

# The Correlation Between Availment of Maternal Care and Receiving of Health Services Through 4Ps Health Grant with the Perceived Improvement in Child and Maternal Health Among Women of Reproductive Age in 4 Barangays in Tondo, Manila

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## Abstract

The Pantawid Pamilyang Pilipino Program (4Ps) is a conditional cash transfer program of the Philippine government that seeks to reduce poverty by encouraging health and education among poor families. The present study investigated the relationship between the utilization of maternal care and routine health services through the 4Ps Health Grant and perceived improvement in maternal and child health among women of reproductive age in four barangays in Tondo, Manila. Employing a quantitative correlational design, information was gathered through systematic surveys that were distributed to beneficiaries of the 4Ps between the ages of 20 to 80 years old. Snowball sampling was utilized in order to access respondents, and information was computed utilizing Spearman's rho correlation in SPSS. Findings showed that most respondents made extensive use of health benefits, routine check-ups, and health education services. Statistical analysis revealed a weak but significant positive relationship between both maternal care availment ( $r = 0.199$ ,  $p = 0.006$ ) and regular health service receipt ( $r = 0.214$ ,  $p = 0.003$ ) with perceived improvements in maternal and child health. These results indicate that while 4Ps Health Grants can enable enhanced health-seeking behavior, underlying structural problems like limited medical infrastructure and service quality continue to prevent the program's potential. The research concludes that while the 4Ps Health Grant has a positive impact on maternal and child healthcare attitudes, improvements in accessibility, staffing, and service delivery are essential in order to ensure maximum long-term health outcomes. This study is part of an increasing body of literature on the effectiveness of conditional cash transfer schemes and provides recommendations for effective strengthening of public health policy and social welfare interventions for urban poor populations.

**Keywords:** 4Ps Health Grant, maternal care, child health, conditional cash transfer, urban poverty

## INTRODUCTION

### Background of the Study

The Pantawid Pamilyang Pilipino Program (4Ps) was a flagship initiative of the Philippine government that aimed to reduce poverty and improve the well-being of low-income families. Launched in 2007, the 4Ps functions as a conditional cash transfer program that provided financial assistance to impoverished households, primarily those with children aged 0 to 18 years (Garcines, 2017). This assistance was tied to specific conditions, such as ensuring regular school attendance for children, maintaining health checkups for young children and pregnant women, and participating in family development programs (Pañares & Rapista, 2023). The program's core objective was to break the cycle of intergenerational poverty by improving access to education and healthcare, which were vital for human capital development (De Jesus & Rivera, 2020).

In urban poor communities like Tondo, Manila, the 4Ps significantly influenced maternal and child health. Tondo presented unique challenges to accessing essential health services, as it was known for its high population density and limited healthcare resources. Despite these challenges, the 4Ps were instrumental in encouraging families to seek critical medical care such as prenatal care, safe deliveries, and child immunizations (Malinao et al., 2022). The financial incentives provided by the program helped offset healthcare costs for impoverished families, enabling them to prioritize health services that would otherwise have been unaffordable. This was particularly important in improving child health outcomes and ensuring that maternal care was accessible to vulnerable populations.

However, the program's effectiveness in addressing health concerns was often constrained by systemic issues. Overcrowded healthcare facilities, limited medical personnel, and insufficient financial aid for larger families frequently prevented the full realization of the 4Ps' goals in communities like Tondo (Balacuit, 2018). Additionally, while the program contributed to improved health outcomes in aspects like reduced stunting and better school attendance, external factors such as inflation and resource shortages continued to hinder its long-term success (Cho et al., 2020). Strengthening healthcare infrastructure and increasing financial support were essential to fully address the maternal and child health needs in such marginalized urban areas.

### Review of Related Literature

#### The Pantawid Pamilyang Pilipino Program

The Philippine government's major social protection program was called the Pantawid Pamilyang Pilipino Program, or 4Ps for short. According to Garcines (2017), the goal of this conditional cash transfer program, launched in 2007, was to help underprivileged Filipino families become less destitute and to enhance their general well-being; in this case, the 4Ps operated on the basis of giving qualified households financial support, provided they met certain requirements pertaining to family development, health, and education. The 4Ps were primarily directed at the poorest of the poor in Philippine society, with an emphasis on households with children between the ages of 0 and 18. Potential recipients were identified by the program using a comprehensive evaluation that took into account a number of socioeconomic characteristics. After enrolling, participating families were given regular financial handouts to help them with basic necessities and to promote long-term investments in the development of human capital (De Jesus & Rivera, 2020). Beneficiaries were encouraged to adopt good behavioral changes through the conditionalities linked to the 4Ps. Pañares and Rapista (2023) highlighted that these requirements included making sure children went

to school on a regular basis, keeping young children's and pregnant women's immunizations and health checkups up to date, and taking part in family development programs. The initiative aimed to interrupt the intergenerational cycle of poverty by improving access to healthcare and education through the attachment of financial aid to these criteria.

