Development of Educational Video Material for Pregnant Women Who Screened Positive for Intimate Partner Violence

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英文抄録

Objective：Intimate partner violence（IPV）is a serious health problem for pregnant women and fetuses. This study aimed to develop educational video material to support women who screened positive for intimate partner violence during pregnancy.

Methods：This was qualitative descriptive study to evaluate video material. The 10-minute video material with animation enabled pregnant women to learn about：（a） the types and structure of IPV；（b） the causes and impacts of IPV on pregnancy；（c） resources for IPV survivors and also（d） aimed to raise women's awareness of IPV. Participants were seven midwives/nurses and five pregnant women who evaluated the video material by using semi-structured interview covering three perspectives：the understandability, usefulness, and suitability of the video material.

Results：Regarding understandability, all participants gave positive assessments despite suggesting some revision of the amount of animation, the use of color, artificial voice, speed of narration and time required. Both pregnant women and midwives/nurses asserted that the video material was useful before the consultation by midwife. Pregnant women considered it useful because of the availability of information and the time to reflect on their partner relationship. Midwives/nurses found it useful for of accessing information and it saved time. Concerning suitability, participants noted it would be better to not use direct expressions and to avoid invasive expression therefore some revisions are necessary.

Conclusion：Overall, participants evaluated the video material positively, and asserted it would help pregnant women learn about IPV. The participants recommended improvements and these will be incorporated into the video materials to enhance their effectiveness.

Keywords：intimate partner violence, domestic violence, pregnant women, educational material, video

Intimate partner violence（IPV）referred to behavior by an intimate partner or ex-partner that causes physical, sexual or psychological harm, including physical aggression, sexual coercion, psychological abuse and controlling behaviors（World Health Organization, 2013）is global public health problem. A recent systematic review revealed that 27% of ever-partnered women are estimated to experience intimate partner violence in their lifetime（Sardinha et al., 2022）. Even if during pregnancy, the prevalence of physical, psychological and sexual violence from the partner was 9.2%, 18.7% and 5.5% respectively（Román-Gálvez et al, 2021）. A 2005 survey in Japan reported that approximately 5% of pregnant women were experiencing partner violence（Kataoka et al., 2005）. Moreover, the COVID-19 pandemic and the government prevention measures including lock down or stay-home orders exacerbated the burden of IPV for women（Muldoon et al. 2021, Katou et al., 2023）.

IPV, especially during pregnancy, is a prioritized health issue. Many studies have found that IPV during

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pregnancy affects the health of both women and their fetuses（Chisholm et al., 2017；Pastor-Moreno et al., 2020a）. Pregnant women subjected to physical IPV are 2.0-5.5 times more likely to have low-birth-weight infants and 1.4-6.0 times more likely have perinatal death than pregnant women not subjected to IPV（Pastor-Moreno et al., 2020b）. In addition, IPV affects their children such as witnessing violence against their mothers caused psychological trauma to children（Yoon et al., 2016）. For these reasons, providers have an important role in providing support for women for a safe and healthy pregnancy and to ensure that their children can be raised in a safe environment.

In Japan, where almost all pregnant women receive prenatal care, it is the optimal opportunity to screen for IPV and to start early intervention with women. Therefore, guidelines for midwifery care（Japan Academy of Midwifery, 2020）recommend universal screening for IPV at pregnancy check-ups. However, studies have shown that only 6.9% of institutions perform IPV screening（Inoue et al., 2017）. Personnel shortages, including a lack of staff at medical institutions with knowledge and skill to support women who experienced IPV（Andreu-Pejó, et al., 2022；Hudspeth et al. 2022）and the psychological burden on staff members, who felt reluctant to become involved with IPV victims（Feder et al., 2006）were factors that hindered the widespread implementation of IPV screening.

