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## Socio-Economic Impact of Covid-19 Pandemic and Its Implication on Education

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### ABSTRACT

This study contributes to the Covid-19 literature by understanding the recent pandemic implications on seaweed farmers' lives. The study's respondents are tripartite, composing seaweed farmers, students, and significant personnel from the Local Government Units (LGUs). Data were collected through face-to-face interviews with strict adherence to the IATF's minimum health standards. Gathered data were analyzed thematically. Results show that the pandemic impacted seaweed farmers' lives socially and economically. The pandemic has implications for the education of the children of the seaweed farmers as it is gleaned in the findings that most of them struggle over the new modes of learning. However, the implications were mainly domino effects of the adverse impacts of the pandemic on the parents. The study's findings are substantial in mitigating the ongoing pandemic's adverse effects and laid a foundation for the proposed intervention framework model. Conclusions were discussed and gave light to recommendations primarily offered to the Local Government Units (LGUs), educational institutions under the Department of Education Agutaya District, and concerned higher education institutions in the Province of Palawan as a basis for policy and program formulations aimed at mitigating the effects of the Covid-19 pandemic on the lives of seaweed farmers in Agutaya, Palawan.

### INTRODUCTION

The recent Covid-19 pandemic had detrimental effects on every human life (Nicola et al., 2020; Tria, 2020). The impacts are inevitable (Douglas et al., 2020). The pandemic has affected all sectors, not only the people's health but also the social and economic sectors of most, if not all, countries worldwide (De, 2020; Douglas et al., 2020; Jena, 2020; Tria, 2020; Obi, et al, 2020). Recent studies on Covid-19 show some significant socio-economic effects of this pandemic, such as imminent economic crisis and recession, social distancing and self-isolation, travel restrictions, production, and manufacturing slowing down, and schools' closures (see Douglas et al., 2020; Nicola et al., 2020; Tria, 2020; Garcia Lirios, 2021).

The pandemic has affected people's lives and businesses' activities (Haleem A-n et al., 2020). It freezes and shuts down the trade, locally and internationally. Since the pandemic affects the

sources of supply, it has subsequent impacts on the global economy. The pandemic's impacts, though, vary. The most affected are those who belong to vulnerable sectors like those involved in the extraction of raw materials (e.g., agriculture, aquaculture, petroleum, and oil, etc.), production of finished products (e.g., manufacturing), and service providers (e.g., education, finance industry) (see, Nicola et al., 2020).

In the Philippines, most coastal areas depend on aquaculture like seaweed farming as a livelihood. Through seaweed farming, even the women in a small fishing community can earn extra income. The demand for seaweeds is mostly overseas (Valderrama, 2012); hence, seaweed farmers who have limited or reduced access to alternative economic activities were seriously hit by the pandemic.

Recent studies show that the education sector is also one of the most affected sectors by the

Covid-19 outbreak (e.g., De, 2020; Jena, 2020; Upoalkpajor & Upoalkpajor, 2020). Due to the pandemic, most countries have closed educational institutions, which affected billion of students. According to Shahzad et al. (2020), approximately 120 countries have stopped face-to-face learning, and most schools are operating through e-learning portals. Worldwide, about 98.5 percent of the students' population was affected by the school's closure (Upoalkpajor & Upoalkpajor, 2020). In the Philippines, approximately 28 million students were affected by the closures (UNESCO, 2020, as cited in Tria, 2020). The lockdowns and quarantines have prompted students and teachers to stay at home, which led to learning via online and modular platforms.

Most learning institutions around the world have been compelled to provide services different from the normal. In regular times, interactions are done in the classrooms where teachers and students can discuss the lessons face-to-face. During the pandemic, classes and other communications are being managed online. Most schools nowadays delivered classes through online platforms (e.g., Zoom, Google Meet, WebEx, etc.). Although, in some schools, especially in the far-flung areas, schools have shifted to modular learning due to internet connectivity and device issues.

The social distancing and self-isolation affected seaweed farmers' social lives, e.g., relationships with family, friends, and peers. They likewise restricted farmers' activities and mobility; thus, they also affect seaweed farmers' economic conditions. Students from remote areas and marginalized sections or whose families suffer financial difficulties generally face enormous challenges (Kapasia et al., 2020).

