INTRODUCTION

In the past three years, lactation counseling for pregnant and nursing women has been implemented via distance counseling. Furthermore, this is the development of a new policy in health services for pregnant, maternity, and postpartum mothers as well as newborns during the COVID-19 pandemic in Indonesia. Health workers render postpartum mothers with no risk or signs of danger service through home visits or online monitoring at the second, third, and fourth visits.1 Distance lactation counseling is useful when access to a face-to-face meeting is limited or cannot be conducted due to an emergency.2,3 In some circumstances, local mothers can be recruited to become peer counselors by providing supportive training.4 Peer counselors should be facilitated with good media to provide quality service since they lack clinical knowledge and skills while counselees have complex needs.6 Integrating work aids with clear lactation management guidelines into the curriculum for maternal and child health training and supportive supervision is essential to build the skills and competencies of the counselors to provide quality lactation counseling.7

The counseling media provided also needs to be tailored to the capabilities of peer counselors in accessing digital technology. Some of the distance media often used include 1) voice-based counseling media such as telephone and voicemail, 2) voice and image-based tools such as WhatsApp, Facebook Messenger, Instagram, and Telegram, 3) voice and video-based media such as Skype, Zoom, WhatsApp, FaceTime, Facebook Messenger, Sinyal, and Telegram.8 Peer counselors need to provide the cost of procuring a data package. Since they are recruited voluntarily and without salary, hence it is necessary to consider media with more efficient and cheaper access costs. The tutorials about lactation packaged in video recordings could be recommended as a medium for distance counseling. A collection of video tutorials can be presented in a single link that can be accessed independently by the counselees via linktr.ee. They can select a lactation tutorial according to their needs and can see it repeatedly as well as independently. Furthermore, the understanding evaluation of the video tutorials can be conducted by telephone, text, or voice message with peer counselors, reducing cost. Telehealth is the safe and low-cost use of information and communication technology.9

Several studies on the effectiveness of distance counseling media used by peer counselors in performing their duty have been widely reviewed. Some of them include that: Mothers can increase breastfeeding due to one telephone conversation with a peer counselor. The provision of lactation counseling through email does not significantly increase breastfeeding.10 However, primiparous moms are more likely to increase breastfeeding when they

ABSTRACT

Introduction: Handling the COVID-19 pandemic has consumed the time and energy of every health worker. Empowering the role of peer counselors through the deployment of distance lactation counseling is the key to maintaining the services. Furthermore, counseling is implemented frequently and for a long duration. Therefore, the cost of accessing the media and internet connection plays an important role in implementing distance counseling. This study aimed to reduce the duration and frequency of distance lactation counseling using a combination of WhatsApp and linktr.ee media.

Methods: The method used was a quasi-experimental post-test group design with a case study approach. The population consists of 40 peer counselors in Kampung ASI, Wonokromo Village. Additionally, the sample size used is the total population. The difference in duration and frequency of lactation counseling is tested using the independent sample t-test.

Results: There was a significant difference between the duration and frequency of counseling in the two groups, with a p-value = 0.000 <0.05. Longer duration and high frequency were observed in the implementation of individual counseling using WhatsApp media, with a mean difference (95% CI) for the duration and frequency at 46.4 and 1.7, respectively.

Conclusion: Counseling media equipped with video recordings of materials can reduce the duration and frequency, hence, counselees can learn independently according to their needs and only discuss things they do not understand with counselors. It also reduces media access costs for peer counselors recruited with minimal salaries.

Keywords: lactation, counselors, counseling, distance counseling.
receive guidance from peer counselors via WhatsApp groups. Video counseling affects the knowledge of pregnant and breastfeeding mothers. The adoption of distance lactation consultation using video conferencing is significantly associated with perceived ease of use. Finally, no studies evaluate the impact of employing lactation counseling media on the duration and frequency of the implementation. This study aimed to reduce the duration and frequency of distance lactation counseling using a combination of WhatsApp and linktr.ee media.

**METHODS**

**Study Design**

This research was presented using a quasi-experimental post-test group design method with a case study approach. The population was 40 peer counselors in Kampung ASI, Wonokromo Village. Furthermore, the sample size used was the total population. The sample consisted of control (n = 20) and case (n = 20) groups of peer counselors who provided individual counseling using WhatsApp as well as a combination of WhatsApp and linktr.ee media.

**Data collection procedures**

Data collection was collected in March-June 2021, and the inclusion criteria used were having an android, the willingness to perform individual counseling, and being able to read and write. The exclusion criteria were unwillingness to be a respondent. Finally, the instrument used was an observation sheet to record the duration and frequency of lactation counseling implementation.

**Data analysis**

The data were processed using SPSS, and its normality was tested using Kolmogorov-Smirnov. Furthermore, a comparison of the characteristics of respondents in the two groups was evaluated using chi-square. Meanwhile, differences in the duration and frequency of lactation counseling implementation between the two groups were examined using a t-test of 2 independent samples.