In order to solve barriers to implementation for IPV screening, the use of ICT is imperative. Recently, a Japanese government funded online support for IPV survivors has been instituted and is now being examined for its effectiveness, eliminating the need for women to meet face-to-face（Suga, 2021）. The use of the web to introduce support may help to solve various problems, including a lack of time, staff shortages, the psychological burden placed on staff, and IPV victims' reluctance to admit IPV and accept support（El Morr et al., 2020）. Therefore, screening and intervention for IPV during pregnancy should also include the web-based educational materials in addition to face-to-face consultations.

Toward that goal we developed video material to support pregnant women who screened positive for IPV to provide access to relevant knowledge and resources. The video material via the web would be provided in the health care settings before the consultation with a midwife. Ultimately, this video material and consultation with a midwife aims to empower women by providing more options to help them stay safe from the antenatal to postnatal periods. The purpose of this study was to evaluate the feasibility of the video materials through qualitative interviews with both providers and pregnant women. The feasibility evaluation addressed the contents and methods of the video material in terms of its（a）understandability,（b）usefulness and（c）suitability for women experiencing IPV.

Ⅰ. Method

1. Conceptual framework

The conceptual framework for pregnant women experiencing IPV at health care setting was based on the women-centered care of respect, safety, holism, and partnership（Horiuchi et al., 2006）（Figure 1）. After the IPV screening, pregnant women who screened positive were provided support by first viewing the video material and next receiving a consultation with the midwife. The video material consists of three parts：（a）providing information,（b）promoting IPV awareness and（c）formulating a safety plan for women and fetus or infant. After watching the video, the consultation with the midwife focuses on assessing the woman's holistic health and support needs for decision making. During consultation, the midwife respects the woman's experience and decisions based on the partnership between midwife and the woman. Providing women-centered care empowers women and helps to restore their self-efficacy, enabling them to choose to live in safety.

2. Development of video material

The aims of the video material were to provide information about IPV including the structure of IPV, prevalence, causes and consequences of IPV, and to formulate safety plans and obtain resources for support in order to keep women's safety. At the same time, we aimed to raise pregnant women's awareness about IPV and to have them reflect on their own relationship with their partner. The video material indicated what a healthy relationship between couple is and to provide an opportunity to think about their own relationship.

The goals and contents were chosen based on established guidelines（ACOG, 2012；Horiuchi et al., 2007；WHO, 2013）and various web sites（Centers for Disease Control and Prevention, 2021；Gender Equality Bureau Cabinet Office, n.d.；UN, n.d.；WHO, 2021）. Table 1 shows the goals and contents of video material. Words and illustrations were carefully chosen to be sensitive and comfortable for IPV survivors. In addition, because the video material would be used before the consulta-