In some coastal communities, like the coastal barangays in the municipality of Agutaya in Palawan, seaweed farming developed as the most critical livelihood strategy (Valderama, 2012). The municipality of Agutaya has a population of 12,545 in 2015. The primary source of income in the area is fishing and seaweed farming. A total of eight barangays in the Municipality of Agutaya are engaged in seaweed farming. Since seaweed farming is the primary source of income for the seaweed farmers in the area, the socio-economic impacts of the Covid-19 pandemic on the farmers' lives are believed to bring severe implications on

students' education. Understanding the impacts of the socio-economic consequences of the Covid-19 pandemic is significant in mitigating the ongoing pandemic's adverse effects. The current study can also contribute to the Covid-19 literature by conducting the research in the pandemic setting and employing seaweed farmers in Agutaya, Palawan, as the study's respondents.

## **METHODS**

The study adopted the qualitative design since interviews were done as the primary data gathering procedure. The research uses themes or patterns to describe the socio-economic impacts of the Covid-19 pandemic on seaweed farmers' lives in Agutaya, Palawan, based on their experiences. The study describes the implications of the pandemic's socio-economic impacts on the children of the seaweed farmers' education. The pandemic's impacts were explored to identify the gaps in crafting an intervention framework model that contains the intervention program as the study's final output.

## **RESULTS AND DISCUSSION**

### **Covid-19 Pandemic Impacts on Farmers' Social Relationships**

To answer "What are the experiences of seaweed farmers in terms of social relationship impacts?" the study interviewed farmers concerning the impacts of the Covid-19 pandemic on their relationship with other people, specifically with other members of their families.

The findings (see Figure 1) reveal two significant themes: family and social interactions. The themes depict the farmers' social relationships during the crisis. The theme "family" was formed from the following codes: family is together, fear in the family, discipline is practiced, and time for family bonding. Meanwhile, the theme "social interactions" emerged due to the following: social distancing, isolations, and reduced social distancing.

When the environment changes, people tend to feel anxious and unsafe, especially when the cause of such progression and its possible outcomes are unclear (Ren et al., 2020). The 'fear in the family' is a usual response among people during a pandemic. According to Levin (2019), fear has been known as a typical response to infectious outbreaks, and people react in various and individualized ways towards the perceived threat. Not only individual

seaweed farmers, even their families, and the coastal communities experience feelings of hopelessness, despair, grief, bereavement, and a profound loss of purpose because of pandemics. The apprehension about having or contracting Covid-19 is just higher among seaweed farmers due to social protection issues. The pandemic forced people to stay home and work from home, which brought the family members together. They are forced to talk, eat, and play together every day, which was impossible for most families before the pandemic due to work and various responsibilities (Verma & Prakash, 2020). In this study, the participants exposed how the pandemic has changed their family life. Life is different for most families before the Covid-19 outbreak. Due to the pandemic, seaweed farmers and their families were given the time to bond and caught up for the lost times due to their busy schedules. The lockdowns look suitable for family life and social engineering. The discipline being practiced within the family appears to be something that most seaweed farmers appreciate.

Countries worldwide have implemented stringent movement controls in response to the Covid-19 pandemic. Social distancing measures, such as advising the whole population to self-isolate at home if they or their family have symptoms, bans on social gatherings, stopping flights and public transport, closure of non-essential workplaces, closure of schools, colleges, and universities, prohibition of all non-essential population movement, and limiting contact for special populations were implemented across countries (see, Douglas et al., 2020).

The ECQ, initially implemented in Metro Manila, was extended to the whole Island of Luzon, including the province of Palawan. The quarantine “consisted of: strict home quarantine in all households, physical distancing, suspension of classes and introduction of work from home, closure of public transport and non-essential business establishments, prohibition of mass gatherings and non-essential public events, regulation of the provision of food and essential health services, curfews and bans on the sale of liquor and a heightened presence of uniformed personnel to enforce the quarantine procedures”, provided the country the chance to organize funds

and arrange its pandemic response (Amit et al., 2021, p.3).

The results of this study verify the existing pandemic response of the Philippine government amidst the Covid-19 outbreak. Seemingly, the topmost focus of the government is to curb the spread of the virus and save the lives of the people.

Overall, the results above validate previous studies’ declarations that social distancing and self-isolation may impact social lives. Since the pandemic reduced interpersonal contacts, relationships with family, friends, and peers were set aside momentarily. The results also elucidate how the Filipinos treasured the family. Innate to the Filipinos to care for family, especially children; thus, social interactions may be sacrificed for the time being to ensure their loved ones’ safety.

