

Fertility Issues in Female Cancer Survivors

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Overview of the Female Reproductive System (Background section)

Purpose of the Reproductive System

Table for a Secondary Source

What is the purpose of this source's information?	The purpose of the information of the source is to give the clear understanding of the purpose of the reproductive system.
Who is the most appropriate audience for this information?	The appropriate audience for this source is both male and females and the learners who study the reproductive system.
What information is provided by this source?	The source illustrates the purpose of the reproductive system in both males and females.
What do you conclude from this source?	From the information provided in the source, it can be concluded that both the female and male reproductive system have the same purpose and all are needed in the process of sexual reproduction.
What cautions do you raise about the limits of this source?	The source has a limitation on the purpose of reproductive system that limited the exhaustion of the reproductive system.
What particularly interesting/valuable things could a reader learn from this source?	The interesting thing a reader can learn from the source is the function of the reproductive system.
Author(s) and year	Tyler Tatyana (2016)

The Stages of the Reproductive System

Table for Primary Source	
What was the purpose of the study?	The study is focused on the understanding of the stages of reproduction in females.
Who did the author use in the study?	The authors used participants who had the experiences in the field of research on the stages of reproduction that is aging.
How did the study produce data for research variables?	The data were collected through having different discussion panels and workshops to identify the significant factors on the stages of reproduction.
What were the major steps in performing the study?	The groups used their experiences to come up with the recommendations in each staging.
What were the results?	The stages of reproduction are affected by different processes and each stage is not similar to the other.

What does the author conclude?	The authors conclude that from the puberty to menopause, there are different reproductive axes that happen which are dynamic and have different and relative fashions that are rapid.
What cautions do you raise about the limits of this study?	The goal on the knowledge gaps that the panel is focused on does not clearly give the understanding how it affects the stages of reproduction.
What cautions does the researcher raise about interpreting the study?	Interpreting the study raises the gaps that are still difficult to understand about the stages involved in reproductive system.
What particularly interesting/valuable things could a reader learn from this study?	The reader would be able to get the processes that are involved in the reproductive system stages especially in women from puberty to menopause.
Author(s) and year	Soules et al. (2001)

Cancer Treatment Methods

Table for a Secondary Source	
What is the purpose of this source's information?	The purpose of this source is to give the relevant information on the treatment of cancer and the methods that are relevant.
Who is the most appropriate audience for this information?	The audience for this source is the patients or the victims of any cancer related problems.
What information is provided by this source?	The information provided is the methods for the treatment of cancer.
What do you conclude from this source?	I can conclude that the source provides the relevant methods that can be used and approved by the health sector to help in cancer treatment.
What cautions do you raise about the limits of this source?	The source has tried to exhaust all the probable methods to treat cancer which provides a clear understanding of the methods.

What particularly interesting/valuable things could a reader learn from this source?	The reader can learn about the processes and the methods to treat cancer.
Author(s) and year	National Cancer Institute (2017)

Table for Primary Source	
What was the purpose of the study?	The purpose of this study was to review the ovarian function of female childhood survivors of cancer.
Who did the author use in the study?	The author used 21 female survivors of childhood cancer with regular menstrual cycles and 21 healthy females of the same age.
How did the study produce data for research variables?	The researchers performed tests to find the follicular number of each participant.
What were the major steps in performing the study?	The researchers gathered the participants, performed the follicular test, and analyzed the results.
What were the results?	The cancer survivors had a significantly less follicular number in each ovary.
What does the author conclude?	The authors conclude that childhood cancer survivors with regular menstrual cycles have a smaller number of eggs in each ovary.
What cautions do you raise about the limits of this study?	The size of the sample is a limitation of the study.
What cautions does the researcher raise about interpreting the study?	The authors consider the strict inclusion criteria a necessary limitation of the study.
What particularly interesting/valuable things could a reader learn from this study?	The interesting thing about this study is that it provides the reader with the information that even though a female cancer survivor has a regular menstrual cycle, she can still have a depleted ovarian reserve.
Author(s) and year	Larsen, E., Müller, J., Rechnitzer, C., Schmiegelow, K., & Andersen, A. (2003)

Overview of Cancer Treatment (Allied section)

Effects of Cancer Treatment on the Reproductive System

Table for a Secondary Source	
What is the purpose of this source's information?	The information in this source provides the understanding of the way cancer treatment can affect the reproductive system.