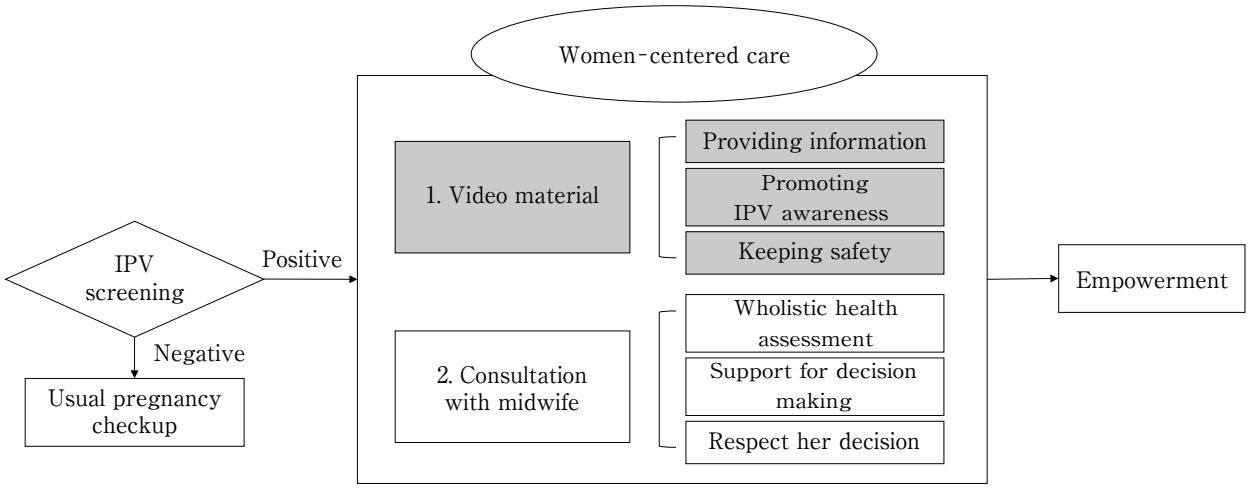

Figure 1　Conceptual framework to support pregnant women who experienced intimate partner violence

Table 1　Goals and contents of the video material

Goals	Contents	
Section 1 Understand the types and structure of violence, prevalence and causes of IPV [5 minutes]	●Definition of IPV ●Prevalence of IPV in Japan ●Types of IPV (physical violence, sexual violence, economical and psychological aggression) ●Cycle of violence ●Power and control wheel	
Section 2 Understand the impact of IPV on pregnancy [2 minutes]	●Impact of IPV on pregnant women and fetus or baby.	
Section 3 Aware IPV and keep their safety [3 minutes]	●What is a healthy relationship with a partner? ●Asking for help is the first step ●Safety plans to lessen harms ●Introduction of resources for support	

tion with a midwife during the pregnancy check-ups, we estimated that a video of about ten minutes would be an appropriate amount to time.

Using PowerPoint 2016, we developed scenes and a narration, creating animation via the cloud-based video animation tool, a creation platform by Vyond, owned by GoAnimate, Inc. The content, narrated by an artificial voice, was then edited. One researcher (FT) created the prototype of the video and the other researcher (YK), an expert midwife, supervised the process to ensure that the content was valid and appropriate.

3. Evaluation of the video material

1) Participants

The study participants were health care providers (midwives/nurses) and pregnant women. We included midwives/nurses (hereafter called providers) who worked at facilities that provided IPV screening and support or who were conducting research related to IPV. We invited pregnant women who were healthy, low risks of pregnancy and childbirth and Japanese speakers to participate in the study.

The participants were recruited using convenience sampling method to tap into the specific population of concern. Participants who met the inclusion criteria were contacted by email or phone and invited to participate. All participants received information about the study, confidentiality, privacy of information, freedom to

withdraw without penalty and provided informed consent.

2）Data collection

The video material was presented in the form of an animated film, with narration based on slides. Playback speed was unchangeable. After providing informed consent, participants viewed the video materials via web on a personal computer or tablet terminal. Before viewing the video material only pregnant women were asked to complete (a) a questionnaire about their pregnancies and (b) the Violence Against Women Screen (VAWS), which was the IPV screening instrument. The viewing environment was a quiet, private room at home or in a midwifery center, where the participants were required to watch the video alone.

After women watched the video material, semi-structured interviews based on an interview guide were conducted to evaluate video material. The interviews were conducted either face-to-face or by phone. The face-to-face interviews, which lasted 30-40 minutes, were conducted in a private room to ensure privacy. An IC recorder was used and data then transcribed for data analysis. The data collection period was from October 2019 to January 2020.

We developed an interview guide to evaluate the video material from the perspective of its understandability, usefulness and suitability of video material for women experiencing IPV. The understandability of the video material was assessed by screen visibility, audio clarity and required time. The usefulness of the material was evaluated by content interest and usefulness or applicability of the video material for pregnant women. In addition, for providers, the internet access in the hospital was assessed. The participants assessed the video as a whole, addressing its suitability as video teaching materials by word selection and language. Responses to the questions were collected as "yes" or "no," followed by a question about the reasons for the decision. Table 2 shows the evaluation questions and the number of respondents who thought that a revision was needed.

3）Data analysis.

Interview data were collected and transcribed. The data focused on the areas of understandability, usefulness and suitability, and each area was evaluated as positive or negative. Those points that were evaluated as negative or needs to be revised were analyzed in more depth.

4）Ethical considerations.