#### **Covid-19 Pandemic Impacts on Economy**

To answer “What are the experiences of seaweed farmers in terms of economic impacts?” the study questioned seaweed farmers vis-à-vis the economic impacts of the Covid-19 pandemic.

Based on the findings, the Covid-19 pandemic significantly impacts the economy through the livelihood of seaweed farmers. The analysis results revealed four major themes, namely “shortage of labor”, “low income”, “low prices of seaweeds”, and “low production”.

The interviews with the critical informants from the LGUs of Agutaya, Palawan, also supported the above claims. The results show that farmers’ “seaweeds production was hampered”, “farmers cannot monitor their crops due to lockdowns”, “price cut in seaweed causes losses to a farmer”, and “farmers cannot market their products due to restrictions”.

According to Thamrin et al. (2020), seaweed farmers usually worked more than eight hours a day. Works are done manually and repetitively. During the growing season, the seaweed farmers tend to work overtime to take care of the seed, planting, harvesting, and drying seaweeds. Although seaweed farming is a very long process, most of the time, the work is shared by family members. Therefore, most of the time, the work time is extended due to the limited workforce in the family.

The seaweed’s price is a common complaint among farmers (see Aslan et al., 2018). The prices of dried seaweed fluctuate constantly. The seaweed

farmers also receive low prices from the buyers. Thus, there was a typical concern that the government has given little assistance to seaweed farmers, especially in pricing, since few private buyers control the price of the seaweeds.

Most individuals experienced the loss of income from social distancing measures (Douglas et al., 2020). Self-employed workers, like seaweed farmers, are at high risk of adverse effects from loss of work and no income. The study results revealed a similar situation as seaweed farmers have lost incomes due to restrictions imposed during the pandemic. Their incomes were not enough to cover their expenses at home. Other essential expenditures like children's education were also compromised.

Diseases and pests are significant problems in seaweed production that restrict this valuable industry's growth in the Philippines (Mateo et al., 2020). The problems occur and confront the seaweed farmers since the inception of the industry in the country. The results of this study confirm that these problems still exist. As unveiled in this study, the developing concern is the protocols that hinder the production of seaweeds.

The above results suggest that prolonged restrictions can derail economic activities at an unprecedented rate. Similar to the previous findings, the present study proves that the pandemic can impede the production and distribution of goods. In normal times, a shortage in the supply of essential commodities like seaweeds may cause the price of such products to shoot up. However, in the case of seaweeds, during the Covid-19 pandemic, the prices went down instead. The main reason for such a decrease can be traced to supply chain disruptions. Due to restrictions, the movement of goods from the point of production to the point of consumption was hampered. Not only that, at some point during the pandemic, the opening of businesses offering non-essential goods and services was regulated, making the consumptions controlled and limited. The closures and limited capacity imposed by the authorities affected the supply and the demand for various products, including seaweeds.

Overall, the Covid-19 pandemic created chaos that affected the livelihood of the most vulnerable sectors in society, such as those involved in seaweed farming. Most seaweed farmers do have not enough means to weather the storm; hence,

most of them suffered from the pandemic's adverse effects.

### **Covid-19 Pandemic's Implications to Education**

To understand the implications of the Covid-19 pandemic to education better, the study asked parents to describe the current situation of their children in the "new normal".

With the parents' and guardians' permission, students were also interviewed as to the problems they encountered during the pandemic. The results show cooperating results such as "struggle over the new mode of learning", "financial difficulties/problems", and "presence of distractions". Aside from the aforementioned cooperating results, the problems with gadgets, school distance, time management, and emotional disturbances emerged as pressing issues among students.

Learning during the "new normal" is a drastic change for a student. Be it online or offline classes, it is pretty tricky for a student to adjust to the new methods suddenly. Since students are used to face-to-face interaction with the teacher, it necessitates proper orientation and familiarization of the new normal. However, the shift to online learning was too sudden. To keep pace, academic institutions have to strategize and accelerate new forms of teaching pedagogy. However, the readiness of the schools in terms of technical infrastructure is uneven. Some schools are ready while others are not. In the far-flung areas, like in Agutaya, Palawan, the learners need to adopt the new learning modality and understand the lessons at their own pace with their parents and guardians' assistance.

