



# Article Critique

Student's Name

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# Overview of the Article

In the article “Preconception healthcare: what women know and believe” by Keith Frey and Julia Files, the authors seek to determine whether or not women understand the importance of maintaining perfect health before pregnancy. In doing so, the authors also seek to find out whether women plan for the pregnancies and their level of understanding and knowledge concerning preconception healthcare. After reading the article, the audience can clearly understand what the authors are trying to communicate. It is clear that preconception healthcare is very important for every woman. This knowledge would help a woman plan her pregnancy and take care of her health before and during pregnancy.

The authors express their disappointment in the fact that physicians and patients understand the importance of preconception healthcare but they overlook it. However, most women believe that they can receive this information only from their personal physicians and gynecologists yet there is a lot of information on the internet that could also be useful to their health. Nevertheless, the project would have been more important if the authors would have given their own recommendations on what should be done other than referring the reader to the recommendations made by the Center for Disease Control. That way, it would have been more complete and helpful to the readers. However as it stands, it does not add any value to the audience.

The study is a primary research because the authors collected information that did not exist before. This primary research was a way of conducting epidemiological research because the study was concerned with information about the health and welfare of women. All the data collected was for the aim of improving the preconception healthcare.

# Methods

## Research Design

Frey and Files (2006) have not directly indicated the hypotheses the study was to test. Any research should have a clear hypothesis that guides the study. Normally, the hypothesis is formulated from the objective of the study. The only way the readers can presume the hypothesis of the study is by looking at the objective. Therefore, one could assume that one hypothesis would be that women do not realize the importance of preconception healthcare. The authors, therefore, failed to indicate the hypothesis because everyone could have their own hypotheses. The hypothesis should then be either approved or disapproved after the research.

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Nonetheless, the topic of the study is developed logically. The authors begin by an introduction which explains the goal of preconception healthcare, followed by a bit of history of the concepts. The authors justify their topic of study by stating that although a number of studies indicate the significance of increasing the awareness about preconception healthcare, there is very minimal evidence about promotion and implementation of this information. The study goes on to describe the methodology, followed by the results and a discussion of the results. Unfortunately, there is no clear indication on what the conclusion is. All that the authors did was to direct the readers to have

look at the recommendation by the CDC.

The inference that primary care physicians are important in the delivery of preconception health should have been improved by providing reference to a scenario where such information was applicable. Although it is true, there is no reference to back up the inferences.

Not all concepts and terms are defined in the article. For instance, the terms, primary care, obstetrician/gynecologists, mortality, morbidity, and family medicine have not been defined. Not everyone reading the article might have a background in nursing or clinical terms. It would therefore be cumbersome for them to understand such terms.

## Sampling Strategy and Data Sources

The state of Arizona has over 3 million female. Although this number is inclusive of children, the study population is not representative of the population. 499 would be applicable for a study of a school may be. Furthermore, the study period was 11 months; from August 2004 to July 2005. This period is long enough to study a population of over 1000 women.

There are a number of potential sources of biasness. To begin with, the researchers used in the study were the professionals from the Mayo Clinic Arizona, the organization whose patients were interviewed. To some extent, the interviewers have an interest in the study because the findings affect the staff. It is therefore possible that the staff could have influenced the results of the study. Additionally, only the women who understood English were used as the study population. Does it mean that those who do not understand English don't give birth? Women with all kinds of background have the ability to conceive. The study was therefore biased by excluding some women. It would have been better if the study used questionnaires written in various languages so that everyone would have an equal chance of participating. The



sample population would therefore lead to an underestimation of the relationship reported in the article.

The sources of data are appropriate to conduct an analysis because they include patients with various interests and knowledge about preconception health. The study population included women with various levels of education; 11th grade and below to graduate degree holders. In addition, it included women with various economic standards; those with a house income of less than \$25,000 to those with an income of more than \$200,000. It was therefore representative of the economic and academic standards.