The study was conducted in compliance with the Ethical Guidelines for Medical and Health Research Involving Human Subjects. St. Luke's International University Research Ethics Review Board approved this study（Approval number：19-A060）.

Ⅱ. Results

1. Characteristics of participants

The twelve participants in this study were comprised of five pregnant women, one nurse and six midwives. Of the midwives, five were practicing midwives and one was an IPV midwife researcher. All of the midwives had experience of providing care and support to IPV survivors. The midwives encountered at least two pregnant women per year who might be affected by IPV.

Among the five pregnant women, three were primipara and two were multiparous. They ranged in age from 24 to 37 years old. Three of the pregnant women had previously learned about IPV at a university or vocational school. The other two women had worked with IPV victims and with children growing up in families affected by IPV. Three of the five pregnant women screened positive for IPV（Score of VAWS 2≤）.

2. Understandability of the video material

The understandability of the video material was evaluated from three perspectives：the screen visibility of animation, audio and required time for viewing.

1）Screen visibility

All participants gave positive assessments of the following factors：layout of figures and the text for each slide, the amount of text per slide, the size of the text, and the font. The participants gave negative assessments of the following factors indicating a need for revision：the amount of animation and the use of color.

(1) Too much animation

Two of the pregnant women commented on the amount of animation, as follows："There is slightly too much animation, and it makes the narration difficult to understand." "There is too much animation in the handout（handwritten animation of text and illustrations on the screen）."It would be better to emphasize the more important points."

Two providers responded that,"Pregnant women who screen positive for IPV may have reduced capacity for judgment, thus the amount of animation may be too much for those women, and may lessen their concentration." "I felt that the speed of the animation itself was fast and the overall speed of the video was also fast."

(2) Use of warmer color.

Table2 Evaluation questions and the number of participants who responded 'revision required' for video material (*N*=12)

Question perspectives		Specific question items	The number of evaluators responded revision required	
			Pregnant women (*n*=5)	Midwives/Nurses (*n*=7)
Understandability	Screen visibility	Layout of figures and text for each slide	0	0
		Amount of animation	2	2
		Amount of text per slide	0	0
		Size of text	0	0
		Font	0	0
		Use of color	0	1
	Audio and text	Sections where it is difficult to hear the artificial voice	2	5
		Sections where the audio and text are difficult to understand	1	0
		BGM music selection/BGM volume	0	0
	Required time and the amount of information	Length of time required for viewing	1	1
		Was the right amount of information provided in the video?	0	2
		Were the structure and order of the contents of video easy to understand?	1	1
Usefulness	For pregnant women			
	Interest to pregnant women	Did watching the video engage your interest in IPV?	0	—
		If you were IPV survivor, would watching the video engage your interest in IPV?	1	—
	Usefulness of the video material	Usefulness of the video before the consultation with midwife.	0	—
	For midwives/nurses			
	Usefulness of the video material	Would the video be useful for supporting IPV survivors?	—	0
		Could this video be used before the consultation with midwife?	—	0
	Internet access	Difficulties accessing the video material via web in hospital.	—	0
Suitability	Suitability of word selection and language	Were you able to understand the medical and the technical terms related to IPV?	0	3
		Was Japanese used in an inappropriate way in any sections of the video?	0	0
	Comfortable and sensitive expression	Was there any discomfort words and expressions?	0	5
	Possibility of misinterpret the content	Was there any content that would lead to misinterpretation?	0	2

Regarding the use of color, one provider said : "The colors are too dark. It would be better to use warmer colors."

2) Audio

(1) Artificial voice obstructs understanding.

Two of the pregnant women commented negatively

on the artificial voice narration. One pregnant woman mentioned,"the halting impression of the artificial voice" and "the lack of inflection" as specific points that increased "the difficulty of listening to the artificial voice."

Five of the six health providers said that the artificial voice narration needed improvement. Three mentioned that the"rapid speaking speed"made it difficult to listen to the content. These providers may have known that pregnant women suffering from IPV can have reduced cognitive ability or be emotional (upset). Other providers commented that "the intonation was strange, and it was difficult to understand." "The voice has an artificial feel." "It's better to use a human voice." "Some parts are not relatable with an artificial voice."

