2022

Evaluating Providers' Knowledge, Attitudes and Intentions Toward Assessing Pregnancy Desires in Women of Childbearing Age

Sydney Hahn
slab223@uky.edu

Evaluating Providers' Knowledge, Attitudes and Intentions Toward Assessing Pregnancy Desires in Women of Childbearing Age

Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Nursing Practice at the University of Kentucky

Sydney A Hahn RN, BSN

Lexington, KY

2022

Abstract

Background: Unintended pregnancies account for over half of all pregnancies in the United States. Unintended pregnancies can lead to abortion, socioeconomic difficulties, medical complications, psychological issues, and political issues. Unintended pregnancies are potentially harmful to both the mother and the baby. Healthy People 2030 listed reducing the number of unintended pregnancies as one of their family planning objectives.

Purpose: The purpose of this DNP project was to evaluate providers' knowledge, attitudes, and intentions toward assessing pregnancy desires in women of childbearing age.

Methods: The study was a one-group pre/post intervention design. The data was gathered via a convivence sample through the Kentucky Association of Nurse Practitioners and Midwives listserv. The evaluation occurred through a survey before and after a two-and-a-half-minute educational module on The One Key Question initiative

Results: There were statistically significant changes in participants' (N=69) attitudes about unplanned pregnancy after the educational module. There was also significant change in participants' attitude on providing preconception care after the educational module. There was significant change after the online educational module in participants intention to provide preconception care. The knowledge of the One Key Question screening tool also increased from nine participants knowing what the OKQ was to sixty participants.

Discussion: The training module was highly effective in increasing providers' knowledge of the One Key Question and provides an opportunity for advancing in primary care screening of preconception care. This can ultimately decrease the number of unintended pregnancies.

Acknowledgements

I would like to express my sincere gratitude to a number of people that have helped me complete this project and supported my efforts to obtain a DNP. There is no way to fully express my gratitude and appreciation for the help of my advisor, Dr. Julie Ossege. Dr. Ossege has been my advisor during my completion of this program. Thank you for answering my countless emails and all the hours you have spent helping me complete this project. I am grateful for your guidance, encouragement, and doing it all with a smile. I appreciate you more than you know. I am also grateful for my committee member, Dr. Grubbs. Thank you, Dr. Grubbs, for always wanting the best for me and for being such a help in clinical all four years. You have truly made me want to become a better student and doctoral-prepared Nurse Practitioner. Thank you, Dr. Tovar, for also always being willing to help out in anyway possible.

A special thanks belongs to my amazing husband and family, who have supported my endeavors to obtain my degree without fail. Carter, thank you for always being a listening ear, for always giving me chocolate when I am down, and being my personal google when I have questions. Mom and Dad, thank you for being my biggest cheerleader and always encouraging my largest dreams. I will never be able to explain how thankful I am for all your support over the last four years. I truly do not think I could have finished without you all.

Table of Contents

List of Tables

List of Appendices

Background and Significance

Unintended pregnancies account for more than half of all pregnancies in the United States (Center for Disease Control and Prevention, 2019). An unintended pregnancy is a pregnancy that occurs when the pregnancy is mistimed or unwanted (CDC, 2019). Most unintended pregnancies result from either using contraceptive methods incorrectly or not using them at all (CDC, 2019). Seventy-five percent of unintended pregnancies occur in women who are between the ages of eighteen and twenty-nine, have a low income, have not completed high school, are African American, and are cohabitating but not married (Finer & Zolna, 2016). While all unintended pregnancies do not equate to pregnancies that are unwanted, unintended pregnancies could lead to harm for the baby or the mother. Therefore, family practice providers must continuously focus on ways to prevent unintended pregnancies through preconception counseling and providing access to contraceptive methods.

Unintended pregnancies can lead to abortion, socioeconomic difficulties, medical complications, psychological issues, and political issues. Almost half of unintended pregnancies end in abortion (Finger & Zola, 2016). Unintended pregnancies cost the United States twenty-one billion dollars each year through state funded abortions, maternal care, or infant care after delivery. (Sonfield & Kost, 2015). Women who experience unintended pregnancies have a higher incidence of mental health problems, less stable relationships, experience higher rates of physical abuse and are more likely to delay prenatal care (Monea & Thomas, 2016). Mothers of unintended pregnancies are more likely to develop postpartum depression as well (Brito et. al, 2015).

