

Women empowerment and its relationship with wealth index and COVID-19 prevention

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ABSTRACT

The pandemic requires empowering rural Indonesian women for their personal and family well-being and increased economic output because of their high participation in self-employment. This study aimed to find a relationship between women's empowerment, wealth level, and preventive behaviors towards the coronavirus disease 2019 (COVID-19). The study employed a cross-sectional design and was conducted at two community health centers in Banten, Indonesia. Women over 18 years old, married with at least one kid, and willing to participate were eligible. Over half of the 200 women were under 30 (56%) and had a higher degree (56.5%). Around 67.5% were unemployed, and 60% earned less than the regional minimum wage. Women were sufficiently empowered in terms of economic, household, and social empowerment. Preventive behaviors toward COVID-19 were connected with educational level, wealth index, women empowerment score, and knowledge, with an adjusted R square of 31%. Women who are empowered have a higher wealth index and COVID-19 prevention activities. It is argued that initiatives aimed at increasing women's empowerment would positively impact improving public health.

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1. INTRODUCTION

The year 2020 has seen the outbreak of the novel coronavirus, which impacted the whole world gravely. It will be remembered as a major global pandemic in the history of pandemics for centuries. In Indonesia, the coronavirus disease 2019 (COVID-19) pandemic has been going on for more than 1.5 years. To date, rises in COVID-19 cases have been observed in several locations, particularly outside Java and Bali's Indonesian islands [1]. The COVID-19 handling task force reported 20,709 new cases of COVID-19 on August 9, 2021. With this addition, the total number of COVID-19 cases in Indonesia now stands at 3,686,740. Meanwhile, in Banten, active cases of the COVID-19 reached a total of 7,232 people. South Tangerang City, with 1,915 people, is the most active corona case [2].

Prevention policy taken by the Indonesian government to reduce COVID-19 rates has reduced the economy ability to grow and the level of social welfare. The poverty rate has increased following the current COVID-19 outbreak. One in ten Indonesians lives below the national poverty threshold [2]. The intersections between COVID-19 and gendered burdens are highlighted, particularly in frontline work, unpaid care work, and community activities [3]. Challenges associated with preventive practices results from poverty, lack of financial support from husbands or partners, cultural beliefs/practices, excessive workload [4]–[6]. Women

on the frontlines are immensely proud [7]. However, women empowerment issues are still lack in government strategies to control COVID-19 and improve family well-being [8].

Women empowerment should be viewed as a critical component and an indicator of health outcomes. According to empowerment theory [9], people's abilities, knowledge, and motivation to perform valid responsibilities must be increased and improved. They provide solutions for marginalized groups' capacity development, awareness rising, and skill development. According to this view, denying women access to resources necessary for good health, interpersonal skills, and valued societal positions renders them powerless and impairs their functioning. Previous studies have been reported that women empowerment significantly associated with lower rates of unwanted births [10] and lower incidence of unprotected sex diseases such as gonorrhea and chlamydia [11]. Other studies have demonstrated the benefits of empowerment for health-related behaviors, such as purchasing dietary supplements and participation in health teaching [12]. The relationship between child nutrition and female empowerment, medical care, home buying, household purchase, household-based visits and husband income in two developing countries was similarly substantially established. Ethiopian demographic and health surveys in 2011 provided evidence that higher socioeconomic position and women's empowerment are positively correlated with better nutrition among children. Women empowerment and education were positively related, as were the range of financial resources in the family [13]. Several studies have discovered a link between greater empowerment and reduced mortality rates [14], [15]. However, few studies have been conducted to explore the association between women empowerment with wealth index and preventive behavior during the pandemic COVID-19 in Indonesia.

