

# Nepal-The Effect of Health Education on Knowledge and Preventive Behavior Regarding Issues Related to Pregnancy

Jeevan Sharma<sup>1</sup>, and Dr. Rashmi Shukla<sup>2</sup>

<sup>1</sup>Research Scholar, Glocal University, Saharanpur. Uttar Pradesh, India

<sup>2</sup>Associate Professor, Glocal University, Saharanpur. Uttar Pradesh, India

Correspondence should be addressed to Jeevan Sharma; [Jeevensharma44@gmail.com](mailto:Jeevensharma44@gmail.com)

Copyright © 2023 Made Jeevan Sharma et al. This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**ABSTRACT-** Prenatal and preconception care, as well as other forms of healthcare provided to pregnant women, are extremely important for minimizing the effects of various issues and complications. Health education is essential for increasing pregnant women's self-knowledge and adopting preventative behaviors regarding preconception-related complications. Promoting self-care practices during pregnancy is one of the main goals of health education for pregnant women. This may reduce morbidity and mortality, improve pregnant women's quality of life, and lower healthcare costs.

Numerous sources were identified through methodical searches of bibliographical records in order to conduct a systematic literature search for a comprehensive literature review. Extra assets were acquired by hand looking through the catalogs of survey articles, peer-explored diaries and essential examinations to assemble data on clinical preliminaries comparable to pregnancy related wellbeing instruction among Nepal ladies pointed toward diminishing dangers and intricacies through pre-birth care.

Even though pregnancy-related health education strategies have been used for more than two decades in Nepal, only a small percentage of the population is well-informed about pregnancy-related health information. As a result, proper pregnancy-related health educational strategies must be implemented by medical professionals and physicians in Nepal's prenatal health care centers to help pregnant women learn about various psychological issues and clinical complications.

**KEYWORDS-** Health Education; Self-Efficacy; Pregnancy; Self-monitoring behaviour; Nepal.

## I. INTRODUCTION

For a woman, pregnancy is a perfectly normal despite the fact that there are inherent dangers and complications associated with this stage of life, it is a serious matter. Pregnant women and their unborn children may suffer irreversible health consequences from ignorance about health and lifestyle during pregnancy. Maternal mortality is a major cause of death in some countries due to a lack of awareness and proper care, even though technological and scientific advancements have been made to improve care during pregnancy in order to reduce complications associated with pregnancy [1]. According to a report from the World Health Organization, the global rate of

maternal mortality decreased by 44% between the years 1990 and 2017. More than 830 women die each day from problems related to childbirth and pregnancy that could have been avoided [2]. Nepal's mortality rate in 2015 was estimated to be 12 deaths per 100,000 live births, a significant decrease from the maternal mortality rate of 30 deaths per 100,000 live births in 1996 [3]. However, the mortality rate at this time is still too high. During pregnancy and childbirth, a number of risks and complications contribute to the high mortality rate. There are a number of high-risk factors that have a significant impact on the health of both the mother and the unborn child. These factors can occur prior to pregnancy or develop during pregnancy. Pregnancy-related hypertension is thought to be one of the leading causes of morbidity and mortality, particularly in developing nations, and this risk factor is responsible for more than 10-15% of all deaths related to pregnancy [4]. Diabetes mellitus, which accounts for nearly 3-5% of pregnancy-related mortality [5], is another major cause of morbidity and mortality during pregnancy.

Pregnancy healthcare, including prenatal and preconception care, is essential for pregnant women to minimize the effects of various issues and complications [6]. It is believed that prenatal care is essential. However, in the context of Nepal, very little research has been done on health care and preventative behavior during pregnancy. In addition, health education is essential for increasing pregnant women's self-knowledge and adopting preventative behaviors regarding preconception-related complications [7]. Any activity that aims to improve a person's health and well-being and includes providing the necessary health instruction and interventions to enable them to monitor and control their health and adopt a healthy lifestyle is considered to be health education [8]. Health education also includes risk management and disease prevention.