Not only are unintended pregnancies difficult on the mothers, but they are also difficult on the babies. Unintended pregnancies are also associated with higher numbers of premature birth and lower birth weights, mainly due to the fact of poor prenatal care. Women carrying unintended pregnancies are also more likely to engage in risky behaviors that can put the baby at risk such as drug use, smoking and

alcohol (Centers for Disease Control, 2019). Maternal risky behaviors can cause low birth weights, premature births, and poor birth outcomes. Moreover, babies born from unintended pregnancies are at greater risk for having negative physical and mental health outcomes and are more likely to develop delinquent behaviors during their teenage years (Monea & Thomas, 2016).

Throughout the years, many strategies for preventing unintended pregnancies have been examined. The Center for Disease Control and Prevention recommends helping all people in their childbearing years understand their pregnancy intentions or reproductive life plan (2019). Reproductive life plans is an idea created by the CDC to help women identify when they desire to become pregnant and determine the optimal timing of these plans in order to decrease the number of unintended pregnancies. The CDC recommends providers routinely talk to their patients about their goals for having or not having children and how to achieve these goals. Reproductive life plans also helps provide contraceptive plans, pregnancy testing, and counseling to help manage prenatal care

Purpose/Objectives

The overall goal of this project was to decrease unintended pregnancy. The purpose of this project was to assess provider knowledge and educate providers about the One Key Question tool which simply helps start the conversation about pregnancy intention and therefore can help lower unintended pregnancies. Specific aims for expected from this project included:

- Evaluate provider's attitudes about preconception care for women of childbearing ages before and after watching an online training video.
- Evaluate a change in providers' intentions towards assessing pregnancy desires in women of childbearing ages after learning about the One Key Question method.
- Increase provider knowledge about the One Key Question screening tool.

Literature Review

While many organizations have addressed the need and importance for preconception care, there is an obvious gap between the need of preconception care and providing preconception care. Preconception care has been recognized as one of the earliest sensitive windows of human development (Mumford et.al, 2015). Despite this important and sensitive window, many providers identified time constraints, numerous preventative priorities presenting at the general practice setting, and lack of knowledge of the resources available for the delivery of preconception care guidelines as barriers to providing preconception care (Mazza and Chapman, 2013). A way to easily implement preconception counseling into practice is warranted to guide providers in these conversations.

The One Key Question screening tool helps providers have conversations with women about pregnancy and childbearing. (Bellanca & Hunter, 2013). The goal of the One Key Question screening tool is to provide a template for healthcare works, social service providers, and champions to assess the woman's reproductive intentions and to help prevent unintended pregnancies. The One Key Question was created by the Power to Decide Program (Allen et al, 2017), asks women at every interaction a simple question which is, "Would you like to become pregnant in the next year?" This allows for the women to answer either yes, no, okay either way, or unsure and then meets the woman where they are. If the woman answers no, the provider can easily open the conversation about contraception or review the current contraception the woman is using. The One Key Question meets the woman where they are and provides for a non-judgmental conversation. Using the One Key Question in practice allows for providers in practice can begin the reproductive life plan discussion.

The One Key Initiative simply helps providers start the conversation on contraceptive use by asking their patients, "Would you like to become pregnant in the next year?" In a pilot study in Utah, providers implemented the One Key Question into their everyday practice. Before the implementation

of the One Key Question, many providers did not bring up contraceptive use due to the lack of knowledge and resources. After implementation, the proportion of using no method of contraceptive use decreased from 26% to 4%, and increased the proportion of using the most effective methods from 32% to 46% (Yonke, 2011). In another pilot study, it was found that the One Key Question was a feasible option to reduce the barriers to provide contraceptive and preconception counseling. In fact, OB/GYN appointments rose from 5% to 15% after the intervention (Stulberg et.al, 2019). The integration of the One Key Question tool into practice has proved higher rates of provider counseling about contraception options and has been found to be supportive in assisting reproductive plan communication (Baldwin, et al, 2018; Stulber, et al., 2019; Yonke, 2011).