Women empowerment has been studied extensively in low-middle-income nations, yet the measures used to define empowerment remain elusive. Many indicators exist describing women's empowerment in the literature that defines empowerment as a process of transformation that enables persons who were initially rejected to make decisions to gain the ability to do [16]–[20]. However, there are still no measurements that comprehensively gauge women's empowerment. Because empowerment is a latent phenomenon, research utilized different metrics [21]. In a recent study, there have been indicators for creating an African women's empowerment index for surveys [22] to monitor progress towards sustainable development goal (SDGs) five (women's rights achievement and empowering all girls and women) [23]. The usage of indicators and the method of weighing them in order to develop a women's empowerment index, on the other hand, are not agreed upon by scientific experts.

Empowering women, particularly in rural of Indonesia is critical to the well-being of families, individuals, and community as a whole and increased economic production. Women multiple engagements in the self-employment is parts of the country workforce. Empowerment can help others surrounding a woman, most notably her children and their family. Gender-transformative techniques are an aid in addressing gender inequities while also enhancing health outcomes. These approaches influence the sharing of benefits and duties between males and females, manage power structures, and boost women's status [24]. This study aimed to determine the relationship between women empowerment with social, economic status and preventive behaviors towards COVID-19 in Indonesia.

2. RESEARCH METHOD

This study was conducted using a cross-sectional design. This reaserch located in two community health centers in Banten, Indonesia. Data were collected from June to August, 2021.

The inclusion criteria of the samples were women over 18 years old, married, at least having one child, and willing to join in this study. Women with cognitive and mental disorders were excluded from this study. The sample size was determined using the procedure for estimating proportions. This sample size included 200 women, who were chosen by random sampling. A basic random selection technique (random.org) was used to choose study participants identified by their queue number.

The information was gathered through a questionnaire. The questionnaire consisted of three sections. The first section focused on women's demographics (age, education, employment status, and wealth index), COVID-19 knowledge and preventive behaviors, and empowerment.

The wealth index is used to assess a household's economic and financial situation. The wealth index measures a family's overall standard of life. The wealth index is constructed using simple data on a household's possession of specific items, such as televisions and bicycles, building materials, water accessibility and sanitary. Each item was given a score of 1 if it belonged to them and 0 if it was rented or not their property [25]. There was a total score between 0 and 5. A higher score showed a high index of wealth.

The empowerment of women was quantified using the women empowerment index [26]. We focus on the specific characteristics of empowerment that relate to women's financial capability (financial empowerment), household decision-making ability (household empowerment), and their ability to move

freely (physical freedom of movement) (social empowerment). All measures have minimum and maximum values ranging from 0 (not empowered) to 1 (empowered) that are specified according to the human development index methodology [25]. A higher score suggested that women were empowered to a greater extent.

COVID-19 knowledge demonstrated through "Yes/No" questions—including (symptoms, transmission, and prevention). Preventive measures against COVID-19 are included in the "Yes/No" question (protective activities: face mask and hand sanitizer use, hand washing, exercise routines, advancements in the food supply, maintaining social distance and where to seek more information). The tools used in this investigation were adapted from a prior study conducted by previous study [27]. A total of 14 questions were asked about knowledge, while 16 questions were asked about preventive behavior. Improved knowledge and preventive behaviors were associated with higher scores.

2.1. Data collection

We received clearance from our institutional review board (IRB) for this project (06/0287/KEPK/STIKEP/PPNI/2021). All community health centers participating in this inquiry had their data gathering procedures approved by their respective directors. The study's eligible participants were reached via phone. Before data collection, written consent was acquired. Participants were given the option to cancel or terminate their participation in the study at any point during the trial's duration. A Google Form was used to collect data for an online survey. The subjects were informed on their demographic characteristics, women empowerment, and knowledge and practice of COVID-19 prevention. Each participant took approximately 15-20 minutes to complete the questions.

2.2. Data analysis

Data were presented as averages with standard deviation (SD) and categorical data as percentages for categorical data types. We used the independent t-test for continuous data in bivariate analysis. A linear regression model was used to discover the factors that affect wealth index and preventative behavior. SPSS 22.0 was used to analyze the data.

