

Community Engagement to Increase Physical Activity During the Covid-19 Pandemic

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ABSTRACT

It is widely known that physical activity can improve quality of life and health. In addition, regular physical activity is also associated with the improvement of fitness and immunity. This community service activity aims to educate the community of Dusun Wangun about the importance of physical activity during the COVID-19 pandemic to increase immunity, maintain fitness, and introduce some sports that are not popular yet in remote areas villages. The method used in this community service activity is the Participatory Rural Appraisal (PRA) method. These community services results showed that the entire series of activities is carried out very well; this can be seen from the community's enthusiasm during educational activities, socialization of new sports, and practical implementation. Additionally, in order to support the sustainability of the program to increase immunity, fitness, and public health in the wangun village, the society of Wangun is committed to implementing a physical activity program, which is carried out twice a week in the afternoon for 60-90 minutes coordinated by village apparatus and youth organizations (Karang Taruna).

Keywords: Physical activity, Immunity, Education, Community services

1. INTRODUCTION

In December 2019, an outbreak of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), also known as COVID-19, was detected, which rapidly spread and infected more than 14 million people [1]. Covid-19 has implications for all aspects of people's lives, including their mental and physical health [2], and is also considered a global health threat that significantly impacts the global economic crisis [3]–[5].

The COVID-19 pandemic in Indonesia has not only impacted the community's economy. Still, it has also become a turning point for the Indonesian people to prioritize various preventive efforts to maintain their health and physical fitness. This health priority is aligned with the government's strategic plan in the National Long-Term Development Plan (RPJPN) 2019-2025 regarding the priority of promotive and preventive efforts, including increasing health promotion, community empowerment, developing national health insurance, meeting the community in accessing quality basic health services, and referrals for mothers, infants, toddlers, adolescents, productive ages, and the elderly

[6]. Maintaining immunity during a pandemic is very important [7]. Regular physical activity is essential for increasing immunity as the body's defense against infection [8]–[12], which will later support a person's fitness status [13]–[15]. Physical activity also helps individuals become more resilient during the pandemic, both mentally and physically [16], prevent respiratory diseases, and protect against bacteria and viruses infection [17].

The World Health Organization (WHO) recommends physical activity for adults at least 150 minutes/week with moderate intensity [18]. Other researchers also proved that moderate-intensity physical activity positively affects the immune system [19]. Therefore, the community needs to carry out the physical activity during the pandemic, especially those with comorbidities, because they are prone to contracting the disease [20].

During the social restriction period, the level of physical activity of the community has decreased significantly with a concurrent increase in sedentary behavior. Physical inactivity is closely related to increased risk of diseases such as depression [21], cancer, and type 2 diabetes [22], to death [23]. In addition, the

current problem is a lack of public awareness about the importance of physical activity and even a misunderstanding of the correct model of physical activity to increase the body's immunity.

Based on surveys and interviews with several communities in Dusun Wangun, Daliwangun Village found that residents were less interested in physical activity. Residents who do not like to do physical activities are motivated by a lack of understanding of the importance of sports activities for health. Residents still consider sports activities only in the scope of increasing sports achievement. It is essential to do physical activity [24]–[26] and reduce sedentary behavior [27], [28] during the COVID-19 pandemic. Referring to these problems, it is imperative to develop and empower the resident of Wangun to be actively involved in physical activities to improve the body's immune system and physical fitness during the COVID-19 pandemic.

2. METHODS

Participatory Rural Appraisal (PRA) is a method used in this community service activity. This program was developed to increase community participation in development. This PRA method allows the community to express and analyze their situation and optimally plan and implement this determination in their village [29]. In PRA, village communities play an active role in mapping social problems and their causes, roadmaps for solving problems and turning them into programs, budget support, and implementation based on community cooperation, self-reliance, and independence. PRA is also an appropriate instrument for assessing community needs at the local level [30]. The partners in this community service activity are residents of Wangun village. They are fully involved in implementing activities, starting from coordinating, preparing, providing for the implementation of activities, participating, and monitoring and evaluating the success of this activity with enthusiasm.

The method of implementing this community service activity goes through several stages, including preparation and survey to the location of service, problem identification, development strategy, program piloting, coordination with village officials and youth organizations in Wangun village, preparation and provision of activity facilities, implementation of activities, and monitoring and evaluation of community service activities. The partners in this community service activity are residents of Wangun village. They are fully involved in implementing activities, starting from coordinating, preparing, and providing for the implementation of activities and participating in the success of this activity with enthusiasm.

This community service in Wangun Village, Lamongan Regency, was conducted for two days. On October 30, 2020, the first day was held at 15.30 WIB, explaining the benefits of sports and understanding sports activities

during the COVID-19 pandemic by complying with health protocols [31]. Furthermore, the second day was held on October 31, 2020, at 15.30 WIB, inviting the public to practice physical activity and new sports that are not popular yet among society, such as Rugby, fencing, handball, and hockey.

