

PARENTAL AWARENESS ON PRENATAL CONCERNS: AN EDUCATIONAL PERSPECTIVE

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Abstract

Having a healthy baby is a dream of every parent and a cherished goal of every nation. However, the latest statistics indicate that in US about one in every 33 babies is born with birth defects or disabilities, and that the birth defects are one of the most leading causes of infant deaths, accounting for more than 20% of all infant deaths. Many of these birth defects or disabilities are avoidable if precautions are taken and care is provided during prenatal period. Awareness among parents about such prenatal concerns is therefore, critical. This exploratory pilot study was conducted to find out the level of basic awareness among parents about prenatal concerns and avoidable factors leading to birth defects and disabilities. The subjects (N= 73) were African American parents residing in the city of Dover and surrounding areas in Delaware State. The subjects were interviewed and administered the Prenatal Concerns Survey designed for this research. The results on various aspects revealed unawareness among parent on many critical issues, and the overall results indicate that 19.4% of the parents expressed ignorance about the basic prenatal concerns. A broad based research is recommended for in-depth analysis.

Keywords:

Introduction

Global neonatal mortality remains unacceptably high and worldwide, approximately four million newborns die every year before completing one month of life (Lawn, Cousens & Zupan, 2005). In 2005, the latest year that the international ranking is available for, the United States ranked 30th in the world in infant mortality, behind most European countries, Canada, Australia, New Zealand, Hong Kong, Singapore, Japan, and Israel. Unfortunately, about 24,000 infants died in the United States in 2011. Latest

statistics indicate that in US about one in every 33 babies are born with birth defects or disabilities, and that the birth defects are one of the most leading causes of infant deaths, accounting for more than 20% of all infant deaths (Rynn et al., 2008).

United Nation's Millennium Development Goals (MDG) 4 & 5 provide a target of reducing child mortality by two-thirds & to reduce the maternal mortality ratio by 75% by the year 2015. The Healthy People 2020 (U. S. Department of Health and Human Services) initiative has set a goal for reducing infant mortality from 6.7 deaths per 1,000 live births in 2006, to 6.0 deaths per 1,000 live births in 2020. Among infants, the leading causes of death include congenital and chromosomal abnormalities, problems related to short gestation and low birth weight, and sudden infant death syndrome (SIDS). Many of these birth defects or disabilities are avoidable if precautions are taken and care is provided during prenatal period. Awareness among parents about such prenatal concerns is therefore, critical. Most of the research tend to focus on the relationship between women's satisfaction and the provision and utilization of health care services. It was found that women expressed dissatisfaction with the care because of reduced knowledge about pregnancy (Kochanek et al., 2012).

There are many factors affecting prenatal care & concern such as perception about the importance of prenatal concerns, experience with pregnancy, concerns may play a greater role in the initiation of care, non-availability of information, age, socio economic status, cultural differences, unexpected/unplanned pregnancy etc. Not much research has been done to explore the level of basic knowledge about such common prenatal concerns. Hence this research was undertaken as a pilot study to find out the level of awareness among parents about prenatal concerns and avoidable factors leading to birth defects and disabilities.

Method & Procedure

A qualitative descriptive exploratory design was used to understand awareness about prenatal care and concern. Subjects (N= 73) were the African American parents of 0 to 8 year old child or children residing in the city of Dover and surrounding areas in the Delaware State. The subjects participated in a semi-structured interview and were asked to answer the questions provided in the Prenatal Concerns Survey designed for this research following Sword et al. (2012) model. Scoring and tabulation of data was carried out statement-wise to facilitate the process of data analysis. The collected data was subjected to quantitative analysis for drawing statistical inferences.

Survey contained questions relating to various aspects such as 'critical period', 'grandmother effect', 'germinal period', 'shaken Baby

Syndrome’, ‘small for gestational age’, ‘large for gestational age’, ‘genetic and chromosomal abnormalities’ ‘teratogens, and their effects’ effects of exercise and nutrition etc.