The 4Ps were expanded and improved several times throughout the years in order to increase its efficacy and reach. From its early test phase, the program developed into one of the nation's biggest social security programs, serving millions of Filipino families in various locations. The 4Ps remained a key element of the Philippine government's plan to combat poverty and encourage inclusive growth as it progressed.

### **The Health Grant of the 4Ps**

For a maximum of 12 months, qualifying households received a set monthly health grant of ₱750.00 under the Pantawid Pamilyang Pilipino Program (4Ps). By encouraging participants to adhere to certain requirements, such as enrolling children in school and guaranteeing vaccines for those aged 0–5 years, the program sought to enhance maternal and child health (Frufonga, 2015). Since the financial assistance removed financial obstacles, women were able to access essential medical treatments and attend routine prenatal checkups, demonstrating the program's favorable link with improved prenatal care among recipients. Although inequalities still existed in isolated barangays, studies also showed a rise in the use of medical facilities for prenatal visits, especially in places with easily accessible health infrastructure (Pasuelo, 2019).

The 4Ps health grant's postnatal care outcomes showed notable advancements in promoting medical attention right after delivery. Families were encouraged by the program to follow advised medical procedures, such as vaccination regimens and routine pediatric visits (Chaudhury et al., n.d.). Households that benefited from the 4Ps were more likely to obtain necessary postnatal care for mothers and newborns, which lowered mortality rates among these groups, according to research from the Department of Social Welfare and Development (DSWD). Nevertheless, some research indicated that regional health inequities and differing degrees of program knowledge may have restricted how beneficial these results were.

The 4Ps health grant demonstrated a moderate effect in lowering postpartum problems and enhancing maternal mental health in the context of postpartum care. The program's financial assistance enabled women to focus on their recuperation, get therapy, and pursue postpartum depression treatment (Once et al., 2019). Additionally, by holding health seminars, the initiative promoted community involvement and raised awareness of the significance of long-term maternal health. However, issues still existed, such as uneven grant use for postpartum care and low medical professional participation in underprivileged barangays.

### **Maternal Health in the Philippines**

Over the last decade, maternal health in the Philippines experienced substantial challenges, with maternal death rates being a major issue despite continuous measures. Maternal health efforts historically focused on increasing access to services while addressing hurdles such as budgetary restrictions and infrastructural deficiencies. According to studies, while Basic Emergency Obstetric and Newborn Care (BEmONC) facilities had grown in number, their functionality varied, especially in rural regions. Key challenges to utilizing these services included a lack of competent health professionals and restricted access to medical supplies (Cagayan et al., 2022). This necessitated focused expenditures in healthcare systems to ensure consistent service delivery.

The effect of the COVID-19 pandemic from 2020 to 2022 increased maternal health issues. Data showed

that maternal mortality, stillbirth rates, and cesarean section prevalence increased throughout this time, which might have been related to limited healthcare resources and access to prenatal and delivery care. The case fatality rate for pregnant women with COVID-19 was 1.18%, emphasizing the vulnerability of health infrastructure during public health emergencies (Eclarin et al., 2024).

Efforts to alleviate maternal health inequities also included community-based interventions, particularly in rural and underprivileged regions. Quantitative research showed that social variables such as economic position, cultural norms, and geographic constraints had a major impact on service usage. Mothers reported difficulty receiving prenatal and delivery care, particularly in Luzon, where more than half of maternal death cases were recorded. Improving maternal health outcomes still required strengthening local health systems and tackling socioeconomic obstacles (Nisperos, 2022).

### **The Effects of the 4Ps Health Grant in Maternal and Child Health Services in Tondo, Manila**

The Philippines faced considerable challenges in ensuring access to quality healthcare, particularly for disadvantaged families residing in urban areas. The Pantawid Pamilyang Pilipino Program (4Ps) Health Grant has emerged as a pivotal strategy for poverty alleviation and the enhancement of health outcomes. However, the effectiveness of this program within such contexts remained a topic of ongoing debate.