While there were many negative assessments of the artificial voice, one of the pregnant women and one provider responded positively, saying that "the light feeling of artificial voice works well to convey the meaning of the content." All participants evaluated the BGM music selection and BGM volume as suitable for this video material.

(2) Narration is at a fast pace

One of the providers commented that narration of the video was too fast to understand the content. A provider stated the following:

"I felt that the information was compressed into a short time, so you should consider setting the speed and time to ensure that the message will be conveyed to those who need to watch it. The pace of the video is fast, and there may be parts that are difficult for first-time viewers to grasp."

3) Time required for viewing and the amount of information.

(1) Ten minutes might be a little long.

One pregnant woman commented on her impression of the time needed to view the video, saying: "I felt like I had to make time to watch it." Two women said,"I thought that the viewing time was too long when I heard it would take 10 minutes." After watching the video, four out of the five pregnant women felt that the time required was appropriate; but one said,"It felt a little too long."

A provider pointed out that:

"When an IPV victim is in her recovery process it may affect whether she is able to keep watching the video until the end. A pregnant woman who is able watch a 10-minute video is at a point where she has a certain level of awareness that she is a victim of violence and she wants to recover on her own. A pregnant woman in this process would be able to watch the video without discomfort."

Five of the six providers felt that the video time span was appropriate.

All of the pregnant women whose time-length assessments changed before and after watching the video commented that the reason for this was that "it did not seem long when I actually watched it."

All of the pregnant women said that the amount of information provided in the video was "just right," commenting: "There was a lot of information but it was organized in a straightforward manner so I could organize the information in my head." "It does not tire me out, even though I'm absent-minded with my pregnancy." Four of the six providers said that the amount of information was "just right." A provider pointed out that the video may contain scenes that IPV victims do not want to see, saying,"I thought it was good to have the option of fast-forwarding through parts they did not want to see."

4) Usefulness of the video material

The assessment of the usefulness of the materials included questions that allowed the pregnant women and experts to analyze the responses of pregnant women and providers separately.

5) Usefulness of the video material for pregnant women.

(1) Useful and interesting tool.

The pregnant women were asked about the usefulness of the video materials as an introduction prior to consultation by midwife and whether the content would be of interest to pregnant women. All of the pregnant women responded,"It is useful" to the question "Can the video be used to introduce consultation by midwife?" Their reasons for giving this response included "I did not have any interest previously, but I did want to think about the video content before the consultation;" "The video gave me the chance to look back on our relationship," "The video was helpful because it presented the QR code and contact information of support organizations." One pregnant woman said,"Hurdles are there from the beginning when seeking support in interpersonal situations" and explained that she felt this way because

"There are probably aspects that you can't reveal when talking to others, including recognition of parts of yourself as a victim that you do not want to be seen or exposed to others, and parts that you didn't want to notice, but ended up noticing. This video material proceeds in a straightforward manner, so it

means you will be able to face your inner self rather than talking to your supporters."

All of the participants responded affirmatively to the question,"Did watching the video engage your interest in IPV?" The pregnant women responded to this question with comments such as : "This provided an opportunity to consider the possibility of being subjected to IPV by imagining myself in that position," "I am not affected by IPV myself, but it engaged my interest because I realized I may come into contact with a IPV victim in the future."

When asked the question,"If we assume that you are pregnant and may be subjected to IPV, would watching the video engage your interest in IPV?", four out of the five pregnant women responded that "it would engage my interest." The reasons for their responses included : "Being aware that IPV is more than just physical violence means that some victims will take another look at their own situations ;" "The animation made it easy to understand that IPV is not just about being physically beaten," and "You may feel that you are not subjected to IPV yourself, but having the video makes you feel that pregnant women suffering from IPV would be interested in watching the video."

6) Usefulness of the video material for health care providers.