Theoretical/Conceptional Framework or Model

The Theory of Planned Behavior is chosen as the framework for the model of this project. (Ajzen, 1991). The TPB predicts an individual's intention to engage in a behavior at a specific time and place. The theory was created to explain all behaviors over which people have the ability to control. The main component of this theory is that the behavioral intentions are motivated by the likelihood that the behavior will result in an expected outcome. The TBP has three major components: attitudes toward the behavior, subjective norm, and perceived behavioral control to influence behavioral intention (Ajzen, 1991).

Using Ajzen's TPB, this study will investigate factors influencing providers initiation of conception care management and will likely help identify gaps in which may affect providers likelihood of bringing up the One Key Question in order to prevent unintended pregnancies. To help assess these concepts, providers attitudes and asking about intention were assessed in the pre- and post-survey.

Methods

Study Design

The design of this project was a quasi-experimental one group pretest and posttest study to assess primary care provider's knowledge, attitudes, and intentions toward assessing pregnancy desires in women of childbearing age. The pre and posttest occurred before and after watching a training video on the One Key Question method.

Setting/Sample

The sample was a convenience sample from voluntary participants that subscribe to the Kentucky Association of Nurse Practitioners and Nurse Midwives (KANPNM) listserv (N=1,417). Inclusion criteria included advanced practice nurses (family nurse practitioners, pediatric nurse practitioners, adult nurse practitioners, psychiatric nurse practitioners, women's health nurse practitioners, and midwives) who see women of childbearing age and are able to write and read in English. Neonatal, geriatric nurse practitioners, retired practitioners, and providers not actively seeing patients were excluded.

The Kentucky Association of Nurse Practitioners and Nurse Midwives is a professional organization accessible to all nurse practitioners and midwives in Kentucky. Their mission is to empower Kentucky Advanced Practice Registered Nurses in providing quality, accessible and compassionate care through education, leadership, and advocacy (Kentucky Association of Nurse Practitioners and Nurse Midwives, 2020). Their five main values are integrity, professionalism, service, advocacy, and best practices. This project is in congruence with the association's values by encouraging best practice in providing preconception care. The PI is a member of this organization.

Stakeholder

The stakeholders of this project include Kentucky Nurse Practitioners and Midwives that are members of the association. Those volunteering to participate were educated on the One Key Question method and preconception counseling and are therefore able to implement this into their daily practice. Another stakeholder was women of childbearing age. Due to the educational module provided to practicing providers in Kentucky, these women potentially gained access to preconception counseling which can in turn reduce the number of unplanned pregnancies.

Barriers and Facilitators

There were specific facilitators and barriers that occurred when implementing this project. Once facilitator included easy access to the listserv by KANPNM. An email was simply sent to the president of the organization for approval. Once granted approval, the email was sent free of charge. Another facilitator included that the project had the support of evidenced-based research. The training module was based on recommendations from the CDC and ACOG. Barriers included the sample limitation of members of KANPNM. Another potential barrier was survey fatigue due to the number of surveys that are sent out through the KANPNM listserv. A third barrier was the amount of time that is required to take the surveys and view the educational modules.

Measurement

The survey contained four demographic questions, two attitude questions, one knowledge question and one intention question for a total of eight questions. The questions were developed based on Ajzen's Theory of Planned Behavior (1991), Corrina Hughes' study titled, "Evaluating Providers' Perceptions on Preconception Care for Women with SUD" (2020), and the Power to Decide Organization development on the One Key Question (2020). Demographic questions included gender, race, certification, and years of experience. The attitude and intention questions were assessed on 5-point

Likert scale. The educational module was presented through a training video. The time of the training video was two minutes. The post survey contained four questions. Both the pre- and post-surveys were developed through Qualtrics with the learning module embedded between the pre- and post-surveys. Total time required to participate was about eight minutes (See appendix A).

The goal of the online training video was to provide a resource for nurse practitioners and midwifes to encourage preconception counseling of all women of childbearing age. A two-minute training video was developed with a pre-test, the education, and then ended with the post-test that investigated provider knowledge, attitudes, and desires about assessing pregnancy desires. The training video discussed the importance of avoiding unplanned pregnancies, the burden of unplanned pregnancies on the US healthcare system, and how to easily incorporate preconception counseling with the One Key Question tool. The investigator developed the educational module in congruence with recommendations from the Center for Disease Control and Prevention (2018) and the American College of Obstetrics and Gynecology (2018).