3. RESULTS

Of 200 women, over half were less than 30 years old (56%) and obtained higher education (56.5%). About 67.5% were unemployed, 60% had below basic regional wage. In addition, about 75% of women had children ranging from 2 to 3. The majority of women (65%) had inadequate women empowered, 57.5% inadequate economic empowered, 52.5% inadequate household empowered, and 56% inadequate social empowered as shown in Table 1. Women who received had higher education (Mean=3.97, SD=1.76, p-value=0.037), employed (Mean=3.64, SD=1.77, p-value=0.014), higher income (Mean=4.58, SD=2.06, p-value=0.001), and adequately empowered (Mean=3.66, SD=1.320, p-value=0.001) showed a better wealth index than those with lower education and income, unemployed, and inadequate empowerment (Mean=13.43, SD=5.32, p-value=0.001). Then, women who received had higher education (Mean=12.46, SD=5.06, p-value=0.002) and adequate empowerment showed better preventive behaviors towards COVID-19.

Our study found that most women had adequate women empowered in terms of economic empowerment, household empowerment, and social empowerment. In addition, they also had an average wealth index, adequate knowledge and preventive behaviors towards COVID-19 as presentd Table 2. In the multivariable analysis, we found that after adjusting for all confounders, educational level ($\beta=0.35$, $p=0.011$), family income ($\beta=0.51$, $p=0.004$), employment status ($\beta=0.42$, $p=0.010$), and women empowerment score ($\beta=0.49$, $p=0.001$) were associated with wealth index. All significant variables contributed 23% to the dependent variables as shown in Table 3.

In addition, this study found that after adjusting for all confounders, educational level ($\beta=0.58$, $p=0.013$), wealth index ($\beta=0.43$, $p=0.014$), women empowerment score ($\beta=0.47$, $p=0.001$), and knowledge ($\beta=0.61$, $p=0.001$) were associated with preventive behaviors towards COVID-19 as shown in Table 4. All significant variables contributed 31% to the preventive behaviors.

Table 1. Differences in wealth index and preventive behaviors to general characteristics of study participants (n=200)

Variables	n	%	Wealth index		p-value	Preventive behaviors	
			Mean±SD			Mean±SD	p-value
Age	<30 years old	112	56	3.45±1.21	0.214	11.87±5.87	0.473
	≥30 years old	88	44	3.49±1.50		11.61±5.50	
Educational attainment	Basic Education	87	43.5	3.03±1.54	0.037	10.44±4.12	0.002
	Higher Education	113	56.5	3.97±1.76		12.46±5.06	
Employment status	Unemployed	135	67.5	2.37±1.31	0.014	10.15±5.06	0.214
	Employed	65	32.5	3.64±1.77		10.31±4.03	
Family income	Below basic regional wage	120	60	2.34±1.36	0.001	10.11±5.60	0.336
	Above basic regional wage	80	40	4.58±2.06		10.56±6.54	
Number of children	1	55	27.5	3.34±1.76	0.089	10.28±4.73	0.115
	2-3	7	37.5	3.71±0.89		11.06±5.46	
	>3	70	35	3.02±1.15		10.72±4.51	
Women empowerment	Adequate	70	35	3.66±1.32	0.001	13.43±5.32	0.001
	Inadequate	130	65	2.54±1.18		9.25±4.20	
Economic empowerment	Adequate	85	42.5	4.36±2.58	0.001	12.60±4.42	0.001
	Inadequate	115	57.5	2.79±1.65		9.34±3.39	
Household empowerment	Adequate	105	52.5	4.21±1.98	0.001	12.87±5.00	0.001
	Inadequate	95	47.5	3.04±1.10		10.85±6.23	
Social empowerment	Adequate	112	56	3.53±1.32	0.001	12.31±5.02	0.001
	Inadequate	88	44	2.11±0.34		9.44±3.69	