The 4Ps Health Grant played a vital role in improving healthcare access for mothers and children in impoverished regions such as Tondo, Manila. This initiative provided financial assistance aimed at encouraging families to seek essential medical care, including prenatal visits, safe deliveries, and child vaccinations. According to Malinao et al. (2022), the conditional cash transfers associated with 4Ps incentivized low-income households to prioritize healthcare that may have otherwise been financially inaccessible. This initiative was particularly significant in areas where limited resources frequently obstructed access to quality healthcare.

Characterized by its dense population and constrained resources, Tondo, Manila presents unique challenges for the 4Ps Health Grant; following this, overcrowded healthcare facilities, a shortage of medical personnel, and limited access to emergency care and nutritional support all contributed to the complex health needs of the community. Balacuit (2018) underscored the effectiveness of the 4Ps Health Grant in enhancing access to essential health services within marginalized communities, noting significant increases in school attendance and improved health outcomes among children. Nevertheless, despite these achievements, the program encountered various challenges. A primary concern was that the financial assistance provided by 4Ps was often inadequate for larger families. This financial shortfall led to the misallocation of resources, as families struggled to balance their limited budgets across healthcare, food, and education. Consequently, enhancing resource allocation and monitoring mechanisms was essential to ensure families could fully benefit from the 4Ps Health Grant.

Furthermore, Cho et al. (2020) examined the initial success of the program in addressing child malnutrition (e.g. stunting), which remained a significant concern in Tondo and similar regions. While the 4Ps initially contributed to a reduction in stunting rates, indicative of long-term improvements in child nutrition and development, external factors such as inflation and a decrease in the number of eligible beneficiaries adversely affected its long-term effectiveness. In areas where many children were at risk of malnutrition, consistent and adequate nutrition was imperative for their development. Cho et al. (2020) advocated for targeted interventions to ensure that the most vulnerable children continued to benefit from the 4Ps program, particularly as it adapted to evolving economic conditions.

Bustos et al. (2023) further investigated the relationship between the 4Ps Health Grant

and child malnutrition, specifically focusing on the issues of wasting and stunting. Their research indicated that while the subsidy had contributed to reducing stunting in certain regions, its impact on wasting had been minimal. In contexts like Tondo, poverty, poor sanitation, and limited access to nutritious food prevailed, but this disparity underscored the necessity for a more tailored approach. Bustos et al. (2023) proposed that localized solutions were crucial for improving child health outcomes, addressing both environmental and economic factors, and these findings suggested that its limitations needed to be addressed to ensure a comprehensive approach to health and nutrition, even though the 4Ps program had had a positive impact. To maximize the program's impact, it was essential to complement financial assistance with targeted improvements in healthcare facilities, increased staffing, and more robust emergency services. In conclusion, the 4Ps program made meaningful contributions to the enhancement of maternal and child health by increasing access to healthcare and utilization of services; however, its effectiveness was impeded by systemic limitations within the local healthcare infrastructure. Additionally, addressing both long-term and immediate health risks, such as acute malnutrition, was crucial for the program to fully achieve its objectives. As suggested by Cho et al. (2020), strengthening monitoring and evaluation mechanisms, adjusting the level of financial support to account for inflation, and evolving healthcare needs would ensure that the 4Ps remained responsive to the needs of the most vulnerable families in Tondo.

### **The Utilization Pattern of Maternal and Child Health Services in Urban Poor Communities**

Healthcare insurance played a significant role in utilizing facility-based delivery for childbirth. Gouda et al. (2016) examined the impact of healthcare insurance on childbirth in the Philippines. They found that women with healthcare insurance were more likely to give birth in healthcare facilities; undeniably, this finding was essential as facility-based delivery was associated with lower maternal and infant mortality rates. The study highlighted the need for policy reforms to expand insurance coverage, especially in urban poor areas where access to facility-based care was often limited due to financial constraints.

Another aspect that affects the utilization of health was the patient experience. Doroteo et al. (2020) conducted a study investigating patient experiences in the Philippines and how these experiences shaped health-seeking behaviors. They found that patient satisfaction with healthcare, particularly maternal and child health, was a strong predictor of future utilization. Positive interactions with healthcare providers and the quality of care were significant factors influencing whether women in low-income urban areas returned to healthcare facilities for future care.

