Workshop and Training on Making Personal Protective Equipment during the COVID-19 Pandemic as a Form of Empowering Persons with Disabilities

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ABSTRACT
The availability of Personal Protective Equipment (PPE) during the Covid-19 pandemic is very important and crucial. The skills of workers making personal protective equipment also need to be improved. This program aims to improve, develop knowledge, attitudes, and skills for people with disabilities, who are a group of craftsmen making masks and personal protective equipment, so that the products produced meet the standardization of PPE during the coronavirus pandemic (COVID-19). This program is implemented from June to November 2020. Participants of this program are 20 people with disabilities (15 craftsmen and 5 administrators) in Bedali Village, Lawang District, Malang Regency, East Java Province, Indonesia. The method used in implementing this program is a workshop and training. This program is implemented in collaboration with the MA-LINKSOS Community. The results achieved in these workshops and training were increased job skills and income for handicraftsmen with disabilities, which led to equal access to work and a decent life. This workshop and training overcome the scarcity of PPE in Malang Regency, Indonesia, by making innovative face masks and standardizing PPE by craftsmen with disabilities.

Keywords: workshop, training, personal protective equipment, disabilities, covid-19

1. INTRODUCTION
The prosperity of people with disabilities is a world concern issue. Based on Law Number 8 of 2016 concerning Persons with Disabilities Article 1 paragraph 1, people with disabilities of mental, physic, and sensory in daily activities [1]. Around a billion or 15% out of the human population in the world have deformity [2]. Access limitations by people with disabilities related to unemployment, minimum income, and other destitution...
issues [3]. Besides, there is a health issue that contributed to this COVID-19 pandemic.

The COVID-19 pandemic based on the results of Rasmussen’s [4] research is a viral outbreak in which it has an enveloping RNA Genome that causes respiratory infections. A study proves that Corona Virus Disease or SARS-CoV-2 can persist in the air for long periods. The virus can cause respiratory tract infections and is at risk of complications until death. The virus can infect anyone from children to adults. People aged 65 and over are more at risk of infection. According to data Kompas [5], covid-19 cases have now reached 389,712 victims with the number of Patients in Monitoring = 33,797 and People in Monitoring = 168,299 with patients recovering up to 94 people per day. Some aspects of life have changed significantly due to the COVID-19 pandemic.

Looking at the economical aspect, that is the decline in per capita income proved by the results of research by the Organization for Economic Co-operation Development (OECD) which states that the Indonesian economy will decline by 3.9% in 2020 [6]. Besides, the health aspect is in the public spotlight because of the number of COVID-19 victims which continues to increase and there is also the scarcity of PPE for medical personnel. Malang is one of the cities that find the impact of COVID-19.

According to Kompas [7] stated that Malang needs 1000 liters of disinfectant, 10,400 face masks, and 1.2 million pieces of PPE for medical personnel. Due to this crisis, 1,290 nurses and 255 doctors are infected with the COVID-19 Virus. The socio-cultural aspects are found in the enforcement of social distancing, lockdown in many places, and also self-isolation for and self-quarantine for PDP.

Bedali Village, Malang Regency, Indonesia, is additionally feeling the impact of this pandemic in government, economic, socio-cultural, and also health sectors. The population in Lawang Districts is 110,754 people with 300 people from Bedali Village that has the highest number of people with disabilities in Malang Regency, which is 227 people [8]. In the health aspect, people with disabilities at Bedali Village are inhabitants who are most vulnerable to the impact of the COVID-19 Virus, because of their weakness. Especially after hospital rehabilitation where people with disabilities need further accompaniment (aftercare). Maguire [9] says that further coaching in social work practices is quite important in achieving successful development after social rehabilitation.

This is done so that people with disabilities can adapt and play an active role in the family and society. The problem of disabled people that often occurs is the retardation of self-orientation within society. It happens because of the paradigm in society that sees people with disabilities as weak creatures. Besides, families of people with disabilities hide or cover up if they have family members with disabilities. This leads to low poverty and education levels of disabled people.

In response to the COVID-19 emergency, the Government of Bedali Village has intensified disinfectant spraying activities, restricted access in and out of the village, launched an innovative Work from Home (WFH) job field with a community of people with disabilities and provided medical equipment in public places. There is also a place for health accessibility including 1 hospital, 6 doctor’s practice places, 4 midwife practice places, 16 Integrated Healthcare Center (Posyandu), 3 pharmacies, and 1 disabled community equipped with disabled people.