Promoting self-care behaviors among pregnant women during the prenatal period is one of the primary goals of health education, which may result in a reduction in the rate of morbidity and mortality, an improvement in the quality of life for pregnant women, and a reduction in the cost of healthcare. Healthcare professionals can follow a variety of theories and concepts when selecting prescriptions or intervention strategies, and theories play a significant role in the promotion of health education. As of now, self-viability hypothesis is one of the major and

most broadly involved speculations for advancing wellbeing instruction [9]. Bandura's self-efficacy theory has been widely used in a variety of health promotion and health education endeavors, including smoking cessation, dietary and lifestyle changes, pain management, treatment adherence, and cardiac rehabilitation [10]. This theory says that self-efficacy is a person's confidence in his or her ability to do a particular activity well [11]. Self-efficacy serves as a link between a person's attitude, knowledge, and behavior in relation to their ability to complete a particular task [12]. In their study, Zhianian [13] looked at how self-efficacy theory improved self-care behaviors among Nepalese pregnant women. Improving pregnant women's self-efficacy and knowledge of the risks associated with pregnancy are two of the most important components of antenatal care health education. This will increase pregnant women's attitudes and behaviors toward self-care.

They will be encouraged to participate in self-care and develop a positive attitude toward self-care behaviors as a result of this. Focus groups, individual counseling, presentations, and lectures can all be used to increase pregnant women's self-efficacy in terms of improving their attitudes and behaviors toward self-care. These methods can also be used to educate pregnant women about the importance of physical activity during pregnancy, controlling blood glucose levels, and controlling hypertension.

**Aim and Objectives** The primary objective of this study is to examine the most recent and existing research to see if and how health education strategies have changed women's attitudes toward taking preventative health measures and raised awareness of pregnancy-related health issues.

The following objectives will be addressed throughout the study in order to achieve the research objective.

1. to learn about the state of pregnancy-related health issues in Nepal at the moment .
2. to comprehend the effect that health education has on preventing complications during pregnancy.
3. to investigate current methods for raising health awareness among Nepalese pregnant women.

**Materials and Methods** Literature Search strategy for systematic review After finalizing the research title, the "Medical Literature Analysis and Retrieval System Online (MEDLINE) database" was used to conduct a preliminary literature search to suggest potential strategies for communicating pregnancy-related knowledge and health education. The primary objective of this literature review was to locate pertinent articles and studies on a variety of health issues and complications related to pregnancy, the impact of health education on preventing complications in pregnant women, and current Nepali practices for raising health awareness among pregnant women. A lot of research has been done on clinical interventions designed to reduce specific risks during pregnancy, according to the database search for relevant literature; However, there is not a lot of literature on the topic of understanding and analyzing the impact of health education on lowering the risks and

complications of pregnancy among Nepalese women by increasing their self-monitoring behavior and raising awareness of these risks and complications. As a result, the primary focus of this research project will be on how health education reduces the risks and complications of pregnancy among Nepalese women. Important subject headings or keywords were discovered during the database search for relevant literature and used in the formal, systematic literature search for this study's literary review.

## II. LITERATURE SEARCHING METHODS AND DATABASE

Methodical searches of bibliographical records were used to identify numerous sources for a systematic literature review, including the British Medical Journal (BMJ), The Cochrane Library, the Web of Science, and the Medical Literature Analysis and Retrieval System Online (MEDLINE). The following key terms were used in the search: "Prenatal care," "antenatal care," "preconception care," "pregnancy-related complications," "pregnancy-related knowledge," "health behavior," "clinical studies," "randomized trials," and "Nepal" are all synonyms for "pregnancy." In addition, the World Health Organization-WHO database and the ProQuest theses database were searched for background literature in order to comprehend the issues associated with Nepalese women's experiences with pregnancy-related complications and the current state of health education for women, which was included in the preliminary portion of the study.

The bibliographies of primary studies, peer-reviewed journals, and reviewed articles were manually searched for additional resources. In addition, websites were searched for any unpublished clinical trial data pertaining to pregnancy-related health education for Nepalese women with the goal of lowering risks and complications through prenatal care. Subsequent to gathering every one of the articles, explicit articles were chosen by gathering titles, watchwords and digests, lastly those articles whose full text really fulfilled the incorporation measures were chosen for basic assessment.