Social networks also played an important role in shaping health service utilization, especially for women in low-income communities. Luu et al. (2022) explored how social networks facilitated access to maternal health. The study showed that women often relied on advice and referrals from their social networks to navigate healthcare systems. In urban poor communities, these networks were crucial for providing information and support, especially for those who faced barriers such as financial limitations or lack of awareness about availability.

Contraceptive use was another important component of maternal health that was affected by multiple factors in low-income settings. Nagai et al. (2019) identified several barriers to the use of effective contraception in the Philippines, including misconceptions about contraceptive methods, cultural beliefs, and access issues. These barriers were particularly pronounced in urban poor communities where reproductive health services may not have been readily available or where there was a lack of education regarding contraception. Addressing these barriers could have significantly impacted the utilization of

maternal and child health services by reducing unintended pregnancies. Adolescent pregnancy was a persistent issue that influenced the utilization of maternal health services. Maravilla et al. (2018) tracked trends in repeated pregnancy among adolescents in the Philippines from 1993 to 2013. Especially from low-income backgrounds, teenage mothers often lacked access to reproductive health services. This gap in service utilization could have led to poor health outcomes for both the mother and child. Similarly, Habito et al. (2019) explored adolescent sexual initiation and pregnancy, noting that early sexual activity was associated with higher rates of adolescent pregnancy. These studies emphasized the importance of improving reproductive health education and services in urban poor areas to prevent adolescent pregnancies and improve maternal health outcomes.

### **The Perceived Quality of Maternal and Child Health Services among 4Ps Beneficiaries**

According to Republic Act No. 11310, Section 3, the Pantawid Pamilyang Pilipino Program (4Ps) was a conditional cash transfer program designed to assist impoverished households by providing financial support for a maximum of seven years. It was launched in 2008 and institutionalized in 2019. Its primary goals were to reduce poverty, improve healthcare access for children and mothers, and increase school enrollment, ultimately reducing child labor. Numerous studies highlighted the positive impact of the 4Ps program on healthcare utilization. For instance, Organo (2023) noted that the 4Ps program positively affected the nutritional status of its beneficiaries by increasing meal frequency, improving Body Mass Index (BMI), and providing access to vitamins. In addition, the program positively impacted the overall well-being of beneficiaries by improving their health, nutrition, education, household expenditure, and income. Overall, these findings indicated the critical role that 4Ps played in enhancing the quality of life for impoverished families, particularly in urban and rural communities.

Despite the positive outcomes, there were still challenges in the utilization of healthcare among 4Ps beneficiaries. Ambong (2024) observed that the majority of Conditional Cash Transfer (CCT) families spent a significant portion of their household health budgets on inpatient care. While the National Health Insurance Program covered approximately 40% of healthcare costs, a large portion of hospitalization expenses still had to be paid out of pocket. Additionally, common issues such as unpaid hospital bills, poor customer service, and difficulties navigating healthcare facilities often hindered effective healthcare utilization. These barriers extended to maternal and child health, which were vital components of public health aimed at reducing maternal and infant mortality rates.

Maternal and Child Health Services (MCHS) remained a focal point of the Department of Health (DOH) in the Philippines, with several initiatives implemented to improve healthcare outcomes for women and children. However, urban communities such as Tondo, Manila faced significant barriers in accessing basic healthcare. According to Flores et al. (2021), these challenges included an insufficient number of health facilities and an uneven distribution of available resources. This inequitable access further exacerbated the difficulty of receiving consistent and reliable maternal healthcare, particularly in marginalized areas where poverty was prevalent.

Moreover, in spite of the implementation of healthcare programs, such as PhilHealth's Maternity Care Package (MCP) and the 4Ps, the maternal mortality rate (MMR) in the Philippines remained high. Cagayan et al. (2022) reported that Luzon, the country's largest island, continued to struggle with elevated MMR rates. Poor quality healthcare and staffing by disrespectful or abusive personnel contributed to women's negative perceptions. Coupled with financial constraints, socio-cultural beliefs, and personal or environmental factors, these negative perceptions discouraged many women from seeking essential

maternal health services. In some cases, abuse was documented in maternal health settings, which further discouraged healthcare utilization.