Table 2. Descriptive statistics obtained from the scale (n=200)

Variables	Mean±SD
Women empowerment	3.04±1.57
Economic Empowerment	3.26±2.14
Household Empowerment	3.06±1.62
Social Empowerment	3.20±1.58
Wealth index	3.45±1.61
Knowledge of Covid-19 prevention	10.54±7.22
Preventive behaviors towards COVID-19	12.61±6.08

Table 3. Factors associated with wealth index (n=200)

Variables	β	95% CI	p-value
Educational attainment	0.35	0.12–2.79	0.011
Family income	0.51	0.10–2.16	0.004
Employment status	0.42	0.13–3.35	0.010
Women empowerment	0.49	0.17–2.88	0.001

R²=0.43, Adjusted R²=0.23, F=4.43, p-value=0.001

Table 4. Factors associated with preventive behaviors towards COVID-19 (n=200)

Variables	β	95% CI	p-value
Educational Attainment	0.58	0.10–3.11	0.013
Wealth index	0.43	0.19–2.34	0.014
Women empowerment	0.47	0.14–2.89	0.001
Knowledge score	0.61	0.15–2.56	0.001

R²=0.46, Adjusted R²=0.31, F=4.34, p-value=0.002

4. DISCUSSION

This study found that women empowerment has significantly associated with preventive behaviors towards COVID-19. Women who are empowered can make decisions in various areas of their lives, including socio-cultural, family, relational, and legal dimensions [16], [24]. They are capable of making decisions for their own and their children's health. As a result, women empowerment can enhance COVID-19 prevention and care, better nutrition, and the flexibility to choose appropriate family care options. Financially empowered women have more influence over their lives. More money might be allotted for their family's

education and wellness as well. Empowered women have increased accessibility, which enhances independence for themselves and their kids to go grocery stores and to join health center meetings and see friends and family. Because of this, individuals gain access to facilities such as knowledge and assistance [20], which aid in the improvement of mother and child health services.

However, due to the multidimensional latent character of women empowerment, it is difficult for academics to quantify it directly and accurately. Most cultures worldwide, especially in Sub-Saharan Africa and Indonesia exhibit male dominance in social strata, especially at the family and home level. While few studies have explored empowerment concerning COVID-19 prevention, this study shows that the empowerment of Indonesian women can help minimize COVID-19 transmission by improving their preventative practices. Thus, future research should develop an effective intervention to increase women empowerment on multiple levels, including economic, social, and household.

Women empowerment has also been shown to be related to wealth index. This finding is consistent with findings from other related research undertaken in a variety of international locations [33], in which wealth disparity was found to be a consistent predictor of continuum care. Women from wealthier households may have greater access to resources (such as money, vehicles, or motorcycles) and are more likely to be exposed to appropriate maternal and child health information that can assist them in obtaining maternal health care services. Additionally, it has been suggested that women from affluent families may have greater access to conventional health care facilities (such as hospitals or clinics), contributing to Bangladesh's higher continuum care rate [28]. In developing countries, on average, women form 43% of the agricultural labor. They are expected to make up two-thirds of the 600 million people who raise livestock as their source of income [29]. Supplying a rapidly expanding global population with food will necessitate increasing reliance on domestic production, putting women at a more significant economic disadvantage because of their property rights around the globe [30]. Additionally, as we adopt new behaviors in a changing world, there is an increased demand for sanitizers, hand washes (including antibacterial), and masks in rural regions. A circumstance like this necessitates the cooperation of the entire family in creating hand sanitizers and face masks [31]. Regularly, systematic effort and family support are required to expand women presence in the business arena and prevent discrimination against them.