**Criteria for inclusion and exclusion** After the literature was found in an electronic database, it was checked against the eligibility criteria. The inclusion and exclusion criteria used to select the literature for this systematic review are shown in Table 1.

After screening the selected articles in accordance with the eligibility criteria, they were grouped according to the most important aspects of the research, such as understanding of breastfeeding, nutrition, and dietary intake, psychological changes during pregnancy, proper knowledge and awareness of the significance of folic acid in reducing pregnancy-related complications, and knowledge of various prenatal procedures, among other things. A table with information about the study's design, purpose, setting, participants' characteristics, key outcomes, and limitations summarized the selected studies. For this systematic literature review, a qualitative synthesis of these selected articles followed.

Table 1: Inclusion and exclusion criteria for literature selection for systematic review [31]

Inclusion Criteria	Exclusion Criteria
i. No period constraint was applied during the formal literature search as the number of studies were not abundant as per the aim and objectives of this study.	i. Studies that were not based on the impact of health education to reduce the pregnancy-related risks and complications among Nepalwomen.
ii. Studies that focused on investigating the impact of health education to reduce the pregnancy-related risks and complications among Nepalwomen were included.	ii. Research articles and journal papers which were written and published in a language other than English were removed from the literature selection
iii. Literature that focused only on pregnant women's health education was considered.	iii. Some of the literature was discarded as it was not available in full, only the abstract being available. In order to save time and costs, this literature was excluded.
iv. Literature was included if the key outcome of the research was focused on clinical interventions related to pregnancy related health education.	iv. Some of the literature was discarded as the key outcomes of the research were focused on issues other than clinical interventions or humanistic findings.
v. Research articles and journal papers which were written and published in English were included.	
vi. Literature with the full-text available which were focused on the impact of health education to reduce pregnancy-related risks and complications among Nepalwomen were found to be limited and were included.	
vii. For grey literature, reports, theses or dissertations that were completed before November 2018 were also included.	

A total of 52 research articles were identified using the MEDLINE database during the literature identification phase, and another 26 articles were identified from other sources. Using Endnote software, 23 of the 78 identified literature sources were removed because they were found to be duplicates. After that, the eligibility criteria were applied to the remaining 55 articles, and 37 of them were eliminated because they did not meet the inclusion criteria for this systematic literature review. Due to the fact that only the abstract was available, some of the literature was discarded. This literature was left out to save time and money. Because the primary outcomes of the research were focused on issues other than clinical interventions or humanistic findings, some of the literature was discarded. Seven articles were ultimately selected for this systematic literature review after 18 full-text articles were screened and 11 were discarded.

Figure 1 depicts the systematic literature review's overall process of literature identification, screening based on inclusion and exclusion criteria, and final selection. Generalizing the data that was collected After the articles that met the eligibility criteria were screened, they were grouped according to the most important aspects of the research: understanding of breastfeeding, nutrition, and dietary intake, psychological changes during pregnancy, proper knowledge and awareness of the significance of folic acid in reducing pregnancy-related complications, and knowledge of various prenatal procedures, among other things. A table with information about the study's design, purpose, setting, participants' characteristics, key outcomes, and limitations summarized the selected studies. For this systematic literature review, a qualitative synthesis of these selected articles followed.

Table 2: Summary of the key findings from systematic literature review [31]

Author(s), year	Study Design	Aim of the study	Setting and participants	Results and findings	Research limitations
Rasheed and Al-Sowielem [23]	Cross-sectional study; questionnaire-based survey	Understanding the level of health awareness related to pregnancy among pregnant women.	n= 581; Study Location: Primary Health Care Centres in Al-Khobar, Nepal.	Participants were well-informed about: physical activity during pregnancy (83.6%); risks of smoking during pregnancy (99.3%); necessary food intake of dairy products (74.7%); protein rich foods (71.4%); required amount of sleep (81.9%); rubella infection during pregnancy (43%); importance of pre-natal care (97.2%); need for prenatal visits and follow-up (91.9%); and need for immunisation during pregnancy (46.3%).	Health complications during pregnancy were not thoroughly studied. No interventions related to health education in terms of improving preventive behaviour among pregnant women in Nepal are discussed.