Who is the most appropriate audience for this information?	The appropriate audience for this source is the women who have cancer.
What information is provided by this source?	This source provides the clear information on the problems or effects that cancer treatments have on the reproductive women who have been treated for cancer.
What do you conclude from this source?	I conclude that the information provided in this source is relevant to the women who have survived cancer.
What cautions do you raise about the limits of this source?	The information provided can cause panic and depression to the cancer survivors since the treatment can cause damages on the reproductive system causing infertility.
What particularly interesting/valuable things could a reader learn from this source?	The reader can get to learn the effects of cancer treatment on the reproductive system.
Author(s) and year	Cancer Council Victory (2016)

Table for Primary Source	
What was the purpose of the study?	The purpose of this study is to analyze the mental and emotional effects of infertility.
Who did the author use in the study?	A group of 450 women who were split into two separate groups, one for infertile women and one for fertile women.
How did the study produce data for research variables?	The researchers used questionnaires to collect data regarding the participants feeling about infertility.
What were the major steps in performing the study?	The researchers found the participants, split them into groups, conducted a cross-sectional survey, and analyzed the results.
What were the results?	The researchers found that the mental health and quality of life was greater in fertile women compared with infertile women.
What does the author conclude?	The authors conclude that counseling and treatment is crucial for infertile women because of the lower quality of life as a result of infertility.
What cautions do you raise about the limits of this study?	I raise no cautions regarding this study.

What cautions does the researcher raise about interpreting the study?	The researchers did not cite any limitations in the study.
What particularly interesting/valuable things could a reader learn from this study?	The reader learns that infertility has a negative effect on a woman's mental health and quality of life.
Author(s) and year	Direkvand-Moghadam, A., Delpisheh, A., & Direkvand-Moghadam, A. (2014)

Table for a Secondary Source	
What is the purpose of this source's information?	The purpose of this source is to give some of the issues that women may face after treatment of cancer.
Who is the most appropriate audience for this information?	Audiences for this source are the women who have been victims of cancer problems and have gone through the cancer treatment methods.
What information is provided by this source?	The fertility issues that are related to cancer treatment.
What do you conclude from this source?	This source provides the ideas and the issues that should be considered before a woman proceeds to any kind of cancer treatment.
What cautions do you raise about the limits of this source?	The information that this source contain may cause panic to the survivors of cancer who would wish to have children.
What particularly interesting/valuable things could a reader learn from this source?	The reader gets to understand the possible outcome after treatment of cancer especially to the women of childbearing age.
Author(s) and year	Cancer Council Victory (2016)

Table for Primary Source	
What was the purpose of the study?	The study is conducted to get the understanding of the women who were diagnosed with breast cancer.
Who did the author use in the study?	The data was collected from women who were diagnosed with breast cancer between 2009 and 2014.
How did the study produce data for research variables?	The data in this study has been produced through getting the information from the victims of breast cancer.

What were the major steps in performing the study?	The steps in this study included the use of questionnaire and interview of the patients.
What were the results?	From the expected number of 163,150 turned out and the interview were carried out effectively. The results showed that the quality of life of the patients is affected and this caused some of them to miss the interview.
What does the author conclude?	The authors conclude that there is need to conduct a more individualized intervention assessment which would provide the assistance to the patients.
What cautions do you raise about the limits of this study?	I can raise a concern on this study since it has not exhausted the other studies on the quality of life that is affected by cancer.
What cautions does the researcher raise about interpreting the study?	The researcher raises the concern about the implication of the research in the practice and policies and calls for future research.
What particularly interesting/valuable things could a reader learn from this study?	The reader can better understand how cancer affects a survivor's quality of life.
Author(s) and year	Akel et al.(2017)

Overview of Fertility Issues in Female Cancer Survivors (Critical section)
Common Fertility Issues

Table for Primary Source	
What was the purpose of the study?	The purpose of this study was to determine how young women with breast cancer feel about fertility after their diagnosis, and how it affects their choices.
Who did the author use in the study?	The participants were female members of the Young Survival Coalition.
How did the study produce data for research variables?	A survey regarding opinions about fertility were emailed to the participants.
What were the major steps in performing the study?	The major steps included creating the survey, emailing the survey, and evaluating the results.