Procedures

Permission to post the cover letter on the KANPNM listserv was obtained via from the KANPNM correspondence with the organization's president (See Appendix B). The email was sent with a cover letter that included the link for the survey. Once the participant completed the pre-survey, the participant was automatically taken to the training module, and then taken automatically to the post-survey. One week following the initial listserv post, the PI sent a reminder email to the KANPNM listserv. The PI was granted expedited approval from the University of Kentucky Institutional Review Board (IRB). Data was collected in September and October of 2021. The data collection was closed two weeks after final reminder email.

Data Collection and Analysis

The data was collected and stored in Qualtrics with no personal health identifiers and was transferred to an excel spreadsheet for data storage and analysis. The demographic information entered by the participants was reported through frequencies with percentages. Means with standard deviations was used to describe pre-and post- scores on the providers' knowledge of importance of preconception counseling. To assess providers' attitudes and intentions to provide preconception care, a paired sample-test tests was used. The analysis was conducted using IBM SPSS statistical software.

Results

Demographic Characteristics

Seventy-three providers began the pre-survey demographic section, sixty-nine completed the pre-survey, and sixty-two completed the post-survey. Over half of the participants (61.6%) were family nurse practitioners. Other certifications included certified nurse midwives, adult-gerontology nurse practitioners, women's health nurse practitioners psychiatric nurse practitioners, and pediatric nurse practitioners. The experience level of the participants ranged from 20 or more years in practice (n=10, 26.03% to less than one year (n=11, 13.70%.). The participants in this study were overwhelmingly white, non-Hispanic (91.7%) and female (93.1%). See Table 1 for a full description of the demographic characteristics.

Attitude Questions

To address aim one, two attitude questions to evaluate provider's attitudes about preconception care for women of childbearing ages were assessed via the pre- and post-survey. The first question, "unplanned pregnancies are an issue," was assessed on a five-point Likert scale with 1 being strongly disagree and 5 being strongly agree. The means ranged from 3.53 (*sd* .64) to 4.18 (*sd* 0.64). This

showed a statistically significant change in the pre- and post-survey that more providers thought that unplanned pregnancies were an issue (p = <.001. See Table 2). The second attitude question, "preconception counseling is important to provide to every female of childbearing age," was also assessed on a five-point Likert scale. The means ranged from 4.50 (*sd* .695) to 4.69 (*sd* .50), which represented a statistically significant change that more providers thought that preconception counseling is important to provide to every female of childbearing age. (p=.013. See Table 2).

Intention

To address aim two, one question assessed providers' intentions towards assessing pregnancy desires in women of childbearing ages after learning about the One Key Question Scores ranged from 3.04 (*sd* 1.17) to 3.89 (*sd*.99), which shows a significant change in provider's intention to assess pregnancy desires from the pre- and post-survey (p= <.001. See Table 3).

Knowledge

To address aim three, one question evaluated provider's knowledge on the One Key Question screening tool. In the pre-education survey, nine participants answered that that they were aware of the One Key Question screening tool. In the post-education survey, sixty participants answered that they were aware of the One Key Question screening tool. This showed a significance increase in the awareness of the screening tool before and after the learning module, p= <.001. See Table 4.

Discussion

This project assessed and evaluated provider's knowledge, intentions, and attitudes towards providing preconception care to women of childbearing age. Through the online module, providers were educated about the consequences of unintended pregnancies and the One Key Question screening tool. Provider's knowledge, attitudes, and intentions towards providing preconception care were evaluated

pre and post education. Educating providers on the consequences of unintended pregnancies and easy ways to implement preconception care into practice was shown to be beneficial through this study.

Provider's Attitude towards Unintended Pregnancies

Unintended pregnancies are an issue many studies have researched; however, the number of unintended pregnancies has stayed consistent. Unintended pregnancies cause an increase in unwanted outcomes for both the baby and the mother (Goosens et.al, 2018). In this study, after a short educational module, there was increase in the number of providers that agreed that unintended pregnancies are an issue. This shows that education about unintended pregnancies to providers is important to help them understand the risks and consequences of unintended pregnancies. With the specific knowledge of the consequences of unintended pregnancies, providers are more likely to move closer to providing preconception care.