Habib et al.[24]	Cross-sectional study; questionnaire-based survey	Evaluating the type of consultations about the antenatal health issues of pregnant women in health care centres.	n= 394; Study Location: seven different prenatal health care centres in Medina, Nepal.	Participant's perceptions of pregnancy related health education provided by antenatal care centres, such as nutrition advice (63.7%), necessary daily rests during pregnancy (43.1%), importance of hygiene in reducing complications (15.5%), psychosocial support (2%) and counselling regarding risks and complications during pregnancy (39.8%), was positive.	This study focuses on the efficiency of consultations at health care centres, rather than on the impact of health education in improving knowledge and preventive behaviour among pregnant women.
Otaiby et al.[21]	Cross-sectional study; questionnaire-based survey	Examining the level of pregnancy related health knowledge among pregnant women and assessing the need for health education to enhance preventive behaviour among pregnant women.	n= 468; Study Location: different primary health-care centres in Riyadh, Nepal.	Knowledge about risks and complications related to pregnancy was found to be quite low (34.8 out of 100); participants supported the need for health education, and they preferred health education strategies in a written format (37.8%), one-to-one counselling (18.8%) and audio-visual training-based health education (14.3%).	Lacks proper evaluation of the need for health education among pregnant women in relation to reducing risks and complications during pregnancy and improving preventive behaviour among pregnant women.
Al Ateeq et al.[26]	Descriptive Study; questionnaire-based survey	Evaluating the impact and effectiveness of health education related to pregnancy-related issues among pregnant women, especially reducing complications during the preconception period.	n= 300; Study Location: two healthcare centres in Riyadh, Nepal.	80% of the participants were satisfied with the health education provided. The main themes of health education were related to breast feeding (83%), baby care (74.7%) and signs of labour (75.3%)	This study is based on the responses of the participants (pregnant women) and suggests the need for health education from their perspective only rather than including the thoughts of healthcare professionals.
Al Hazmi [27]	Cross-sectional study; questionnaire-based survey	Assessing the awareness of prenatal care among pregnant women in Nepal	n= 1,617; Study Location: two hospitals in Medina, Nepal.	The majority of the participants (89.7%) reported the need for health education while 89% of the participants suggested contemporary supplements and health education was needed to reduce the risks during pregnancy.	This study does not emphasize the impact of health education in terms of improving knowledge and preventive behaviour among pregnant women. Moreover, this study does not include expert's opinions on the mode of pregnancy related education.
Al-Rahi et al.[28]	Cross-sectional study; questionnaire-based survey	Assessing the knowledge of the importance of frequent practice of physical activity during the preconception phase among pregnant women in Nepal.	n= 388; Study Location: three different regions of Nepal.	Knowledge about risks and complications related to pregnancy was found to be quite low (13.7±3.6), and this is associated with level of education (p=0.009).	This research focuses only on the physical activity related to education and awareness among pregnant women, whereas other factors relating to pregnancy are absent in this study.
Ramisetty-Mikler, et al.[29]	Clinic-based study; questionnaire-based survey	Evaluating the impact of health education on pregnancy-related health behaviour among pregnant women and the sources of pregnancy related knowledge.	n= 258; Study Location: two prenatal health care centres in Riyadh, Nepal.	The majority of the participants (90%) reported that they were well-informed about the need for folic acid, though younger women (odds ratio, OR=0.43; 95% CI= 0.19, 0.98; p< 0.05) and less educated women (OR=0.36; 95% CI= 0.15, 0.89; p< 0.05) were less informed about complications associated with pregnancy.	This study focuses mainly on the consumption of folic acid and its importance in reducing pregnancy related risks; however, other risk factors are not discussed.

The most important results from the articles chosen for the systematic literature review are shown in Table 2 below.