According to the data, women education and employment status are strongly connected with their preventive behaviors against COVID-19. When comparing women decision-making in the home to men decision-making, women education and wealth are significantly connected with family health status [32]. According to studies conducted in Pakistan, maternal illiteracy is significantly associated with poor nutritional status in children [33], [34]. Education is the first step toward self-determination. People can distinguish between good and bad choices due to education, which equips them to make decisions on their own. Women should have the ability to make crucial decisions about their own lives and the lives of their children. Education equips a woman to advocate for herself and makes her aware of her legal rights.

Moreover, it contributes to improved educational possibilities for future generations and the advancement of cleanliness and healthcare infrastructure. Also important is the fact that education and employment status are linked to financial and economic development. Another crucial maternal aspect to consider when assessing preventive behaviors is the mother's job status. By working and earning a living, the mother contributes to increasing the total household income, which increases the likelihood of having a sufficient amount and high-quality care [35]. In the short term, the mother's participation in an unskilled labor occupation had a good impact on their kid's health or other members of the family [36]. Financially independent women can confront numerous obstacles and adversities without fear. Women either contribute to the household income or manage the household on their own. Women become role models for their children, who learn the importance of financial resources and become motivated as a result.

There were some limitations to the current investigation. The information referring to empowerment, knowledge, and preventive actions was gathered through self-reported questionnaires, and as a result, it was highly subjective in its interpretation. To begin with, we recognize that the participants' geographic sample limits the research design because they are almost all from the Banten Province, while Indonesia has 34 provinces.

5. CONCLUSION

Our study highlights the relationship between women empowerment with wealth index and preventive behaviors towards COVID-19. Adequate empowered women are likely to have a higher wealth index and more COVID-19 preventative actions. Our data suggest that empowering women could be a promising strategy for improving family economic position and COVID-19 prevention in Indonesia during several lockdowns. Findings argue that initiatives aimed at increasing women's empowerment would positively impact improving public health. To quantify women's empowerment in the future, a universal standard is needed.