The Theory of Planned Behavior is a motivational theory that attempts to understand the reasoning behind our actions. The associated beliefs in the theory determine intention and later the behavior. The major associated beliefs outlined by Ajzen (1991) are attitudes towards the behavior, social norms regarding the behavior, and the perception of control over the behavior. Based on this theory, providers' attitudes toward providing preconception care could act as a limitation toward providing that care. Therefore, education on the consequences of unintended pregnancies along with the importance of preconception care could serve as a method to reduce the barriers that are in place to start providing preconception care to their patients. The results of this study support that an educational module can serve as a way to increase the knowledge of the consequences of unintended pregnancies.

A study completed in Kansas with physician assistants found that physician assistants underestimated the amount of unintended pregnancies by about 60% (Brown et.al, 2015). An average of

28% of these physician assistants routinely provided preconception care to their patients. This study also showed that education to physician assistants would increase providers being aware of the issue surrounding unintended pregnancies with subsequent increased preconception care to their patients. If there is an attitude change within providers about the consequences of unintended pregnancies, providers will be more likely to provide preconception care (Brown et.al, 2015). This supports the findings of this study in that after education, providers were more likely to provide preconception care.

Provider's Intention and Knowledge to Provide Preconception Care

This study found that after the learning module there was an increase in provider's who intended to provide preconception care in their practice. Furthermore, the study showed a major increase in provider's knowledge on the One Key Question initiative. With education on ways to implement preconception and contraceptive counseling, many providers are more likely to provide preconception care (Brown et.al, 2015).

The findings from this study are similar to the study involving the Kansas physician assistants in that after education more providers intended to provide preconception care. This study also showed consistent findings to the study in Portland, Oregon. After a single provider practice learned about the One Key Question screening tool, the number of women on contraceptive methods increased (Stulberg, 2019). Therefore, with education on the One Key Question Screening tool, providers are more likely to provide preconception care and in turn the number of unintended pregnancies are likely to decrease.

In a systematic review, barriers to preconception care included lack of knowledge of preconception care, lack of clarity on the responsibility for providing preconception care, and lack of tools and guidelines. (Goossens et. al, 2018). However, an educational module like what was presented in this study can help to overcome these barriers. The One Key Question tool is an easy, efficient way to ask women about their goals for conceiving. This study showed that the One Key Question screening

tool is not well known among providers; however, after education, many more providers knew about the screening tool and intended to provide preconception care in their practice. With this knowledge, the number of unintended pregnancies can potentially decrease.

Implications for the Future

Based on the results of this study, preconception education can raise providers' awareness on the issue and may lead to practice change. Although this study did not measure practice change, the positive and significant change in provider intention is promising. Integration of preconception counseling requires practice change and a potential next step that healthcare organizations could incorporate is adding the simple OKQ, "Would you like to become pregnant in the next year?" to the patient history template. Further, healthcare organizations could emphasize the importance of preconception counseling so that policy change can happen within the organization to include preconception counseling.

This study showed that many providers' do not know the resources that exist to easily implement preconception counseling into their everyday practice like the One Key Question initiative. The module can be taken even further to include more providers such as medical doctors, physician assistants, and other healthcare providers. The module could be presented at conferences to inform more providers about the One Key Question screening tool. Simply getting information out to providers about the One Key Question, like this study showed, is likely to increase the number of providers who offer preconception counseling.

In consideration of these findings, future studies to examine providers' barriers and current delivery of preconception care is indicated. Research is needed to better understand providers' difficulties in following through with preconception care in their practices when they know how

important it is. Exploring why women do not seek preconception care without their provider reaching out and asking them is another area that needs more study. Meeting the reproductive needs of women could help to enhance their health status before a pregnancy happens and could possibly lead to better birth outcomes for women, babies, and communities (Centers for Disease Control, 2019).

Limitations

There were some limitations identified in the design of this study. First, the post-test survey resulted in a lower response rate than the pre-test survey indicating that survey fatigue was likely. Effort was made to make the learning module short and concise, however, some of the participants still did not finish the study as a whole. There was also a limitation of generalizability because of the small sample size, specific to one geographic area, and limited to only nurse practitioners as the provider type. The study results provide valuable information within the limits of the inclusion criteria. Another limitation was that the findings relied on self-reporting of providers perception and knowledge. However, based on feedback, the online training is feasible and should be available to all primary care providers. In future trainings, all types of providers should be included.