The full implementation of online learning and modular learning concerns many students since not all students have internet connectivity at home, and not all can afford to buy devices needed to access the said system (Abante et al., 2021). This study suggests that the situation of students in Agutaya, Palawan is not an exemption, especially for the children of the seaweed farmers. Moreover, the outbreak of the Covid-19 pandemic may challenge the DepEd's mantra of "no child left behind" since disparity exists amongst populations (i.e., those with higher income can access technology that can ensure education continues digitally during social isolation).

Financial problems are defined as the "inability to manage expenses and face the financial problem within half of the year" (Azer &

Mohamad, 2018, p.2474). Accordingly, the financial problem occurs due to the inability of students to increase income. In this study, financial problems among students occur due to farmer parents' inability to finance their school-related expenses. Based on the interviews, the school allowances, internet load allowances, and other school expenses were provided by the parents, whose income mainly comes from seaweed farming.

Blasiman et al. (2018) mentioned that various distractions were present in non-classroom environments and many students attempt to do multitask while learning online. This finding is confirmed in this study. The students mentioned the following distractions: house chores, obligations to siblings, and responsibility to parents. Distractions and multitasking are detrimental to learning and memory (Middlebrooks et al., 2020). Thus, this study claims that learning during the pandemic is possibly impaired.

Academic-related stress can lower academic achievement, drop motivation, and increase school dropout risk (Pascoe et al., 2020). Therefore, the result of this study is critical since adversities caused by the home and school distance may form part of students' stressors. However, based on the interviews, students are resilient. Despite the challenges in the home-school distance, they still persevere and never give up.

Gadgets provide many new features designed to improve the learning process and make it more fun. Thus, the use of gadgets is deemed to provide positive impacts on academic performance. Technical devices aid students receive essential information, viewing textbooks, record lectures, and preparing for classes (Bayanova et al. 2019). More and more students around the world now appreciate the importance of current technologies and contemporary education. The importance of technology in pedagogy is likewise stressed in this study.

Time management skill is essential. It is the key to success in life (Ghiasvand et al., 2017). Thus,

learning time management during academic years is necessary. Based on the interviews, most students experienced managing their time during the Covid-19 outbreak due to various reasons. Prominent among these reasons is the urge to help the family. Therefore, family matters are most important to students during the crisis, as gleaned from the data.

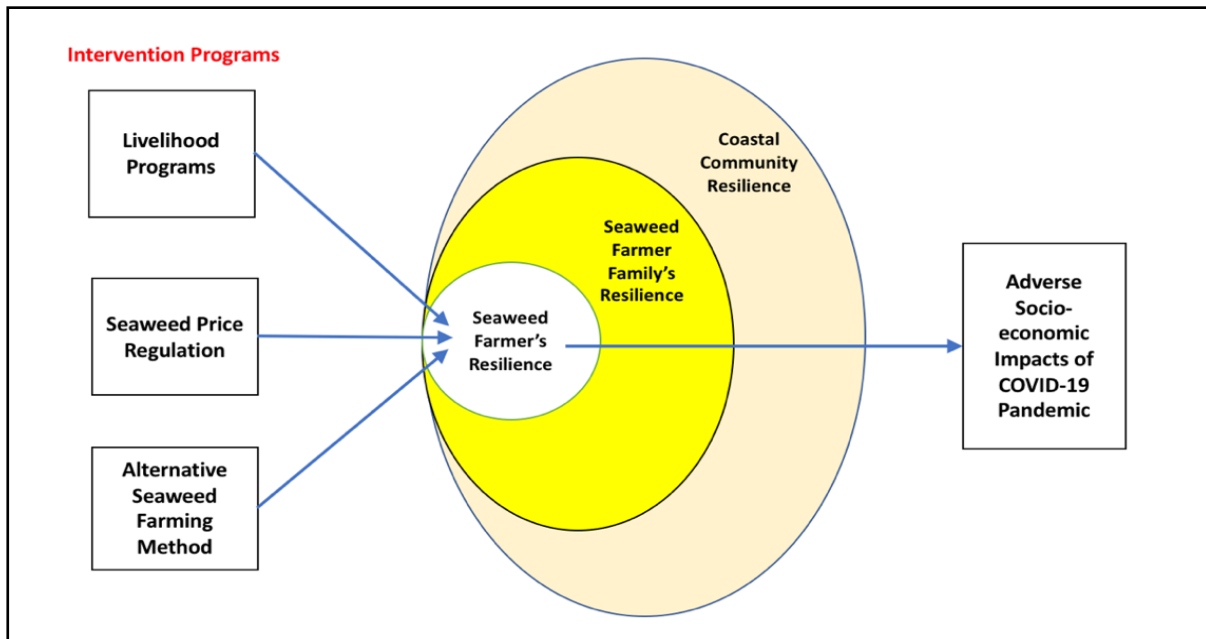
As revealed by the findings, the impacts of the Covid-19 pandemic on education are immense. The findings of this study confirm previous studies declaration that the education sector is one of those seriously affected by the pandemic outbreak. The current study affirms that pandemics impact education positively and negatively. However, the results show that the ongoing pandemic impacts education negatively more than positively.