What were the results?	57% of the women were worried about their reproductive abilities following diagnosis. 7% of women talked to their doctors about their options. However, 51% believed their questions were sufficiently answered.
What does the author conclude?	The authors conclude that cancer survivors are concerned about fertility post-treatment. They call for survivor to be adequately informed of how treatment affects fertility, as well as further research regarding fertility in cancer survivors.
What cautions do you raise about the limits of this study?	The study only included members of the Young Survival Coalition.
What cautions does the researcher raise about interpreting the study?	The author raises no cautions.
What particularly interesting/valuable things could a reader learn from this study?	This study provides valuable insight regarding how cancer survivors feel about fertility after diagnosis.
Author(s) and year	A.H. Partridge, S. Gelber, J. Peppercorn, E. Sampson, K. Knudsen, M. Laufer, R. Rosenberg, M. Przypyszny, A. Rein, E.P. Winer (2004)

Table for Primary Source	
What was the purpose of the study?	The study focuses on the fertility of female childhood survivors of malignancies.
Who did the author use in the study?	The experimental group included thirty female cancer survivors and the control group consisted of healthy females who were the same age.
How did the study produce data for research variables?	The authors conducted laboratory experiments which measured the amount of reproductive hormones in each participant's body.
What were the major steps in performing the study?	The major steps of the study included gathering participants, collecting laboratory data, and analyzing the data.
What were the results?	The authors found that there was lower average ovarian volume in survivors than healthy individuals.
What does the author conclude?	The healthy females had a higher ovarian reserve and volume than the female cancer survivors. Age was a factor in the results.

What cautions do you raise about the limits of this study?	The study seems restrictive, with only thirty participants.
What cautions does the researcher raise about interpreting the study?	The authors raise no cautions.
What particularly interesting/valuable things could a reader learn from this study?	The study confirms that there it is more likely for childhood female cancer survivors to have discrepancies regarding hormones related to fertility.
Author(s) and year	El-Shalakany, A. H., Ali, M. S., Abdelmaksoud, A. A., Abd, S., & Hasan, E. A (2013)

Table for Primary Source	
What was the purpose of the study?	The purpose of the cohort study was to analyze the ovarian function in female childhood cancer survivors.
Who did the author use in the study?	The authors used female cancer survivors in Denmark who were less than fifteen years old at the age of diagnosis.
How did the study produce data for research variables?	The study utilized clinical data, as well as ovarian sonography and an analysis of hormone levels in participants.
What were the major steps in performing the study?	The steps in the study included finding patients who fit the criteria, performing the tests, and analyzing the results of the tests.
What were the results?	The study found that there was no major difference in follicle numbers. However, when compared with the seventy women who experienced spontaneous menstrual cycles, there was a significant difference in the level of hormone between the two. The seventy women with spontaneous cycles had decreased levels of necessary reproductive hormones.
What does the author conclude?	The authors conclude that there is an association between the treatment of childhood cancer and ovarian failure.
What cautions do you raise about the limits of this study?	I raise no cautions about the study.
What cautions does the researcher raise about interpreting the study?	The authors state that one could question whether or not the healthy sample accurately represents the average population of women.