Malang Lingkar Sosial (MA-LINKSOS) which is located at Yos Sudarso Street, Bedali Village, Lawang District, Malang Regency, East Java, Indonesia, is the only disabled empowerment community in Malang Regency. MA-LINKSOS has been established since 2014 until now as a manifestation of activists’ concern for people with disabilities. It is also the only organization engaged in the social and humanitarian sector to provide services to people with disabilities such as free health services, accessibility, physiotherapy, counseling, pick-up, and drop-off from home to Integrated Healthcare Center (Posyandu), to post-rehabilitation economic empowerment.

Posyandu program partners with disabilities receive full support from Ministry of Social Affairs, Lingkar Sosial Indonesia (LINKSOS), Malang Regency Social Service, Village Consultative Council (BPD Bedali Village), Forum Malang Inklusi (FOMI), Baitul Maal Hidayatullah (BMH), Indonesian Red Cross (Palang Merah Indonesia / PMI), NU CARE-LAZISNU, District Social Welfare Staff (Tenaga Kesejahteraan Sosial Kecamatan / TKS), and other Bedali Village people.

From the problem of the scarcity of PPE in Malang City, Malang Lingkar Sosial (MA-LINKSOS) also empowers people with disabilities in Bedali Village to take advantage of these opportunities to get money. Innovative activities carried out by MA-LINKSOS by involving people with disabilities act to reach equality in society. The manifestation of this equality is a decent work opportunity and stage by producing medical standard PPE during the COVID-19 pandemic.

The ability to analyze market needs can change the paradigm where people with disabilities do not always live with Social Assistance (Bantuan Sosial / Bansos), but the presence of people with disabilities is additionally able to provide many benefits and also overcome the scarcity of PPE during the pandemic. Ministry of Health in 2020 establishes standards for personal protective equipment (PPE) used to protect themselves from exposure to the COVID-19 Virus.
The medical standard of PPE used includes N95 masks, hazmat suits (hazardous material), face shields, eye protection, gloves, waterproof boots, and shoe covers. The innovation of making the three-layer mask and Hazmat PPE by people with disabilities that are adapted to medical standards and the application of biosecurity as a result of consultation with the Medical Devices Mental Hospital (Rumah Sakit Jiwa / RSJ) Dr. Radjiman Wediodiningrat and Public Health Center (Puskesmas) Bedali Village. The marketing of local PPE products by people with disabilities can bring up Bedali Village names and people with disabilities are known throughout Indonesia from the act of donations as a manifestation of their humanity.

2. METHOD

This paper aims to describe and provide information and data related to the implementation of workshops and training on making standardized PPE during the COVID-19 pandemic for people with disabilities. This program is carried out by empowering people with disabilities in Bedali Village. The method used in this study is a qualitative descriptive approach with data collection techniques through a survey, which is an observation or critical investigation to get clear and good information on a particular problem and in a certain area [10], [11]. This study was conducted in 2020 at Yos Sudarso Street, Malang Regency, East Java, Indonesia.

This event was carried out during June – November 2020. The research procedure starts with the preparation of a proposal for the completion of the research report. The stages of the programs in this study are: (1) planning, this stage begins with team coordination, identification of village potential, conducting a location survey to Bedali Village, further consultation with supervisors, analyzing the needs needed when implementing village empowerment, materials and tools survey, purchase and ensure the functional tools used during the study; (2) the action stage, where stage begins with providing insight by bringing in innovative mask entrepreneurs from Pasuruan Regency and medical tools expert from Malang District Health Office as the speaker; and (3) evaluating and monitoring is a process of information from activities that have been carried out as a measure in an activity to make further decisions [12].

There was such an individual approach between the speakers and the participants in innovative mask material. From the basics of sewing experience that the disabled PPE craftsmen have, they give great enthusiasm by asking questions to the speakers. The population in this study was 200 people with disabilities in Bedali Village, but due to time constraints, this study only included 10 people due to the COVID-19 pandemic conditions. This event included a question and answer section and also a practice section. This question and answer are effective to dig deeper information from innovative presenters and effective presentation media.