Previously highlighted adverse effects such as hampered educational activities, unprepared students for online education, and parents' responsibility to educate their children were also stressed in this study. The shift in the modes of delivery of instructions surprised both the teachers and students. The schools are not prepared yet for such transformations regarding technology and teachers' readiness. Passing the responsibility to parents to educate their children is something to deliberate since most parents revealed that they are not equipped for such duties. However, the most pressing issue underlined in this study is the 'emotional disturbances' that caused 'low self-esteem' and 'stress' among the students.

### **Proposed LGU Intervention Program**

As a whole, the results of this study suggest that there is a need to create an intervention framework useful in mitigating the ongoing pandemic's adverse effects on seaweed farmers' lives. Therefore, the study crafted the proposed intervention framework based on the relevant findings from this research. The proposed framework illustrates how the adverse socio-economic impacts of the Covid-19 pandemic can be mitigated (see Figure 1).

Figure 1. The Proposed Intervention Framework Model



As shown in the diagram, the study suggests that the Covid-19 pandemic's adverse socio-economic impacts can be mitigated if the seaweed farmer is resilient. Resilience is one's ability to adapt to adversities or rebound from adversity. It gives a person the power to cope with stress and hardship in life. A resilient person is believed to handle adversity better and rebuild himself/herself after the crisis. Therefore, if the seaweed farmer is resilient, he can handle the pandemic's adverse effects and may be able to bounce back after the pandemic.

The resilience included in the proposed intervention framework is multilevel. In this heightened crisis, maintaining and boosting farmers' resilience is critical. This study suggests that boosting the seaweed farmer's resilience will also improve his family's resilience and eventually increase the resilience of the entire coastal community. As shown in the study's findings, the pandemic's socio-economic impacts created domino effects. The socio-economic impacts affected children's education, subsequently. This study proposes that the Covid-19 implications to education can be addressed if the farmer's family is resilient. Thus, the seaweed farming community will be resilient if the individual farmer and his family are resilient.

The suggested intervention programs are mainly based on the needs assessment conducted by this research. In the previous discussions, seaweed

farmers mentioned the assistance they need from the LGU. Therefore, this study recommends the following intervention programs namely: livelihood programs, seaweed price regulation, and alternative seaweed farming methods as deemed ideal to the situation.

**CONCLUSION**

A total of eight significant themes was revealed by this study to support this assumption. The sustainability of seaweed farming as their main livelihood was at risk as reflected by the themes. The pandemic has put the seaweed farmers at a greater disadvantage thus their quality of life in this trying time was also affected.

The pandemic has caused impacts on their family and their social interactions, thus, the seaweed farmers became extra wary in handling their social relationships.

The economic disruptions caused by protocols and lockdowns are devastating. Thus, without the means to earn an income during those challenging times, many were unable to bring enough food to their tables and send children to school.

The impacts of the pandemic on education are both positive and negative. On the positive side, some students adapt to pandemic situations and recognize the ideal social behaviors in the situation. Students also learn social distancing and practice discipline. However, the negative impacts outstripped positive effects.

The government's efforts to mitigate the adverse impacts of the Covid-19 were mainly on the immediate needs of the people and not on education. The main concern of the LGU, with the help of the National Government, is on people's safety and survival. Covid-19 is a tremendous social problem; thus, it needs an equally great social action. Therefore, cooperation among people and different agencies is necessary to lessen the negative impacts of Covid-19 on people's health and livelihood.

Based on the interviews' results, the farmers' immediate needs are livelihood programs and financial assistance. Therefore, the interventions to address the socio-economic problems should consider the availability of alternative jobs in the area, livelihood programs and financial assistance, and seaweeds' prices regulation. Implications on the education aspect was also a concern, thus, an intervention program addressing the new normal educational needs of students was also crafted.

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