All of the providers said that it was useful to introduce the video material for women who screen positive IPV. A provider said that,"Although it is very difficult to change behaviors for IPV survivors, the video material may be a first step" or "Viewing the video is a good idea to start support". All providers indicated accessing the video material via web in hospital was easy. A provider suggested "Video material should be uploaded such as on YouTube, so women access to video anytime and anywhere. It may be useful".

In addition, all providers admitted that the video material might be useful because it led to time saving. The video material enabled them to provide all necessary information for women experiencing IPV before the consultation.

7) Suitability of the video material, suitability of word selection and language

(1) Not too direct expression

The pregnant women were asked whether they understood the medical and technical terms, and whether words and expressions were used inappropriately in any part of the video. They all said that no improvements were needed in this area.

The providers were asked about "the appropriateness of selecting words that include technical terms related to obstetrics and IPV" and "the appropriateness of using technical terms related to obstetrics and IPV." Three providers commented that the "appropriateness of selecting words" should be improved. Specifically, in relation to the section of the narration that said,"Now you understand a little bit about IPV," the providers commented that,"Understanding IPV with your head and understanding it with your heart are different, so it would be better to soften the expression used in that section, to make it more relatable to pregnant women." and "Using the term "IPV" may make it harder for victims." All of the providers said that there were no problems with the "the appropriateness of using words and expressions."

8) Harmful or discomfort contents.

(1) Scene of impact of IPV on baby may be intense

The pregnant women all replied that "there were no harmful or invasive scenes." However, five of the six providers listed Section 2 : Impacts of IPV on the baby during pregnancy as the scene most likely to feel invasive to pregnant women. Opinions on the video as a whole included the following : "Showing this video to IPV victims will create a certain level of invasiveness due to the nature of the support." "It will be painful for those who do not want to acknowledge that they are IPV victims."

"Whether pregnant women will be able to view the video without discomfort will depend on their current situation, such as what stage of pregnancy the pregnant woman is at when viewing the video, what stage of the IPV recovery process the woman is at, and what stage the woman's partner, who is the IPV perpetrator, is at in the IPV cycle."

9) Possibility of misinterpreted the contents

(1) Possibility of blaming themselves

We asked the pregnant women whether "any of the content could be misinterpreted," and they all responded "There are no applicable scenes." In relation to this item, one provider said,"Becoming aware of how common IPV is may be misinterpreted as meaning that pregnant women themselves are guilty and they may blame themselves." Two other providers referred to the scene in Section 2, Impact of IPV on the baby during pregnancy, which mentions the delivery of low-birth-weight infants, premature birth, and stillbirth, pointing out that "mothers who have had low-birth-weight infants, premature births, or stillbirths for reasons other than IPV may blame themselves, and this may cause emotional trauma." One of these providers commented

on the same scene：“The current content reports the risks and is quite threatening to pregnant women, so would be better to inform the viewer of the immediate consequences directly affecting the pregnancy using a softer turn of phrase.”

Ⅲ. Discussion

1. Evaluation of animation in the video teaching materials, understandability of the video material

In this study, video material was evaluated by not only experts but also pregnant women. In order to assess the audiovisual materials, the understandability is one of the most important aspects（Shoemaker et al., 2014）. The video material was ten minutes long and used animation so that content could be easily understood. Animation of video was assessed by the pregnant women as providing a better understanding of the three factors：illustration, text, and narration. Regarding the need to revise and modify the material, improvements were considered in the following areas：“video and audio,” “the amount of information provided in the time required to view the video,” and “suitability of vocabulary.”