What particularly interesting/valuable things could a reader learn from this study?	The reader could learn how the treatment of cancer in females under fifteen can have an effect on fertility and the hormones associated with it.
Author(s) and year	Larsen, E. C., Muller, J., Schmiegelow, K., Rechnitzer, C., & Andersen, A. N. (2003)

Fertility Preservation Options/Ease of Access to Information and Care

Table for Primary Source	
What was the purpose of the study?	The purpose of this study is to collect data regarding the discussion of fertility issues related to cancer treatment prior to the treatment.
Who did the author use in the study?	The author used 1,030 cancer patients in this study.
How did the study produce data for research variables?	The study utilizes a data form to measure how often doctors discuss the effects of cancer treatment on reproduction.
What were the major steps in performing the study?	The pediatric oncologists filled out a data form for each patient over the span of a year.
What were the results?	The effects of the treatment was reviewed with 63% of patients. Boys were more likely than girls to be informed of the effects. The reason many oncologists did not discuss the effects of the treatment was due to young age.
What does the author conclude?	The author explains that oncologists need to refer females and young cancer patients.
What cautions do you raise about the limits of this study?	Some oncologists may have not correctly filled out the data form.
What cautions does the researcher raise about interpreting the study?	The researchers raise no cautions about the study.
What particularly interesting/valuable things could a reader learn from this study?	The reader learns that there is a need for communication regarding fertility after treatment between doctors and patients.
Author(s) and year	Anderson, R. A., Weddell, A., Spoudeas, H. A., Douglas, C., Shalet, S. M., Levitt, G., & Wallace, W. (2008)

Table for Primary Source	
What was the purpose of the study?	The purpose of this study is to analyze whether or not cancer patients receive counseling prior to cancer treatment.
Who did the author use in the study?	The authors used about a thousand female cancer survivors for this study.
How did the study produce data for research variables?	The researchers conducted a survey asking the women whether or not they received infertility counseling prior to treatment.
What were the major steps in performing the study?	The researchers gathered the participants, conducted the survey, and assessed the results of the survey to reach their conclusion.
What were the results?	The majority of the participants received some counseling, either by oncologist or a fertility specialist or both. Those who saw a fertility specialist experienced less regret than those who just saw an oncologist. 90% of the women only spoke with an oncologist and did not receive any further fertility treatment.
What does the author conclude?	The authors conclude that seeing a fertility specialist will result in less regret in the future, and that patients should be given the opportunity, or referred, to a fertility specialist.
What cautions do you raise about the limits of this study?	I raise no cautions about the study.
What cautions does the researcher raise about interpreting the study?	The researcher raises concern about sampling bias.
What particularly interesting/valuable things could a reader learn from this study?	This study provides the reader with information regarding how often oncologists recommend fertility specialists.
Author(s) and year	Letourneau, J. M., Ebbel, E. E., Katz, P. P., Katz, A., Ai, W. Z., Chien, A. J, et Al. (2011)

Table for Primary Source	
What was the purpose of the study?	The purpose of this study is to gather information regarding the decision to preserve fertility after cancer diagnosis.
Who did the author use in the study?	The authors used sixteen men and eighteen women from Scotland in the study.

How did the study produce data for research variables?	The researchers found the cancer survivors and interviewed them to find out why they did or did not choose to pursue fertility preservation.
What were the major steps in performing the study?	Gathering the participants, creating and conducting the interviews, and utilizing the results of the interviews.
What were the results?	The researchers found that women were much less likely than men to pursue fertility preservation because ovarian cryopreservation is more difficult than sperm banking.
What does the author conclude?	The authors state that the results conclude that females need to take immediate action to schedule an appointment with a fertility specialist.
What cautions do you raise about the limits of this study?	There is a difference in the number of females versus males interviewed.
What cautions does the researcher raise about interpreting the study?	The authors raise no cautions about the study.
What particularly interesting/valuable things could a reader learn from this study?	This study allows the reader to understand the difference in fertility preservation between genders.
Author(s) and year	Peddie V, Porter M, Barbour R, Culligan D, MacDonald G, King D, Horn J, Bhattacharya S... (2012)

Summary

Synopsis of Research Findings

Table for a Secondary Source	
What is the purpose of this source's information?	The purpose of this source is to express the importance and growing ease of fertility preservation for cancer survivors.
Who is the most appropriate audience for this information?	The most appropriate audience for this information are those who are pursuing fertility preservation options.
What information is provided by this source?	This sources provides information about the many options for fertility preservation, such as oocyte cryopreservation, hormonal suppression, and ovarian protection during treatment.