Results & Discussion

TABLE – 1

Interview Questions	% Indicated awareness	% Not aware
1. Were you aware about the adverse effects of certain drugs, chemical substances, smoking etc. on the baby when you planned your baby?	95	5
2. Did you take any precautions in this regard?	93	7
3. If yes, were these precautions on the basis of your own knowledge?	88	12
4. Were you aware about the genetic and chromosomal factors that affect normal prenatal growth and development of the child?	91	9
5. Did you consult any specialist or did you undergo some prenatal diagnostic procedures with regard to such genetic/chromosomal factors?	89	11
6. Were you aware about various latest dialogistic techniques and their utility?	93	7
7. Were you aware about the benefits of nutritional diet for a pregnant woman?	99	1
8. Did the mother take any special or particular diet during pregnancy?	99	1

A perusal of the above results in Table – 1 revealed that 95% parents were aware about the adverse effects of substances like Alcohol, Cocaine, Tobacco and Marijuana (cannabis). There is no safe dose of alcohol for pregnant women, and growth retardation of the child has been found with even one drink per day (American Academy of Pediatrics). Among the participants, 5% were unaware that consuming alcohol during pregnancy increases birth defects. They were not aware about the Fetal alcohol syndrome, Alcohol-related neurodevelopmental disorders or Neonatal abstinence syndrome.

95% parents said that they knew that like alcohol, just a single use of cocaine can cause severe problems and “cocaine babies” can develop mental retardation (Meyer & Zhang, 2009). Such children also display fine and gross motor deficiencies and were at risk for SIDS. 5% of the participants had no or very scanty knowledge about the adverse effects of cocaine on babies.

95% of the subjects said that they had knowledge about the adverse effects of tobacco. They knew that tobacco Interferes with hemoglobin’s oxygen carrying capacity, affects placental blood vessels to induce fetal hypoxia, and that the children in homes where there is second hand smoke have more respiratory problems. As compared to these, 5% parents were not very much aware about the adverse effects. A large body of documented

evidence has found that smoking during pregnancy is harmful to both the mother and the fetus (Blood-Siegfried and Rende, 2010).

With regard to the adverse effects of marijuana 95% said that they had knowledge about the adverse effects and knew that even casual marijuana smokers experience potentially harmful changes to the brain of the babies, a fact supported by study of J.M. Gilman et al. (2014). 5% parents were not very much aware about the adverse effects. 93% said they took precautions in this regard and 88% said these precautions were based on their own knowledge

91 % said that they had prior knowledge about the Chromosomal Disorders such as Down syndrome, and Fragile X syndrome. About genetic disorders Phenylketonuria, Sickle cell trait, and Sickle cell disease, 89% confirmed that they had consulted their health provider about these disorders. On the other hand, 9% parents had no knowledge about any such disorders and 11% said they had neither consulted nor underwent any such diagnostic procedures. 93% parents were aware about various latest diagnostic techniques like Amniocentesis, Chorionic villus sampling, and Alpha-fetoprotein test, and 7% expressed ignorance about it.

With regard to benefits of nutritious diet for the mother during pregnancy, almost everyone (99%) answered in affirmative and only 1% expressed ignorance. Similarly 99% of subjects asserted that the mother took nutritious food during pregnancy. It may be due to the effects of media exposure that most of the parents interviewed knew about nutritious diet (Abu-Saad and Fraser, 2010). These parents said they knew about Lack of protein in maternal diet can lead to impaired prenatal brain growth

Table – 2

Interview Questions	% Indicated awareness	% Not aware
8. Was your baby of normal weight i.e. not underweight of overweight at the time of birth?	83	17
9. Had you taken some precautions about baby's weight during the pregnancy?	92	8
10. Were you aware about the concepts of 'small-for-gestational-age' and 'large-for-gestational-age'? Were you aware about their effect on a child?	31	69
11. During pregnancy, did the mother perform any exercise?	84	16
12. Did you believe these exercises proved to be beneficial in some way to her or to the baby?	84	16
13. Were you aware what teratogenes were?	90	10
14. Were you aware about the effects of teratogenes on a child?	90	10