Regarding screen visibility and audio of video material, ‘too much animation’ for screen visibility, ‘artificial voice obstructs understanding’ and ‘narration is at a fast pace’ for audio were specific comments to improve it. The double-speed, continuously moving animation gave the impression that a lot of information had to be read；it also made the entire movie proceed quickly, giving the impression that important points were only weakly emphasized. Therefore, material should be simple, unified and minimum text included in order to easily understand. Since the playback speed of the video cannot be changed, an improvement can be expected by reducing the animated movements. In addition, ‘Narration is at a fast pace’ and ‘Artificial voice obstructs understanding’ might be related. Some participants provided negative evaluation about the artificial voice of video for example, ‘Artificial voice obstructs understanding’. On the other hand, two of participants assessed the artificial voice as good because it seemed stable, not emotional, and worked well to convey the meaning of the content. Therefore, the voice for the material would be need to be considered from both perspectives. Improving the quality of the artificial voice might be an option.

Before viewing the video, many participants felt that 10 minutes was too long to spend viewing the video；however, after watching the video, they felt that the time was appropriate. The main reason given for this change was that the content itself met the needs of women and was not boring because of the animation. The participants’ assessments were frequently modified after watching the video because they re-evaluated their opinions once they understood the amount of knowledge provided by the video. As a result, the time set for viewing the video material was judged as highly appropriate. However, shorter is the better because consultation is conducted during the pregnancy check-up. In addition, settings enabling the pregnant women to pause, rewind, and fast-forward the video itself was also expected to encourage the acquisition of information at an appropriate pace. We need to go over it again to remove content that is less necessary.

2. Usefulness of the video material for women and health care providers

One of the goals of the video material of women was to promote awareness of IPV and to keep women’s safety. All of the pregnant women responded that it would be useful to reflect on their own relationship. This means the video material is likely to achieve its goal. Women experiencing IPV and who are aware of it are in the second stage of the recovery process（Fujita, 2014）；as their perceptions change, women encounter opportunities to become more aware of IPV. Being aware of IPV is the first step to getting the support and to a safer life for the woman and child.

All pregnant women said the video material is helpful because of the information presented the QR code and the contact information of support organizations. There may be a risk of escalating violence if the perpetrator knows that the victim has talked to a provider about the IPV. Accordingly, the guidelines（St. Luke’s College of Nursing, 2004）recommend that “care must be taken to ensure that provisions of information are not discovered by perpetrators, so that women and supporters are not placed at risk”. The participants suggested that, if victims used the materials via internet, the data could be converted into URLs and QR codes, enabling women to keep information about support organizations without risking discovery by their partners. Especially during and after the COVID-19 pandemic, perpetrators of IPV tended to stay home due to remote working, so the need for provision of support, safely based on the ICT such as instant message or online technology services, had been growing（El Morr

et al., 2020).

Providers determined that the video material may be useful for women who are experiencing IPV. In addition, for providers, the video material would be time saving. Systematic reviews revealed that the most frequent reported barrier for IPV screening was time constraints (Andreu-Pejó, et al., 2022 ; Hudspeth et al. 2022). The video material could be useful in the health care settings in order to overcome the time constraint barrier.

3. Suitability of vocabulary used in the video

For educational materials, word choice is an important issue, especially if medical terms are used are not familiar to the audience (Agency for Healthcare Research and Quality, 2020). There were no comments of the suitability of medical terms used in the video material ; however, three providers suggested the need to revise the terms related to IPV. One possible reason for this disagreement between pregnant women and providers could be that for the three who had positive VAWS results, they were unaware of the harm or did not want their interviewees to know about IPV harm. One provider noted that "Seeing the term 'IPV' may make it harder for survivors." The video materials use the term 'IPV' to explain the structure of IPV, causes and consequences of IPV, as a way of empowering women to learn about IPV and become aware of their own abuse situations. During the recovery stage, when a woman may be confused by the details of IPV or in a state of denial that she is actually a victim of IPV, she very rarely discloses her experience of IPV to providers. It has been reported that women in this state are unable to accept help, even if they are suffering from abuse (Yamada et al., 2011). Given the psychological characteristics of women experiencing IPV, the use of the term or expressions related to IPV should be revised to replacement terms that more closely resemble their feelings. In addition, the scene showed the effect of IPV on the fetus or newborn needs to revise because women may blame themselves. One of the serious symptoms of depression or posttraumatic stress disorder of survivors is self-blame (Kline et al., 2021 ; Ullman et al., 2007). The wording needs to be modified so that women do not blame themselves.