Conclusion

Significant changes in knowledge scores, attitudes, and intentions demonstrated the effectiveness of providing education about preconception care and the One Key Question screening tool. While there have been many studies on unplanned pregnancies and preconception care, many providers do not provide preconception counseling or care on a daily basis. With tools like the One Key Question, providers can easily implement this into their daily practice. If more providers are offering preconception counseling or contraceptive methods, the number of unintended pregnancies would likely decrease which could result in healthier babies and mothers. This online training module should

be utilized by primary care providers in the United States as a way to address the healthcare needs of the women of childbearing ages that they serve.

References

Allen, D., Hunter, M. S., Wood, S., & Beeson, T. (2017). One Key Question®: First Things First in Reproductive Health. Maternal and child health journal, 21(3), 387–392. https://doiorg.ezproxy.uky.edu/10.1007/s10995-017-2283-2

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Association of Maternal and Child Health Programs. (2019). Innovation station practice summary and Implementation guidance, One Key Question.

Baldwin, M. K., Overcarsh, P., Patel, A., Zimmerman, L., & Edelman, A. (2018). Pregnancy intention screening tools: a randomized trial to asses perceived helpfulness with communication about reproductive goals. Contraception and Reproductive Medicine, 3(21). Retrieved from https://doi.org/10.1186/s40834-018-0074-9

Bellanca, H. K., & Hunter, M. S. (2013). ONE KEY QUESTION(R): Preventive reproductive health is part of high quality primary care. Contraception, 88(1), 3–6. https://doiorg.ezproxy.uky.edu/10.1016/j.contraception.2013.05.003

Centers for Disease Control (2019). Unintended Pregancies. Retrieved from: https://www.cdc.gov/reproductivehealth/contraception/unintendedpregnancy/index.htm

Brown, G., Parham, D. F., Harris, L., Dare, M. R., & Dollmann, L. (2015). A survey of knowledge and practices regarding prevention of unintended pregnancies. The journal of physician assistant

education : the official journal of the Physician Assistant Education Association, 26(1), 34–39. https://doi.org/10.1097/JPA.0000000000000004

Curry, R. E., Derouin, A. L., Kenny, K., Goulding, D., Thompson, J. A., & Stevenson, E. L. (2019). A QI project to assess feasibility of using One Key Question® in retail health clinics. Women's Healthcare, 7(2), 40-43.

Finer, L. B., & Zolna, M. R. (2016). Declines in Unintended Pregnancy in the United States, 2008-2011. New England Journal of Medicine, 374(9), 843–852. https://doiorg. ezproxy.uky.edu/10.1056/NEJMsa1506575

Goossens, J., De Roose, M., Van Hecke, A., Goemaes, R., Verhaeghe, S., & Beeckman, D. (2018). Barriers and facilitators to the provision of preconception care by healthcare providers: A systematic review. International Journal of Nursing Studies, 87, 113–130. https://doi-org.ezproxy.uky.edu/10.1016/j.ijnurstu.2018.06.009

Health Mothers Healthy Babies Coalition of Hawaii. (2019). One Key Question® Training Assessment. Report for the Hawaii State Department of Health: unpublished.

Hughes, Corinna, "EVALUATING PROVIDERS' PERCEPTIONS ON PRECONCEPTION CARE FOR WOMEN WITH SUD" (2020). DNP Projects. 320. https://uknowledge.uky.edu/dnp_etds/320

Institute of Medicine (US) Committee on Unintended Pregnancy. (2005, January 1). Consequences of Unintended Pregnancy. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK232137/

Mazza, D., Chapman, A., & Michie, S. (2013). Barriers to the implementation of preconception care guidelines as perceived by general practitioners: a qualitative study. BMC health services research, 13, 36. https://doi.org/10.1186/1472-6963-13-36

Monea, E., & Thomas, A. (2016, July 28). The High Cost of Unintended Pregnancy. Retrieved from https://www.brookings.edu/research/the-high-cost-of-unintended-pregnancy/