## Measures and Analysis

The authors do not disclose the kind of data analysis procedures they use. They only stated that the data was fed into the Research Survey Center and availed for analysis. It would also be impossible to test the hypotheses because they are not included. However, the reader could tell the methods of measurement by reading through the results. For instance, the analyzed data is presented in percentages. It could therefore be assumed that the method of data analysis used was calculation of percentages.

One of the potential sources of biased data is that the interviewers assume that all the women interviewed were genuine with their answers. There is no accurate way of measuring the truth behind the answers given by the study population. For instance, the article indicates that 70.6% of the study population did not attempt to conceive at that moment. Some of the women especially the young women would lie that they were not attempting to conceive and yet they engaged in unprotected sex. It is possible that they might be trying to conceive without their knowledge. There have been an increase in the number of unplanned pregnancies and therefore not all women would know whether or not they were about to get pregnant. Furthermore, it

is possible that some women would cheat that they understood the importance of preconception health for the purpose of avoiding the shame of being perceived to be ignorant. This would lead to an over estimation of the number of informed women.

Similarly, some of the contraceptives used by sexual partners 'backfire'. In such a scenario, a woman would have planned to get pregnant after five years but she ends up getting pregnant after one year. This would therefore lead to an underestimation of the number of uninformed women.

In the analysis of the data concerning women interested in being taught about preconception health education, Frey and Files (2006) combine the population of women who were willing to get informed with those who are unsure of what to do. This is represented in the pie charts in fig 1. It therefore looks like more women are interested in getting informed and yet that is not the case. Those who are unsure could go either way; yes or no. The authors would therefore have given the exact percentages in the pie chart other than combining the groups.

The independent variable in the study is knowledge about preconception healthcare while the dependent variable is the number of women. Both variables are appropriate because they can be quantified or measured. The authors also measure the variables properly based on the data they collected.

The criteria for identifying the study population was that one had to be a woman with between 18 and 45 years, and understood English. However, it is not indicated if every woman that met this criteria was included in the study or whether there was a pattern of selecting the study population. The authors only indicate that 570 women were invited. And 499 were eligible. No control groups were used in the study. I therefore find the research design inappropriate.



## Results and Discussions

The results were consistent with the theory because they revealed that more women knew about the significance or preconception education. However, only 39% of them could remember whether they were informed by their physicians. It is therefore clear that this information is not being passed on to those who need it. The discussion is also consistent with the results as reflected in various phrases. For instance, the authors indicate that most women preferred to get preconception information from the physicians especially when they go for the annual exam. The results clearly support this statement because it is indicated that 51.3% obtained the information from primary care physicians while 44.0% got it from obstetricians/gynecologist. However, the sum of the percentages of the preferred sources of information is 99.7% and not 100% as one would expect. It could therefore be assumed that some information was omitted or the analysis was not accurate.

It is also false that majority of the women eschewed using technology as a source of information. From the results, it is indicated that 3.1% were informed by the internet while 0.3% were informed by magazines and newspapers and a similar percentage depended on family and friends. An interpretation of these results should therefore indicate that majority of the women avoided the use of family, friends, newspapers, and magazines and not the internet as indicated in the discussion section. Nonetheless, the conclusions drawn by the authors were warranted because the results indicate that 98% agreed that primary care is very critical to the health of women.

I would therefore interpret the information in the same way by stating that most women understand that preconception healthcare should be provided to the women in time. I would however have added that most physicians have failed in their duty of educating women about preconception education. This

is because only 39% of the study population recalls being informed by the physicians.

According to the authors, one of the limitations of the study was that the study population was homogeneous: Most of them were middle class Caucasians with college education. According to me, the strongest feature of the study is the fact that it used women in the age bracket of capable of conceiving; 18-45. The study population also involved the poor and the rich. The weakest feature is the idea that the study only used women who understood English. It should have used women with the knowledge of other languages including Chinese, Spanish, English, and German because these are some of the most common languages in Arizona. It would therefore be appropriate to generalize the findings.

# References

Frey, K.A. & Files, J.A. (2006). Preconception Healthcare: What Women Know and Believe. *Matern Child Health J*, 10(2), 73-77.