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REFERENCES

- [1] Ministry of Health Republic of Indonesia, "COVID-19" 2021. [Online]. Available: <https://www.kemkes.go.id/index.php?lg=LN02> (accessed 12 Jul, 2021).
- [2] Ministry of Health South Tangerang city government. active cases of the COVID-19 in South Tangerang City. [Online]. Available: <https://lawancovid19.tangerangselatankota.go.id/> (accessed 12 Jul, 2021).
- [3] H. J. McLaren, K. R. Wong, K. N. Nguyen, and K. N. D. Mahamadachchi, "Covid-19 and women's triple burden: Vignettes from Sri Lanka, Malaysia, Vietnam and Australia," *Social Sciences*, vol. 9, no. 5, p. 87, May 2020, doi: 10.3390/SOCSCI9050087.
- [4] C. M. Donkor *et al.*, "Improving nutritional status of children with Cerebral palsy: a qualitative study of caregiver experiences and community-based training in Ghana," *Food Science and Nutrition*, vol. 7, no. 1, pp. 35–43, 2019, doi: 10.1002/fsn3.788.
- [5] C. Abang, "Association between breastfeeding and complementary feeding practices and infant growth in the Builsa District," M.S. thesis, Department of Nutrition and Food Science, University of Ghana, Ghana, 2013.
- [6] A. M. Tampah-Naah, A. Kumi-Kyereme, and J. Amo-Adjei, "Maternal challenges of exclusive breastfeeding and complementary feeding in Ghana," *PLoS ONE*, vol. 14, no. 5, p. e0215285, May 2019, doi: 10.1371/journal.pone.0215285.
- [7] P. Narasri, S. Tantiprasoplap, C. Mekwiwatanawong, W. Sanongdej, and N. Piaseu, "Management of food insecurity in the COVID-19 pandemic: a model of sustainable community development," *Health Care for Women International*, vol. 41, no. 11–12, pp. 1363–1369, 2020, doi: 10.1080/07399332.2020.1823984.
- [8] E. Mulenga, H. Amukugo, and A. Shilunga, "The experiences of mothers and caregivers on feeding practices of children under the age of five years with undernutrition in Oshikoto region, Namibia," *International Journal of Healthcare*, vol. 4, no. 2, p. 20, 2018, doi: 10.5430/ijh.v4n2p20.
- [9] B. B. Solomon, *Black empowerment: social work in oppressed communities*. New York: Columbia University Press, 1976.
- [10] U. D. Upadhyay *et al.*, "Women's empowerment and fertility: a review of the literature," *Social Science and Medicine*, vol. 115, pp. 111–120, Aug. 2014, doi: 10.1016/j.socscimed.2014.06.014.
- [11] R. N. Shain *et al.*, "A randomized, controlled trial of a behavioral intervention to prevent sexually transmitted disease among minority women," *New England Journal of Medicine*, vol. 340, no. 2, pp. 93–100, Jan. 1999, doi: 10.1056/nejm199901143400203.
- [12] S. L. Barber and P. J. Gertler, "Empowering women to obtain high quality care: evidence from an evaluation of Mexico's conditional cash transfer programme," *Health Policy and Planning*, vol. 24, no. 1, pp. 18–25, Dec. 2009, doi: 10.1093/heapol/czn039.
- [13] O. Folaranmi, "Women empowerment as a determinant of investments in children in selected rural communities in Nigeria," *African Research Review*, vol. 7, no. 4, p. 138, Nov. 2013, doi: 10.4314/afrr.v7i4.9.
- [14] Y. K. Alemayehu, K. Theall, W. Lemma, K. W. Hajito, and K. Tushune, "The role of empowerment in the association between a woman's educational status and infant mortality in Ethiopia: secondary analysis of demographic and health surveys," *Ethiopian journal of health sciences*, vol. 25, no. 4, pp. 353–362, Oct. 2015, doi: 10.4314/ejhs.v25i4.9.
- [15] P. Waiswa *et al.*, "Community and district empowerment for scale-up (CODES): a complex district-level management intervention to improve child survival in Uganda: study protocol for a randomized controlled trial," *Trials*, vol. 17, no. 1, Mar. 2016, doi: 10.1186/s13063-016-1241-4.
- [16] A. Malhotra, S. R. Schuler, and C. Boender, "Measuring women's empowerment as a variable in international development," *The World Bank Workshop on Poverty and Gender: New Perspectives*, 2002.
- [17] N. Kabeer, "Resources, agency, achievements: Reflections on the measurement of women's empowerment," *Development and Change*, vol. 30, no. 3, pp. 435–464, Jul. 1999, doi: 10.1111/1467-7660.00125.
- [18] S. Kishor and K. Gupta, "Women's empowerment in India and its states: evidence from the NFHS," *Economic and Political Weekly*, vol. 39, no. 7, pp. 694–712, Jan. 2004, doi: 10.2307/4414645.
- [19] A. M. Basu and G. B. Koolwal, "Two concepts of female empowerment: some leads from DHS data on women's status and reproductive health," in *A Focus on Gender: Collected Papers on Gender Using DHS Data*, 2005, pp. 15–53, [Online]. Available: <https://dhsprogram.com/pubs/pdf/OD32/3.pdf>.
- [20] M. Na, L. Jennings, S. A. Talegawkar, and S. Ahmed, "Association between women's empowerment and infant and child feeding practices in sub-Saharan Africa: an analysis of demographic and health surveys," *Public Health Nutrition*, vol. 18, no. 17, pp. 3155–3165, Dec. 2015, doi: 10.1017/S1368980015002621.
- [21] S. Mahmud, N. M. Shah, and S. Becker, "Measurement of women's empowerment in rural Bangladesh," *World Development*, vol. 40, no. 3, pp. 610–619, Mar. 2012, doi: 10.1016/j.worlddev.2011.08.003.
- [22] F. Ewerling, J. W. Lynch, C. G. Victora, A. van Eerdevijk, M. Tyszler, and A. J. D. Barros, "The SWPER index for women's empowerment in Africa: development and validation of an index based on survey data," *The Lancet Global Health*, vol. 5, no. 9, pp. e916–e923, Sep. 2017, doi: 10.1016/S2214-109X(17)30292-9.
- [23] UNDP, "What are the Sustainable Development Goals?," *United Nations Development Programme (UNDP)*, 2021. <https://www.undp.org/sustainable-development-goals> (accessed Jul. 22, 2021).
- [24] S. M. Lee-Rife, "Women's empowerment and reproductive experiences over the lifecourse," *Social Science and Medicine*, vol. 71, no. 3, pp. 634–642, Aug. 2010, doi: 10.1016/j.socscimed.2010.04.019.
- [25] United Nations Development Programme (UNDP), "Human development report 2005: International cooperation at a crossroads - Aid, trade and security in an unequal world," New York, 2005. [Online]. Available: <http://hdr.undp.org/en/content/human-development-report-2005>.
- [26] K. Mason and H. Smith, "Women's empowerment and social context: results from five Asian countries," *Journal of Chemical Information and Modeling*, vol. 53, no. 9, pp. 1689–1699, Jan. 2013.
- [27] S. Sulistyawati *et al.*, "Knowledge, attitudes, practices and information needs during the covid-19 pandemic in indonesia," *Risk Management and Healthcare Policy*, vol. 14, pp. 163–175, 2021, doi: 10.2147/RMHP.S288579.
- [28] R. Rahman, M. Rahman, and S. E. Haque, "Empowerment dimensions and their relationship with continuum care for maternal health in Bangladesh," *Scientific Reports*, vol. 11, no. 1, p. 18760, 2021, doi: 10.1038/s41598-021-98181-8.
- [29] WHO, "WHO pledges extensive commitments towards women's empowerment and health," *World Health Organization (WHO)*, 2021. <https://www.who.int/news/item/05-07-2021-who-pledges-extensive-commitments-towards-women-s-empowerment-and->