[23] conducted a cross-sectional study with a sample of 581 pregnant women. They were surveyed with questionnaires to find out how much pregnant women knew about their health. Participants in this study were selected at random from Primary Health Care Centers in Al-Khobar, Nepal. According to the findings of the study, the majority of pregnant women (55.1%) reported that they were unaware of the importance of eating foods high in fiber during pregnancy. However, a large percentage of

pregnant women were well-informed about their nutrition and diet during the prenatal stage and were knowledgeable about issues related to prenatal care. Some examples of these issues included physical exercise (83.6%), the number of required hours of rest per day (81.9%), and protein-rich foods (71.4%). This study also found that healthcare providers in Nepal's prenatal healthcare centers do not provide pregnant women with health information about their pregnancy. According to the findings of the study, a significant number of participants reported having a high level of awareness and knowledge regarding health-related issues that are

[View publication stats](#)

provided by healthcare professionals during pregnancy; a lot of pregnant women didn't know enough about what to eat and how to live a healthy life before they got pregnant; Health care professionals are not adequately disseminating information about various prenatal procedures. In addition, according to Rasheed and Al-Sowielem (2003), health education for pregnant women needs to be revamped in order to expand their knowledge base through health care facilities and the media.

In Medina, Nepal, Habib [24] carried out a cross-sectional study with 394 pregnant women from seven distinct prenatal health care centers. In order to evaluate and comprehend the nature of consultations on antenatal health issues for pregnant women in health care centers, a questionnaire-based survey was distributed to the participants. From this review, it was seen that as the majority of the medical services places are successful at imparting different wellbeing advancement exercises to pregnant ladies, for example, way of life and healthful information, breastfeeding advising and care arrangement. However, Habib [24] suggests that additional healthcare facilities are required to carry out the crucial task of providing pregnant women with health education.

In their cross-sectional study, Otaiby [25] administered a questionnaire-based survey to 468 pregnant women from various primary healthcare centers in Riyadh, Nepal, to determine the level of knowledge about pregnancy-related health issues and the need for health education to encourage pregnant women to take preventative measures. Pregnant women had a lower level of prenatal knowledge (38.8%), according to the findings of the study; However, the participants—pregnant women—emphasized the need for efficient means of disseminating health education, such as written communication about pregnancy (39.8%) and one-on-one education (19%). Otaiby and co. 2013) argue that health education and counseling at various stages of pregnancy should cover specific topics because the majority of participants lacked knowledge about pregnancy and the risks and complications associated with it. In addition, they argue that a variety of dissemination methods—including group discussions, one-on-one counseling, leaflets, and so on—are required. to provide direction, boost motivation, and encourage problem-solving so that pregnant women can lessen the risks and complications of their pregnancy.

A clear exploration study was directed [26] among 300 pregnant ladies who used to visit two medical care places in Riyadh, Nepal. They used a survey that was based on a questionnaire to see how well health education about issues related to pregnancy had an effect on pregnant women, specifically in terms of reducing complications during the preconception period. Nearly 80% of participants were pleased with the prenatal healthcare centers' health education, according to the study's findings. Prenatal health education covers a wide range of topics, including breastfeeding, nutrition and dietary intake, psychological changes during pregnancy, labor signs, and other topics. Al-Ateeq [26] also, assessed the viability of wellbeing instruction during the assumption time frame.

In their cross-sectional study, Al Hazmi [27] surveyed 1,617 pregnant women at two hospitals in Medina, Nepal, using a questionnaire, with the goal of determining how

well pregnant women in Nepal are aware of prenatal care. According to the findings of the study, ninety percent of the pregnant women who responded to the survey believed that health education related to pregnancy can significantly reduce and prevent health risks and problems related to pregnancy.

In their cross-sectional study, they surveyed 388 pregnant women from three different parts of Nepal using a questionnaire to find out how many pregnant women in Nepal know about and do physical activity before getting pregnant. Pregnant women in Nepal have a high level of prenatal knowledge (69.5%) and report that physical activity (42.5%) significantly reduces preconception complications, according to the study's findings. Most of the members had satisfactory information with respect to the requirement for actual work during pregnancy; However, they come to the conclusion that more health education is required to emphasize the significance of prenatal physical activity. Identify once more the need for a more structured program in Nepal's prenatal healthcare facilities [28].