**RESULTS**

**Frequency distribution of respondent characteristics**

Age, length of being a peer counselor, and occupation have no significant relationship with the duration of lactation counseling implementation, with p-values of 0.120, 0.123, and 0.935, respectively. Furthermore, these were also not significantly related to the frequency with p-values of 0.170, 0.060, and 0.567.

**Duration and frequency of lactation counseling**

There was a significant difference in the duration of counseling in the two groups, with a p-value of <0.001 and a mean difference (95% CI) of 46.4. The longer duration was observed in the implementation of counseling using WhatsApp media. Furthermore, there was a significant difference in frequency in the two groups with a p-value of <0.001 and a mean difference (95% CI) of 1.7. The highest frequency was discovered in the implementation of counseling through WhatsApp media.

**Table 1. Frequency distribution of respondent characteristics**

<table>
<thead>
<tr>
<th>Respondents Characteristics</th>
<th>Control group</th>
<th>Case group</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 30 years</td>
<td>7</td>
<td>35</td>
<td>4</td>
</tr>
<tr>
<td>&gt;30 years</td>
<td>13</td>
<td>65</td>
<td>16</td>
</tr>
<tr>
<td>Length of being a peer counselor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 2 years</td>
<td>11</td>
<td>55</td>
<td>15</td>
</tr>
<tr>
<td>&gt;2 years</td>
<td>9</td>
<td>45</td>
<td>5</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewife</td>
<td>12</td>
<td>60</td>
<td>9</td>
</tr>
<tr>
<td>Government employee</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Private employee</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Self-employed</td>
<td>8</td>
<td>40</td>
<td>11</td>
</tr>
</tbody>
</table>

*Analysis was carried out using chi-square test. Results were considered significant if p≤0.05.

**Table 2. Duration and frequency of lactation counseling**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control group</th>
<th>Case group</th>
<th>Kolmogorov-Smirnov Mean difference (CI = 95%)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of counseling</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>≤ 30 minutes</td>
<td>2</td>
<td>10</td>
<td>13</td>
<td>65</td>
</tr>
<tr>
<td>&gt; 30 minutes</td>
<td>18</td>
<td>90</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Frequency of counseling</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>≤ 3x</td>
<td>8</td>
<td>40</td>
<td>17</td>
<td>85</td>
</tr>
<tr>
<td>&gt; 3x</td>
<td>12</td>
<td>60</td>
<td>3</td>
<td>15</td>
</tr>
</tbody>
</table>

*Analysis was carried out by using chi-square test and independent sample t-test. Results were considered significant if p values ≤0.05.
Counseling with video and teleconferencing contacts requires more bandwidth than text messages and telephone, directly proportional to the cost required. Limitations to implementing tele-lactation include the mother’s reluctance to make video calls with unknown counselors and technical problems, such as limited Wi-fi in rural areas. Lactation counseling also requires sufficient time because it provides psycho-emotional support, assistance to solve problems, and breastfeeding education, such as how to express breast milk, carry out breast care, and store breast milk. Since breastfeeding problems are different for each mother, hence, it will be more effective when counseling is performed individually. This is time-consuming but could also be more effective in giving mothers time to discuss the most relevant issues.

United Nations and the World Health Organization (WHO) The optimal feeding schedules for infants and young children up to age two are suggested by the United Nations Children’s Fund (UNICEF). It is advised to breastfeed infants exclusively from birth to six months of age, to continue breastfeeding until the child is two years old or older, to establish policies on infant nutrition, and to give healthcare professionals the authority to effectively counsel mothers to breastfeed. Breastfeeding lactation counseling needs to be done by combining several factors, mainly by primary health services. Based on the principles utilized throughout training, primary health services provide breastfeeding counseling and guidance. There are no formal recommendations provided by the primary health services or the health service. Every public service operator is required to design and execute public service standards for every type of service established by the management of public service organizers, according to Regulation No. 15 of 2014 on the Service Standards Guidelines. In order to deliver high-quality, quick, simple, inexpensive, and measurable services, service standards serve as rules for maintaining services and evaluating service quality as duties and promises of the organizer to the community. This study still has a number of limitations, such as the absence of other compounding variables that might have an impact on the findings and the absence of any form of analysis or design to control the variables.

CONCLUSION

Longer duration and high frequency are discovered in the implementation of counseling using WhatsApp media. It is necessary to modify the counseling media, thereby making the process more efficient, especially for peer counselors with limited costs and internet connections to access the media. This is made possible by combining WhatsApp and linktr.ee, which contains a collection of lactation video recordings. Therefore, it is necessary to perform a study to evaluate the impact of combining WhatsApp and linktr.ee media on breastfeeding mothers’ knowledge and behavior.

FUNDING

The authors declare no funding in this study.

CONFLICT OF INTEREST

The authors declare no conflict of interest in this study.

ETHICAL STATEMENT

This study has been declared ethically feasible by the Health Research Ethics Committee, the Universitas Nahlidatul Ulama Surabaya, with certificate number 204/EC/KEPK/UNUSA/2020.
AUTHOR CONTRIBUTION
All authors contributed equally to this study.

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