- health (accessed Jul. 20, 2021).
- [30] M. Banerjee, "Empowering rural women in India during Covid-19: A brief study considering future sustainability," *Journal of Studies in Social Sciences Sci.*, vol. 19, pp. 1-7, 2020.
- [31] P. Karulkar, "Why women empowerment is needed post COVID-19?," *The International Journal of Indian Psychology*, vol. 8, no. 4, pp. 712–716, 2020.
- [32] A. B. Ludermir, G. Lewis, S. A. Valongueiro, T. V. B. De Araújo, and R. Araya, "Violence against women by their intimate partner during pregnancy and postnatal depression: a prospective cohort study," *The Lancet*, vol. 376, no. 9744, pp. 903–910, Sep. 2010, doi: 10.1016/S0140-6736(10)60887-2.
- [33] K. K. Schmeer, "Married women's resource position and household food expenditures in Cebu, Philippines," *Journal of Marriage and Family*, vol. 67, no. 2, pp. 399–409, Apr. 2005, doi: 10.1111/j.0022-2445.2005.00124.x.
- [34] L. C. Smith, U. Ramakrishnan, A. Ndiaye, L. Haddad, and R. Martorell, "The importance of women's status for child nutrition in developing countries," *International Foodpolicy Research Institute*, pp. 1–164, 2003.
- [35] F. Bégin, E. A. Frongillo, and H. Delisle, "Caregiver behaviors and resources influence child height-for-age in rural Chad," *Journal of Nutrition*, vol. 129, no. 3, pp. 680–686, Mar. 1999, doi: 10.1093/jn/129.3.680.
- [36] A. Mainuddin, H. Ara Begum, L. B. Rawal, A. Islam, and S. M. Shariful Islam, "Women empowerment and its relation with health seeking behavior in Bangladesh," *Journal of Family & Reproductive Health*, vol. 9, no. 2, pp. 65–73, Jun. 2015.

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