Finally, [29] conducted a clinic-based survey of 258 pregnant women from two prenatal health care centers in Riyadh, Nepal, using a questionnaire to assess the impact of health education on pregnant women's health-related behavior and knowledge sources. The majority of participants were well-informed about the importance of various factors related to folic acid, but nearly half of the participants did not take a supplement to meet their folic acid requirement during pregnancy. In Nepal, pregnant women typically receive folic acid supplements as part of their standard antenatal care. The study also found that pregnant women with less education are less likely to be aware of the significance of folic acid in preventing pregnancy-related complications.

Discussion In their cross-sectional study, Rasheed [30] identifies the requirement for health education for pregnant women and the channels through which information can be disseminated to increase pregnant women's knowledge. However, the study's analysis revealed that pregnancy-related health issues were not thoroughly investigated. In addition, there were no health education-related interventions to encourage pregnant women to take preventative measures [31]. discuss the effectiveness of prenatal health care centers in advising and communicating with pregnant women about various issues related to pregnancy. However, given the goal of this systematic review [32], the fact that their research primarily focused on the effectiveness of consultations at health care centers rather than the impact of health education on improving pregnant women's knowledge and preventive behaviors is a limitation of the study. The need for health education among pregnant women is clearly identified in their study, and as a result, a variety of formats, sources, strategies, and channels for providing health education are suggested. However, this study fails to properly assess the need for pregnant women to receive health education in order to reduce risks and complications during pregnancy and improve preventative behavior.

Al Ateeq [33] outline the advantages of wellbeing schooling for pregnant ladies during and after pregnancy; However, the conclusion of this study was based on the responses of the participants—pregnant women—and the

need for health education was only based on their perspective, not on the thoughts of healthcare professionals [34]. investigated the most common diseases and complications that pregnant women experience during pregnancy; however, this study does not focus on how health education can improve pregnant women's knowledge and preventive behaviors. Besides, this study does exclude well-qualified assessment on the method of pregnancy related schooling [35]. discuss the most important aspects of physical activity during pregnancy and how well it improves women's health during pregnancy. However, their research only focused on educating and raising awareness among pregnant women about physical activity, leaving out other pregnancy-related factors. Again, their study, [36], primarily focused on the consumption of folic acid and its significance in lowering risks associated with pregnancy; However, no consideration was given to other risk factors.

Cross-sectional and clinical research on pregnant women in Nepal's antenatal period were lacking, according to the systematic literature review. The majority of studies have demonstrated that pregnancy-related health education that is disseminated during pregnancy leads to improved obstetric outcomes among pregnant women [37]. However, none of the cited studies demonstrate that educational interventions' effects during pregnancy are statistically significant. As a result, there is a lack of statistical significance in these studies regarding the improvement of preventive behavior among Nepalese pregnant women and health education related to pregnancy. In addition, these studies indicate that health education among pregnant women does not significantly reduce risks or complications associated with pregnancy. Although only the impact of pregnancy-related health education during prenatal care has been considered in this systematic review, it is important to note that the analyzed birth outcomes involve multiple risk factors. Inadequate lifestyle habits and clinical complications, such as anemia, urinary tract infection, and gestational weight gain deficit [38], are more difficult to modify [39]. The primary risk factors for young or advanced maternal age are low birth weight and prematurity. It is important to note that prenatal care should not be limited to the clinical-traditional model, which only involves patients and healthcare professionals. Instead, it should include health education activities as part of routine care. These activities should be known by professionals who care for pregnant women and try to understand them in the context of how they live, behave, and react. [40].

### III. POTENTIAL METHODS FOR COMMUNICATING HEALTH EDUCATION AND PREGNANCY-RELATED KNOWLEDGE

Recognizing the need for organized prenatal health education and training may have a significant impact on the quality of health education provided to pregnant women, their well-being, and ultimately the overall health of Nepal's female population [41]. Distinguishing the most ideal enlightening plan, channel, timing and substance for wellbeing schooling and preparing to suit this general population might influence the quality and results of antenatal preparation programs in Nepal.