Mumford, S. L., Michels, K. A., Salaria, N., Valanzasca, P., & Belizán, J. M. (2014). Preconception care: it's never too early. Reproductive health, 11, 73. https://doi.org/10.1186/1742-4755-11-73

Office of Disease Control and Prevention. (2021). Reduce the proportion of unintended pregnancies - FP 01. Reduce the proportion of unintended pregnancies - FP 01 - Healthy People 2030. Retrieved February 10, 2022, from https://health.gov/healthypeople/objectives-and-data/browse-objectives/family-planning/reduce-proportion-unintended-pregnancies-fp-01

Sonfield, A., & Kost, K. (2015, February). Public Costs from Unintended Pregnancies and the Role of ... Retrieved April 14, 2021 https://www.guttmacher.org/sites/default

Stones, Rachel E, Stulberg, Debra B, & Bello Kottenstette, Jennifer K. (2017). Patient Experiences with Pregnancy Planning and Perspectives on Reproductive Care in Community Health Centers: A Qualitative Study of African American Women in Chicago. The Women's Health Data Book : A Profile of Women's Health in the United States., 27(3), 322-328.

Stulberg, D. B., Dahlquist, I. H., Disterhoft, J., Bello, J. K., & Hunter, M. S. (2019). Increase in contraceptive counseling by primary care clinicians after implementation of One Key Question® at an urban community health center. Maternal and Child Health Journal, 23(8), 996-1002.

Stulberg, Debra B, Dahlquist, Irma H, Disterhoft, Judith, Bello, Jennifer K, & Hunter, Michele Stranger. (2019). Increase in Contraceptive Counseling by Primary Care Clinicians After Implementation of One Key Question® at an Urban Community Health Center. Maternal and Child Health Journal, 23(8), 996-1002.

Yonke, N. (2011). Pregnancy intention screening in primary care. Oregon Foundation for Reproductive Health's One Key Question® initiative OHSU:Richmond Clinic

List of Tables

Table 1. Demographic Characteristics N=73

Variable	Parameter	n (%)
Nurse Practitioner professional background	Family NP	45 (61.64%)
	Certified Nurse Midwife	7 (9.59%)
	Adult-Gerontology NP	7 (9.59%)
	Psychiatric NP	5 (6.85%)
	Women's Health NP	5 (6.85%)
	Pediatric NP	2 (2.74%)
	Other	2 (2.74%)
Years in Practice	Less than one year	10 (13.70%)
	1-5 years	11 (15.07%)
	6-10 years	9 (12.33%)
	11-15 years	14 (9.18%)
	16-20 years	10 (13.70%)
	20 or more years	19 (26.03%)
Gender	Female	68 (93.15%)
	Male	4 (5.48%)
	Prefer not to say	1 (1.37%)
	Non-binary	0 (0%)
Ethnicity/Race	White, non-Hispanic	67 (91.78%)
	Black, non-Hispanic	2 (2.74%)
	Hispanic	2 (2.74%)
	Other	2 (2.74%)
	Asian, Pacific Islander	0 (0%)

Table 2. Attitude Questions pre versus post n=69

	Pre-Education *Mean* (SD)	Post-Education *Mean* (SD)	*p*
Unplanned pregnancies are an issue	3.52 (0.54)	4.18 (0.64)	<.001
Preconception Counseling is important to provide to every female of childbearing age	4.50 (.695)	4.69 (.50)	.013

Table 3. Intention n=69

	Pre-Education *Mean* (SD)	Post-Education *Mean* (SD)	*p*
I intend to offer preconception counseling to women of childbearing ages at every encounter	3.04 (1.17)	3.89 (.99)	<.001

Table 4. Knowledge of One Key Question n=69

	Pre-Education	Post-Education	McNemar Test
I am aware of the One Key Question screening tool	11.3%	96.8%	<.001

List of Appendicies

Appendix A. Survey Instrument

University of Kentucky

Thank you for participating in my study

This survey contains four demographic questions, a four question pre survey, a three minute video, and a four question post survey.

Demographic Questions

Certification

- ○ Family Nurse Practioner
- ○ Pediatric Nurse Practitioner
- ○ Psychiatric Nurse Practitioner
- ○ Certified Nurse Midwife
- ○ Women Health Nurse Practitioner
- ○ Adult-Gerontology Nurse Practitioner
- ○ Other

How many years have you been a provider?

