Impact of sex ratio if not balanced

The information on sex ratio is an important social indicator to the extent of equality between males and females in a society at a given time. The ratio of males to females in a Population is known to influence the behavior, life histories and demography of people. Research findings have shown that sex ratio also affects human economic behaviors, human financial decisions, and consumer choice. It influences aggression, courtship behavior and parental care, as well as population growth. Although evolutionary ecologists have long recognized the importance of sex ratios, its implications for human behavior remain largely unexplored. When there is imbalance in the sex ratio there is increase in levels of violence, antisocial behavior and ultimately presents a threat to the stability and security of society(Hudson V. Den Boer,A.M.(2004).In some cultures there is an overwhelming percentage of violent crime which is perpetrated by young, unmarried, low-status males as a result of the sex ratio imbalance(Druze ,J. and Keher,R.,2000).It has been proved that there is a clear link between sex ratio and violence(Hudson and Den Boer 2006),and also showed that there was a relationship between sex ratio and murder rates at the level of the Indian state persisted through the late 1990s.For Hudson V. and Den Boer, A .M. (2004), when single young men congregate, the potential for more organized aggression is likely to increase substantially and at the same time these young men are likely to be attracted to military or military-type organizations, with the potential to be a trigger for large-scale domestic and international violence when sex ratio is imbalanced.

It has also been suggested that a shortage of women leads to a rise in homosexual behavior (Park. b .and Cho, N.H., 1995), in the sense that there will be an increasing tolerance toward homosexuality, and surplus of males, may lead to large numbers of covert homosexuals openly expressing their sexuality. A situation of more males will result into gender imbalance which will lead to a reduction in birth rate, which may be particularly beneficial in countries trying to control population growth. If the number of women in a society decreases, then their social status is

increased and they benefit from their enhanced value according to Zhang (1990). Ultimately, this may lead to more balanced sex ratios because couples will choose to have girls. However, it has also been argued that the increased value of women could have a negative side. Especially in rural society: increased female value may not benefit the women herself, but rather the males around her. Her father, husband, and in-laws all hold her value, so when her value increases her life is more controlled by them.

5. CONCLUSION

It was found that there was correlation between time for sex and time for birth because most married couples have sex at night hence many babies being born at night. The data that was collected from the hospital also showed that there was correlation between the time when the couples have sex and the time for the birth of the child. Result collected also indicated that most married couples were having sex at night. The couples who were involved in the study also believed that babies are conceived at night due to the fact that it was time when couples have sex hence the birth of the child being at night in most cases. Just like any country, Zambia has also almost the same sex ratio.

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