- a. The following is a list of some of the possible means by which pregnant women in Nepal could be informed about pregnancy-related information and health education:
- b. Social marketing is a strategy that could be used to provide health information about pregnancy and the complications that come with it. Additionally, it may improve pregnant women's self-monitoring behavior and be effective in changing their attitudes and behaviors;
- c. An individually tailored behavioral change program can be implemented to promote the importance of physical activity during pregnancy; such programs must be tailored to the preferences, particular interests, and willingness of pregnant women in Nepal;
- d. Providing pregnant women in Nepal with health education and communication via smartphone. This will enable individual health education for a large number of females at their convenience;
- e. Health education about pregnancy can also be spread through social media and television, including Nepal's national television station. Women's well-being and knowledge of pregnancy-related health issues and complications should be prioritized by healthcare providers.

### IV. CONCLUSION

Health education for pregnant women must focus on improving self-care and self-monitoring behaviors in relation to various risk factors and complications during pregnancy in order to reduce the global rate of maternal mortality and morbidity. According to the systematic literature review, there are insufficient health education intervention strategies to improve pregnant women's health-related behaviors and knowledge in Nepal. In order to emphasize the importance of providing pregnant women in Nepal with health education, a national program known as the "Plan of Action" was created to direct the activities of health care providers during prenatal care. This strategic plan, which is updated every year, emphasizes that information about prenatal care and other related topics should be communicated to the female population as part of health education to improve their understanding, attitudes, knowledge, and skills for a safe and healthy pregnancy. Social media and television, including Nepal's national TV, can also be used to spread health education about pregnancy. Medical care experts ought to really try to guarantee that ladies are very much aware of and educated about pregnancy related medical problems and confusions. A small percentage of Nepal's female population is well-informed about pregnancy-related health issues, despite the implementation of pregnancy-related health education strategies in the country for more than two decades. Consequently, appropriate pregnancy-related wellbeing instructive systems should be embraced by medical services experts and doctors at the pre-birth medical care communities in Nepal to direct and teach pregnant ladies in regards to various mental issues and clinical complexities connected with their pregnancy. They will ultimately be able to improve their self-awareness and preventative behavior throughout their

pregnancy, including the prenatal and perinatal periods, as a result of this. It is obvious that there are very few studies and clinical studies done in Nepal to find out how health education during pregnancy improves pregnant women's knowledge and preventive behaviors. As a result, additional research in this area is required, with a focus on the content and delivery method of health education for Nepalese pregnant women.

### CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

### REFERENCES

- [1] Bakhshian F, Jabbari H (2009) Effectiveness of Health Services for Mothers in Iran Health System. *Iran J Nursing* 22(58): 43-54.
- [2] WHO (2018) Maternal mortality. World Health Organization, Geneva, Switzerland.
- [3] Unicef (2012) Country Profile: Nepal Maternal, Newborn & Child Survival.
- [4] Muti M, Tshimanga M, Notion G, Bangure D, Chonzi P (2015) Prevalence of pregnancy induced hypertension and pregnancy outcomes among women seeking maternity services in Harare, Zimbabwe. *BMC Cardiovasc disord* 15: 111.
- [5] Say L, Chou D, Gemmill A, Tunçalp Ö, Moller A, et al. (2014) Global causes of maternal death: a WHO systematic analysis. *The Lancet Global Health* 2(6): e323-e333.
- [6] Wahabi H, Fayed A, Esmail S (2014) Maternal and Perinatal Outcomes of Pregnancies Complicated with Pregestational and Gestational Diabetes Mellitus in Nepal. *Journal of Diabetes & Metabolism* 5(7): 1-5.
- [7] Elsinga J, de Jong Potjer L, vander Pal de Bruin K, le Cessie S, et al. (2008) The Effect of Preconception Counselling on Lifestyle and Other Behaviour Before and During Pregnancy. *Women's Health Issues* 18(6): S117-S125.
- [8] WHO (1998) Health Promotion Glossary. World Health Organization, Geneva, Switzerland.
- [9] A review of the literature. *J Med Life* 11(1): 15-19.
- [10] Lawrance L, McLeroy K (1986) Self-efficacy and Health Education. *Journal of School Health* 56(8): 317-321.
- [11] Derryberry M, Allegrante J, Sleet D (2004) Derryberry's educating for health. *San Francisco: Jossey-Bass* 94(3): 370-371.
- [12] Glanz K, Barbara K, Rimer K, Viswanath (2008) Health Behaviour and Health Education: Theory, Research, and Practice. (4th edn), USA.
- [13] Zhianian A, Zareban I, Ansari Moghaddam A, Rahimi S (2015) Improving Self-care Behaviours in Pregnant Women in Zahedan: Applying Self- efficacy Theory. *Caspian Journal of Health Research* 1(1): 18-26.
- [14] Rasheed P, Al Sowielem L (2003) Health education needs for pregnancy: a study among women attending primary health centers. *J Family Community Med* 10(1): 31-38.
- [15] Tucker K, Taylor K, Crawford C, Hodgkinson J, Bankhead C, et al. (2017) Blood pressure self-monitoring in pregnancy: examining feasibility in a prospective cohort study. *BMC Pregnancy and Childbirth* 17: 1.
- [16] Atakiti I, Ojomo O (2015) Influence of Television Health Programmes on Maternal Health. *International Journal of Humanities and Social Science* 5(8): 170-180.
- [17] Otaiby T, Jradi H, Bawazir A (2013) Antenatal Education: An Assessment of Pregnant Women Knowledge and Preferences in Nepal. *Journal of Women's Health Care* 2: 4.
- [18] Al Rahi H, Al Khaldi S, Al Awwad R, Ahmed S, Al Thubaiti A (2018) Knowledge and Practice of Physicalactivity among Pregnant Following in Primary Health Care Centers In the Eastern Province-Nepal. *International journal of scientific research* 7: 7.
- [19] Alreshidi, F, Almujiil Am, Malak A (2018) Awareness of folic acid use among Nepalwomen attending outpatient clinics at King Fahad Medical City. *J Family Med Prim Care* 7(5): 957-962.
- [20] Al Hashem A (2016) Health Education in Nepal: Historical overview. *Sultan Qaboos University Medical Journal* 16(3): e286-e292.
- [21] Otaiby T, Jradi H, Bawazir A (2013) Antenatal Education: An Assessment of Pregnant Women Knowledge and Preferences in Nepal. *Journal of Women's Health Care* 2: 4.
- [22] Ramisetty Mikler S, Javed S, Alamri S, Kalantan S, Kurdi W (2018) Pregnancy-related health behavior of Nepalwomen and key information sources: A clinic-based study. *NepalJournal for Health Sciences* 7(2): 132-137.
- [23] Rasheed P, Al Sowielem L (2003) Health education needs for pregnancy: a study among women attending primary health centers. *J Family Community Med* 10(1): 31-38.
- [24] Habib F, Hanafi M, El Sogheer A (2011) Antenatal care in primary health care centres in Medina, Nepal, 2009: a cross-sectional study. *Eastern Mediterranean Health Journal* 17(03): 196-202.
- [25] Otaiby T, Jradi H, Bawazir A (2013) Antenatal Education: An Assessment of Pregnant Women Knowledge and Preferences in Nepal. *Journal of Women's Health Care* 2(4).
- [26] Al Ateeq M, Al Rusaiees A, Al Dughaiter A (2013) Perceptions and effects of antenatal education. *NepalMed Journal* 34(12): 1287-1293.
- [27] Al Hazmi J (2017) Awareness of Antenatal Care Importance among NepalPregnant Women in Madina. *Journal of Gynecology and Womens Health* 4: 5.
- [28] Al Rahi H, Al Khaldi S, Al Awwad R, Ahmed S, Al Thubaiti A (2018) Knowledge and Practice of Physical activity Among Pregnant Following in Primary Health Care Centres in The Eastern Province-Nepal. *International journal of scientific research* 7(7).
- [29] Ramisetty MS, Javed S, Alamri S, Kalantan S, Kurdi W (2018) Pregnancy- related health behavior of Nepalwomen and key information sources: A clinic-based study. *NepalJournal for Health Sciences* 7(2): 132-137.
- [30] Rasheed P, Al Sowielem L (2003) Health education needs for pregnancy: a study among women attending primary health centers. *J Family Community Med* 10(1): 31-38.
- [31] Al-Farga, Ammar & Aldhafeeri, Mutlaq. (2019). Impact of Health Education on Knowledge and Preventive Behaviour for Pregnancy Related Issues in Saudi Arabia: A Systematic Review. T.