What do you conclude from this source?	I can conclude that it is important for cancer patients to consider their options regarding fertility preservation.
What cautions do you raise about the limits of this source?	I raise no cautions regarding this source.
What particularly interesting/valuable things could a reader learn from this source?	The source gives the reader information about how it is becoming easier to access the preservation options, which is important for people to know before making any major decisions.
Author(s) and year	Levine, J., Canada, A., & Stern, C. (2010)

Table for Primary Source

What was the purpose of the study?	This study considers the effects of cancer treatment during childhood or adolescence on fertility.
Who did the author use in the study?	The authors uses participants in the Childhood Cancer Survivor Study for this study.
How did the study produce data for research variables?	The participants filled out a questionnaire and researchers used medical records to find what treatment each survivor had.
What were the major steps in performing the study?	The researchers gave questionnaires to survivors, as well as their siblings, and used their medical records to find results.
What were the results?	The study found that female survivors who were treated with chemotherapy or radiation were less likely than their female siblings to have ever been pregnant.
What does the author conclude?	The authors conclude that chemotherapy and radiation reduce fertility in childhood cancer survivors.
What cautions do you raise about the limits of this study?	I raise no cautions regarding the study.
What cautions does the researcher raise about interpreting the study?	The authors discuss the cautions with 15% who did not follow up and 16% declined to participate.
What particularly interesting/valuable things could a reader learn from this study?	This study tells the reader that women who receive chemotherapy and radiation as cancer treatment may be less likely to conceive children.

Author(s) and year	Green, D., Kawashima, T., Stoveall, M., Leisenring, W., Sklar, C., Mertens, A., . . . Robison, L. (2009)
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Suggestions for Future Research

Table for Primary Source	
What was the purpose of the study?	This study was used to gather information regarding the perception of fertility treatments in the eyes of female cancer survivors and their parents.
Who did the author use in the study?	The authors interviewed female cancer survivors and their parents.
How did the study produce data for research variables?	The author used a cross-sectional survey to gather data regarding survivors and their parent's perceptions of fertility treatment.
What were the major steps in performing the study?	The researchers created the survey, conducted the interviews, and interpreted the results.
What were the results?	The researchers found that the average age of participants was sixteen. Of the participants, 84.6% wanted children in the future. Patients strongly agreed that they wanted more information regarding fertility preservation.
What does the author conclude?	The authors concluded that almost all of the survivors requested more information on conception after cancer treatment, and that having infertility later in life is associated with negative emotions.
What cautions do you raise about the limits of this study?	Other than the limitations pointed out by the author, I have no cautions about this study.
What cautions does the researcher raise about interpreting the study?	The study was conducted in only one institution. The authors suggested these limitations of the study as a concern.
What particularly interesting/valuable things could a reader learn from this study?	The reader could develop a better understanding of the negative effects of infertility on female cancer survivors.
Author(s) and year	Sandheinrich, T., Wondmeneh, S. B., Mohrmann, C., Gettinger, K., Henry, J., & Hayashi, R. J. (2018)

Table for Primary Source	
What was the purpose of the study?	The purpose of this study is to assess the success of ovarian tissue freezing and preservation.
Who did the author use in the study?	The authors used fifty-nine women who went through the process of ovarian tissue freezing.
How did the study produce data for research variables?	The study provided the researchers with details about the safety and use of the frozen ovarian tissue.
What were the major steps in performing the study?	The researchers gathered the women who had the procedure done and had follow-up meetings.
What were the results?	The researchers found that fifty-six of the fifty-nine participants had not used the tissue yet, for personal reasons, still undergoing treatment, and death. Only one out of the three who had used the tissue was unsuccessful.
What does the author conclude?	The author concludes that the process seems safe.
What cautions do you raise about the limits of this study?	The lack of utilization following the process is a caution in this study.
What cautions does the researcher raise about interpreting the study?	The authors explain that they cannot draw a conclusion of the utilization of the process based on the data.
What particularly interesting/valuable things could a reader learn from this study?	The interesting thing about this study is the apparent lack of use of the process to begin with, as well as the utilization of the tissue following the process.
Author(s) and year	Okta, K. and Oktem, O. (2018)

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