3. RESULTS AND DISCUSSION

Physical inactivity is a global problem [32], which impacts the risk of metabolic syndrome disorders and premature death [33], [34]. Since the outbreak of COVID-19, which imposed restrictions, tended to lead to a decrease in physical activity levels [35]. Factors that influence physical activity involvement include individual psychological factors, including self-confidence [36], while social and environmental factors include emotional and logistical support [36].



Figure 1 Educational activities with the residents of Wangun village

Community service activities on the first day were educating the public about maintaining fitness, body immunity, increasing immunity during the pandemic through physical activity during the COVID-19 pandemic, and new sports. Maintaining regular physical activity is a crucial component of a healthy lifestyle. Therefore, it is recommended to remain active in sports or doing aerobic exercise and moderate-intensity strength training [37]. In addition, the benefits of physical activity, if done on a scheduled, regular basis, with the appropriate intensity and type, will increase the body's immunity [38], [39].



Figure 2 The enthusiasm of Wangun Village residents in receiving materials

In implementing this educational activity, the community service team also involves youth groups, commonly called "karang taruna," composing ideas that will later support the sustainability of the community service program. The principle of delivering material with an adaptable method is fundamental [40]. Thus, to facilitate people to understand our educational program, the material delivery is conducted according to the conditions and culture in Wangun village.



Figure 3 The implementation of physical activity with the residents of Wangun village

Furthermore, the community service activities team conducted physical activity programs prepared with the youth organizations on the second day. This program is carried out to immediately practice various physical activities and sports that can increase the residents' knowledge of Wangun village. Exercising during a pandemic is not only beneficial for physical fitness but is also one of the most effective ways to boost the immune system [10], [41], [42].

The implementation of joint sports activities begins with gymnastics with the residents, then continues with practicing together other sports or new sports that the residents do not yet know, including Rugby, handball, fencing, and hockey carried out in groups. The provision of sports is carried out so that residents get new experiences, do not feel bored in carrying out sports activities, and directly provide benefits to fitness, increasing endurance, cooperation, and stamina.



Figure 4 Introduction of fencing to Wangun residents

This activity was viral among residents. A total of 62 people participated in this activity, classifying 20 children, 23 teenagers, ten older adults, and nine elderly representatives from each local area. This activity is hoped to trigger residents' enthusiasm to conduct physical activities during the COVID-19 pandemic.



Figure 5 Introduction of handball

In the beginning, it was difficult for residents to practice this new sport, such as passing the ball in Rugby and hockey and holding the stick. However, residents are pleased to do this sporting activity because we do not implement the game rules that the community should carry out. In this activity, the community seemed more enthusiastic about implementing this new sport; even children and parents respond positively by taking turns being a player in practicing this new sport.



Figure 6 The community service team and youth organizations of Wangun village

Community service activities given to residents were prioritized how sports are enjoyable to carry out so that later the community will continue conducting sports programs prepared. The enthusiasm of the residents of Wangun village exceeded the team's expectations, so this program had a positive impact on the residents. This activity is in line with the service activities conducted by Mustar et al. [43], which showed that fostering students' active participation in improving their fitness and health prioritized more varied, and enjoyable sports activities. Involving youth organizations is also an essential strategy

in implementing this activity because youth organizations can invite children, other youth, parents, and the elderly to implement the prepared sports program.

At the end of the activity, the community service team evaluated the residents by opening a discussion or question and answer session to find out the progress of community understanding and the community's commitment to stay active in exercising to stay fit, as well as an effort to increase immunity during the pandemic. The residents of Wangun village also announced that the material provided by our team was well organized, and the most important thing was that it was easy to understand by the community because it was accompanied by a form of implementation or practice to conduct sports activity directly. Additionally, village officials also committed that this sport was used as one of the routine programs in Wangun village.

4. CONCLUSIONS

The education program for the community to maintain fitness and increase body immunity through physical activity during the pandemic was well implemented, which was shown by the high participation and interest of the Wangun village residents both in socialization activities and practices to conduct sports directly. Additionally, based on the monitoring results two months after the programs showed that a routine exercise program had been arranged two times a week in the afternoon for 60-90 minutes, coordinated by the youth organization in Wangun village. Supporting village officials is essential in monitoring and evaluating the implementation of a sustainable sports activity program.

AUTHORS' CONTRIBUTIONS

The first author drafted and prepared the manuscript design; the second author conducted data collection; the third author conducted data analysis; the fourth author drafted the manuscript; the fifth author provided direction, adjusted the end of the manuscript, and reviewed the manuscript

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