4. Limitations and future research

An important limitation of this study was that the pregnant women who participated in this study had learned about IPV or interacted with IPV survivors ; the video material was not evaluated by pregnant women with no knowledge of IPV. In addition, the small number of participants in the study is undeniably biased, especially by chance that three of the pregnant women in the study were IPV screening positive. However, it can be said that the results also reflect the opinions of the screening-positive women. Therefore, the next step, the video content will be improved and verified in pregnant women who have no knowledge of IPV. Furthermore, most of the providers were midwives and all worked in the metropolitan area. Thus, their evaluations may reflect a lack of expertise in the field of psychology or resources available only in the areas where they operate. In the future, in order to capture a variety of representations and information, an evaluation by non-nursing professionals who may be involved in supporting VAWS-negative pregnant women and IPV victims is needed. It is also important to improve the materials to prepare for practical application in actual health care settings in Japan. This may require several variations of the video to fit the different locales. Moreover, it is necessary to examine its effectiveness using comparative groups of participants after reversion based on this research.

Ⅳ. Conclusion

The present study developed and evaluated the feasibility of video materials for pregnant women who screened positive for IPV. The video materials were assessed in relation to three aspects : understandability, usefulness and suitability as teaching material. The pregnant women and midwives/nurses who evaluated the video, gave a generally favorable assessment of the video materials. In particular, the majority said that simply enabling pregnant women to learn this information would reduce their resistance to accepting support. They felt that the use of animations would promote learning and make the content easy to understand and 10 minutes was sufficient time. In relation to suitability, the participants felt that certain areas needed improvement to make the materials more palatable to pregnant women. Some expressions of IPV and methods of communication should be revised, taking into consideration the anguish that the video could potentially cause viewers. These improvements must be incorporated to refine the materials, making them more effective and useful.

Conflicts of interest

The authors declare no conflicts of interest associated with the study.

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和文抄録

親密なパートナーからの暴力スクリーニング陽性の妊婦に向けた教育映像教材の開発

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目的：親密なパートナーからの暴力（IPV）は，妊婦と胎児に深刻な健康問題を引き起こす．研究の目的は，IPV スクリーニングで陽性と判定された妊娠期の女性を支援するための映像教材の開発であった．

方法：本研究は，映像教材を評価する質的記述的研究である．映像教材の所要時間は10分であり，アニメーションを用いて；(a) IPV の種類と構造，(b) 妊娠中の IPV の原因と影響，(c) IPV の被害者が活用できるリソース，(d) IPV に対する女性の意識の向上を目的した内容を４つのセクションで構成した．インタビューは半構造化面接を用いて実施した．参加者は助産師/看護師７人，妊婦５人であり，映像教材のわかりやすさ，有用性，適切性の３つの観点から評価を受けた．

結果：映像教材のわかりやすさについて，アニメーションの量，色の使用，人工音声，ナレーションの速度，所要時間の一部の見直しが提案されたものの，参加者全員が肯定的な評価をした．妊婦，助産師/看護師のいずれも，助産師の相談の前に映像教材を視聴しておくことが有用であると評価した．妊婦は，映像教材から IPV についての情報を獲得でき，パートナーとの関係を振り返る時間をもつことにつながるため，教材の視聴が有益であると評価した．助産師/看護師は，情報のアクセシビリティの向上，IPV 被害者の支援に要する時間の節約が可能となると回答した．助産師/看護師から，暴力による健康への影響について直接的な表現，侵襲的な表現は避ける方がよいとの意見があったため，修正が必要である．

結論：全体として，映像教材のわかりやすさ，有用性，適切性についての参加者からの評価は妊娠中の女性が IPV について学ぶ際に役立つというものであり，肯定的であった．評価に基づき，修正点と改善点を明らかにし，映像教材を完成させるための示唆を得ることができた．

キーワード：親密なパートナーからの暴力，ドメスティック・バイオレンス，妊婦，教育教材，映像