A perusal of the Table-2 show that with regard to the weight of the baby, 83% said they knew about the health implications for underweight or overweight babies. 92% had taken some sort of precautions to keep the baby's weight under control. These higher figures suggest that though some parents were not so aware about the concepts of underweight or overweight babies, but still took precautions. Quite a large percentage (17%) said their baby was not having normal weight at the time of the birth and only 8% said they had not taken any precautions in this context. Very few parents (31%) said that they knew about the terms 'small-for-gestational-age' and 'large-for-gestational-age' whereas majority (69%) were not aware about it.

It is quite surprising that in spite of the fact that positive benefits of exercise have been noticed by researchers long ago and every health care provider recommends exercise during pregnancy, but still only 84% would be mothers performed exercises or believed that exercise was beneficial to her or to the baby. 16% pregnant women did not perform any type of exercise, perhaps because a similar percentage (16%) said they did not believe in the benefits of exercises. This, perhaps was more due to common myth about exercise by pregnant women.

90 % of the parents knew what teratogens were and similar percent of parents were aware about the harmful effects of these substances. Since many of these substances are quite commonly enjoyed by people, it was alarming that as many as 10% were not aware about the harmful effects of such substances.

TABLE - 3

Interview Questions	% Indicated awareness	% Not aware
14. Were you aware about the Shaken Baby Syndrome?	7	93
15. Were you aware about the concept of 'critical' time periods?	39	69
18. Did you know anything about concepts like 'germinal period' and 'embryonic period'?	86	14
16. Did you know anything about 'Grandmother Effect'?	74	26
20. Were you aware about the prescription and non-prescription drugs that had adverse effect on the child?	94	6
Overall Awareness about prenatal concerns	80.6	19.4

From the contents of Table-3, it can be observed that only 7% parents were aware about the Shaken Baby Syndrome and 93% were not aware about it. The reason for this may be that the health care providers might consider it as a minor issue or that not many people are aware about it. But this syndrome has very serious implications for baby's health and the health care providers need to educate people, especially expectant parents about it.

Though 39% of the parents said they were not aware about the ‘critical periods’, but 86% said they knew about germinal and embryonic periods. Critical period is when the embryo is most vulnerable to destructive influences in the prenatal environment. Therefore, it would be advisable for the health providers to educate people about this important phase of a baby’s life.

Surprisingly, though almost all the parents had said that they knew about the benefits about nutritious diet for the mother, but only 74% knew about ‘grandmother effect’. This may be because media has a lot to offer regarding nutritious diet, but provide much less information about ‘grandmother effect’.

Most of the parents (94%) were aware about the adverse effects prescription and non-prescription drugs on a baby’s growth and development, and only 6% expressed ignorance on this aspect of such types of medications.

Overall results indicated that 80.6% of the parents were aware about these critical and very important aspects that have direct impact on the health of the baby. 19.4% expressed ignorance. This is quite a large segment of our population and if our endeavor is to achieve meet the Millennium Development Goals or to achieve the target set by Healthy People 2020 initiative, then we still have a long way to go.

Findings and Conclusions

The overall results revealed that a staggering number of 19.4% parents were unaware about basic prenatal concerns and 80.6% parents were aware about these prenatal concerns and took precautions to ensure good health for their baby.

The findings of this study have revealed that although lot of efforts are being made to educate parents about the prenatal care and facilities being made available to them, but still many of them had no knowledge about some basic prenatal concerns. It is imperative that family doctors and health care providers, who provide the majority of first-line care, improve the delivery of information to spread awareness. They are trying to provide information, but increased paperwork imposed restrictions on the time, and increased the stress and instability being faced by the healthcare workforce (Anderson, 2014), which adversely affects the information delivery system. This pilot study has shown that the awareness about prenatal care and concerns is an important determinant that may affect the rate of infant mortality. A large scale follow-up study is recommended to obtain comprehensive information about these very important prenatal awareness issues.

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