3. RESULTS

The results of the workshop and training on standardization of PPE in this pandemic for people with disabilities in Lawang District were that this activity was carried out in one day starting at 07.00-12.00 western Indonesian time. This program was attended by fifteen PPE craftsmen, five staff of Omah Difabel, Bedali Village officials, two presenters from Malang District Health Office, one innovative face masks speaker from Pasuruan, and the KSR PMI Unit Universitas Negeri Malang committee. This workshop and training program were held in the hall of Bedali Village, opened by the master of ceremony and continued by singing the Indonesia Raya song as the national anthem. Then remarks from the leaders of the KSR PMI Unit Universitas Negeri Malang and the Head of Bedali Village as well as opening the event. After a series of opening events have been completed continue to the main program for a more detailed schedule can be seen in Table 1.

Table 1  Time Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>07.00 - 08.00</td>
<td>Check-in</td>
<td>Committee of KSR PMI Unit UM</td>
</tr>
<tr>
<td>08.00 - 08.05</td>
<td>Opening by MC and Prayer</td>
<td>Committee of KSR PMI Unit UM</td>
</tr>
<tr>
<td>08.05 - 08.10</td>
<td>Singing Indonesia Raya</td>
<td>Committee of KSR PMI Unit UM</td>
</tr>
<tr>
<td>08.10 - 08.50</td>
<td>PPE Standardization Material by Malang District Health Office</td>
<td>Reni Wulandari, Evy Triani</td>
</tr>
<tr>
<td>08.50 - 09.00</td>
<td>Frequently Asked Questions about PPE Standardization Materials</td>
<td>Participants</td>
</tr>
<tr>
<td>09.00 - 09.05</td>
<td>Ice-breaking</td>
<td>Committee of KSR PMI Unit UM</td>
</tr>
<tr>
<td>09.05 - 09.35</td>
<td>PPE Innovation Materials</td>
<td>Khoiriyah</td>
</tr>
<tr>
<td>09.35 - 09.50</td>
<td>Innovation Mask Making Practices</td>
<td>Khoiriyah, Committee of KSR PMI Unit UM</td>
</tr>
<tr>
<td>09.50 - 10.35</td>
<td>Material and product marketing simulations through online marketplaces</td>
<td>Yuliana Septiana</td>
</tr>
<tr>
<td>10.35 - 10.45</td>
<td>Closing</td>
<td>Committee of KSR PMI Unit UM</td>
</tr>
</tbody>
</table>
The first material thoroughly discusses the standardization of PPE by Malang District Health Office with the speakers Mrs. Reni Wulandari and Mrs. Evy Triani. In this material, it tends to use the lecture method and the provision of examples of medical standard PPE that has been used by medical personnel in health institutions. The speaker gave examples of medical-standard face masks used during the COVID-19 pandemic and also gave advice on social distancing and staying at home. For documentation of activities can be seen in Figure 1.

![Figure 1](image1.png)

**Figure 1 Material Session on Medical Standard Face Masks**

The second material is a combination of theoretical and practical concepts. Mrs. Khoiriyah as the second speaker delivered material about innovative face masks by adding creative ornaments as decorations for the face masks, so that the face masks used later can be used as medical standards self-protection tools but are still cool to use at any event. The second speaker also invited PPE craftsmen from the community with disabilities to practice directly sewing and decorating face masks according to the instructions and material that had been presented.

The response from the PPE craftsmen from the community with disabilities was so enthusiastic and excited when they practiced making and decorating PPE. They feel this is new knowledge that can be trusted to increase the PPE market share. PPE craftsmen from people with disabilities usually make three-layer face masks according to the standards of the hospital but the models are still plain.

As for other face mask innovations namely the batik mask patterns with a target market for all people, especially working people, cartoon character patterns for children, or with other motives. This speaker emphasized that combining medical standards and innovation in the PPE model is important because this sustainable fashion will be sustainable whether or not a pandemic is present. For documentation of activities can be seen in Figure 2.

![Figure 2](image2.png)

**Figure 2 Personal Protective Equipment Product Innovation**

The third material delivered using the lecture and question and answer method was able to inform PPE craftsmen from the community with disabilities to take advantage of technological advances in product marketing.

![Figure 3](image3.png)

**Figure 3 Material Session on Product Marketing**

After a series of programs and materials have been conveyed the program arrived at the end which is the closing program on that day. This session was closed with a short message from the head of the Bedali Village regarding his gratitude for presenting such innovative speakers who were able to motivate PPE craftsmen from the community with disabilities to keep their creative
spirit and hope to be able to uphold local products to be able to compete in international circles. After the closing ceremony, an evaluation of the results of the activity is carried out. Based on the shortcomings that exist in workshops and training on standardization of PPE in the midst of the COVID-19 pandemic this can be used as material for making improvements in the next event. Especially for PPE craftsmen from people with disabilities to keep working with all the backgrounds of their limitations do not shut down their enthusiasm to continue to be creative.