- ○ Less than 1 year
- ○ 1-5
- ○ 6-10
- ○ 11-15
- ○ 16-20
- ○ 20 or more

Gender

- ○ Male
- ○ Female
- ○ Non-binary / third gender
- ○ Prefer not to say

Ethnicity/Race

- ○ White, non-hispanic
- ○ Black, non-hispanic
- ○ Hispanic
- ○ Asian, Pacific Islander
- ○ Other

Survey

Unplanned pregnancies are an issue.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neutral
- ○ Agree
- ○ Strongly Agree

Preconception counseling is important to provide to every female of childbearing age.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neutral
- ○ Agree
- ○ Strongly Agree

I offer preconception counseling to women of childbearing ages at every encounter.

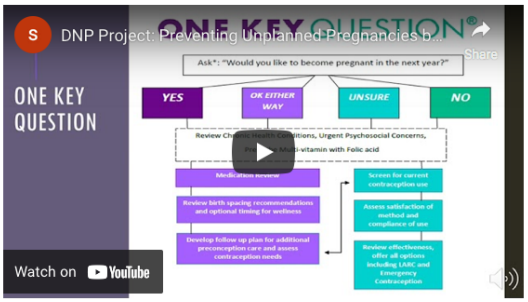
- ○ Strongly Disagree
- ○ Disagree
- ○ Neutral
- ○ Agrees
- ○ Strongly Agree

I am aware of the One Key Question screening tool.

- ○ Yes
- ○ No

Block 2

Please Watch the Video Below



Block 3

Unplanned pregnancies are an issue.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Preconception counseling is important to provide to every female of childbearing age.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I intend to offer preconception counseling to women of childbearing ages at every encounter.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- I already offer preconception counseling to women of childbearing ages

I am aware of the One Key Question Screening tool.

- Yes
- No

Appendix B. Recruitment Cover Letter

IRB Approval
9/15/2021
IRB # 70323
IRB1

Dear Kentucky Association of Nurse Practitioners and Nurse Midwives,

My name is Sydney Hahn, BSN-RN, and I am a member of the University of Kentucky DNP class of 2022. You are invited to participate in a research project to understand provider perspectives of preconception care to women of childbearing age. Specifically, this project involves the viewing a short online video and completing a pre- and post-online survey.

Although you may not get personal benefit from taking part in this research study, your responses may help us understand more about preconception counseling and preventing unintended pregnancies. Some volunteers experience satisfaction from knowing they have contributed to research that may possibly benefit others in the future.

Your participation is voluntary. It requires watching a three-minute video and answering online survey questions. The pre survey will take less than two minutes and the post survey will take less than two minutes. Please complete the entire survey, but you may choose to quit the survey at any time. If you do not want to be in the study, there are no other choices except not to take part in the study.

Risks for participation are minimal and all efforts will be made to minimize risks. Data collected for this study is vulnerable during the electronic data collection, but the data will be encrypted and transferred to a Qualtrics server. The information gathered will only be used for scientific purposes.

The survey will not collect any identifiable information, and no one will be able to connect your response to you. Your anonymity is further protected by asking you to not sign and return a consent form. Your completion of the survey will serve as your consent. If you do not want to participate, simply delete this email without penalty. Your information collected for this study will NOT be used or shared for future research studies, even if we remove the identifiable information like your name, clinical record number, or date of birth.

We hope to receive completed questionnaires from about 100 people, so your answers are important to us. Of course, you have a choice about whether or not to complete the survey/questionnaire, but if you do participate, you are free to skip any questions or discontinue at any time. You will not be penalized in any way for skipping or discontinuing the survey.

By clicking on the survey link below, you are agreeing to participate in the research project.

https://uky.az1.qualtrics.com/jfe/form/SV_3DTHEM2pl5q7Ewu

Contact the primary investigator at 502-974-9181 if you have any questions regarding participation in this study. If you have any complaints, suggestions, or rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.

Thank you in advance for your assistance with this important project.

Please contact me with any questions,
Sydney Hahn BSN, RN
Slab223@uky.edu
502-974-9181