4. DISCUSSION

Work from home (WFH) is the appropriate way for the PPE craftsmen to crafts the PPE in this pandemic. The pandemic becomes the background of the present study to conduct the program that is the workshop and standardization of PPE. Based on the goals and stages of the program in this pandemic classified to planning, action, and evaluating also monitoring [13].

The workshop planned stage based on the result of the field observation and consultation with the “Mitra” so that the program is a comfort to participant needs. The participants are persons with disabilities who are members of Malang Lingkar Sosial (MA-LINKSOS). Workshop material expected can increase the abilities and craft quality by the craftsmen. Previously the material consulted to the leader of MA-LINKSOS considers the participant needs. Based on the results of consultation with the leader of MA-LINKSOS was agreed that the material to be given was about innovation in craft face masks and standardizing PPE. The determination of the speaker in the workshop for innovating crafts the face masks invited from Pasuruan Regency as face masks entrepreneur who known to have unique face masks crafts that are a combination of face masks with lace that usually found on clothes and the second speakers for standardization of PPE invited from Malang District Health Office as a specialist in the standardization of PPE.

After that, the next is preparing the invitation to invite the speakers and the related parties. The invitation-making process is carried out by the committee of KSR PMI Unit Universitas Negeri Malang. Then, the invitation of speakers and the related parties was distributed. A few days before the workshop was held, the committee contacted the invitation for the application of presenters and participants who would attend, to find out the total number involved in the implementation of the workshop. The day before the workshop, a place preparation and a simulation of the workshop was conducted.

The workshop action stages are based on the results of a survey whose aim is to make the program fit the empowerment needs of persons with disabilities [2]. The material presented is well packaged so that it is easy for participants with disabilities to accept and understand. Also, the speakers have prepared activities that will be played in this workshop, namely the method of lecturing, question and answer, ice breaking, and practice. Used in the delivery of the material, namely the PowerPoint display [14], [15]. The first material is PPE Standardization by Malang District Health Office which explains about crafting PPE that is following medical standards and explains the hazmat criteria and good face masks, for example, a face mask that meets medical standards, namely a mask that has three layers covering the nose and mouth properly, does not loosen and has an air filter and how to care and store masks to keep them hygienic.

The second material for PPE innovation was delivered by explaining the latest innovations for hazmat and face masks to make it more attractive to buyers and following the latest styles so that users can look stylish even though they are wearing a face mask, for example, a three-layer plain color face mask that is suitable for all groups and is neutral. scuba face masks three layers of beautiful batik pattern to be combined with Batik clothes and visiting formal events and three layers of brocade scuba face masks that are tailored for women who attend weddings combined with lace clothes or everyday use to style and look contemporary. After the material delivered participants are invited to practice directly to decorate the pattern on the scuba face masks using monotype decorations in this practice the participants’ creativity is allowed participants are allowed to decorate masks such as arranging patterns on face masks made according to their wishes [16], [17].

The third material is product marketing through an online marketplace that explains how to sell products produced online or through e-commerce applications because online product sales are currently experiencing an increase seeing that many offline shops do not operate due to lockdown (PSBB) and public interest in using this e-commerce a lot. During the presentation of the material, a question and answer session was held to find out how well the participants understood the material with the aim that the participants were also active and straightened out any material they did not understand. Then in the middle of the material presentation event, an ice-breaking was held so that the workshop participants would not be sleepy and become fresher so that they focused on listening to the material presented. After the delivery of the material has been delivered it is expected that the participants can practice the knowledge conveyed so that the products produced can comply with medical standards PPE that has been innovated with a more stylish model and can be sold in the online marketplace [18].

Evaluating and monitoring stage namely following up to practice the material that has been submitted to make products in the form of hazmat suits and face masks.
innovations that have previously been submitted. Then the distribution of materials for making hazmat suits and face masks to the organizers of the organization to be distributed to participants (people with disabilities) who sew. Monitoring is held every week to see the development of the sewn product and evaluate whether the existing product is following medical standards or not.

5. CONCLUSION

Training of the workshop and standardization of PPE in this pandemic is classified as planning, action, and evaluating also monitoring. Planning is the step to see the achievements from determined goals as the estimate and be better.

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REFERENCES

International Seminar on: Local Wisdom and Character Education for Elementary School Students, IKIP PGRI MADIUN, Madiun (Vol. 6, pp. 48-62).