Despite the advancements brought about by programs like 4Ps, significant challenges remained in the quality and accessibility of healthcare. Financial constraints, poor customer service, long waiting times, and inadequate attention from healthcare providers were persistent issues that contributed to the dissatisfaction of 4Ps beneficiaries with the healthcare system. These barriers not only limited access to maternal and child health services but also undermined the broader goals of improving health outcomes for vulnerable populations. In conclusion, while the Pantawid Pamilyang Pilipino Program (4Ps) had brought about improvements in healthcare access and overall well-being among its beneficiaries in maternal and child health, the utilization of healthcare services remained hindered by persistent barriers. Financial challenges, negative experiences in healthcare facilities, and logistical issues continued to prevent many beneficiaries from seeking adequate care. In this situation, these ongoing problems emphasized the need for further improvements in healthcare service delivery to ensure that programs like 4Ps could fully achieve their intended outcomes, especially in communities with high levels of poverty and limited access to quality health services.

### **The Socioeconomic Determinants of Health Services Perception in Tondo**

As one of Manila, Philippines' most populous and economically deprived areas, Tondo offered a distinctive case study for analyzing the socioeconomic variables and perceptions of healthcare. The residents' perspectives on and interactions with the healthcare system had been profoundly influenced by the area's historical background of poverty, overcrowding, and restricted access to resources. In order to create health policies and treatments that effectively met the unique needs of this population, it was imperative that these perspectives be understood.

The opinion of health care in Tondo is significantly influenced by income levels. Numerous locals were impoverished, which had an immediate effect on their capacity to access and pay for medical treatment. Financial constraints frequently resulted in the belief that high-quality healthcare was unaffordable, delaying care-seeking behaviors and increasing dependence on alternative—and perhaps less effective—treatment options, according to research by Deluna and Peralta (2014). The economically disadvantaged population often viewed healthcare as a luxury rather than a fundamental right, which made early intervention and preventative treatment more difficult to access.

The degree of education had a big impact on how people in Tondo saw and used healthcare. Low health literacy was frequently linked to lower educational attainment, and this resulted in misunderstandings regarding illnesses, medical conditions, and the healthcare system as a whole. Research by Hoffman and Lutz (2019) found that a predisposition for conventional healing techniques and mistrust toward contemporary medical procedures might have arisen from this information gap. On the other hand, a study conducted by Al-Worafi (2016) demonstrated that those with greater levels of education were inclined to view formal healthcare more favorably and to seek professional medical attention when necessary.

Another important factor influencing how Tondo locals saw healthcare was their work situation. Many residents had sporadic or irregular jobs, which frequently meant they did not have access to social security or health insurance. Even with the presence of public health facilities, this insecure status contributed to the perception of healthcare as being costly or unavailable. This problem was exacerbated by the worry of losing income from taking time off work for medical visits, which made people reluctant to seek healthcare

outside of emergencies (Patdu et al., 2022).

Tondo's overcrowding and generally unsanitary housing conditions had a direct effect on people's health and opinions of medical services. The frequency of communicable illnesses under these conditions caused people to believe that some health concerns were inevitable, which lowered their opinion of the importance of preventative healthcare, in line with a thorough study by Hardoy and Satterthwaite (2014). Furthermore, the idea that high-quality healthcare was not easily accessible to the population may have been influenced by the physical distance and transportation difficulties associated with getting to health facilities from some of Tondo's more isolated or crowded regions.

Perceptions of healthcare were also influenced by deeply ingrained cultural traditions and beliefs in the Tondo community. Locals' perceptions of the value and necessity of official healthcare were influenced by the coexistence of modern medicine with traditional healing practices and spiritual beliefs. Sometimes, a preference for recognizable, community-based healthcare solutions over institutional medical treatment resulted from these cultural considerations (Withers et al., 2018). In order to enhance the way healthcare was seen and used in Tondo, healthcare practitioners had to acknowledge and honor these cultural viewpoints.

Residents' opinions were greatly influenced by the standard and accessibility of public health in Tondo. A study by Reyes et al. (2020) claimed that frustration and mistrust of the healthcare system were caused by overcrowded facilities, lengthy wait times, and the impression that public health clinics lacked resources. Community members may have been discouraged from seeking care or sticking to treatment programs as a result of these experiences, forming a collective perception. To alter these beliefs and develop confidence in the healthcare system, public health services had to be provided with greater quality and accessibility. In Tondo, social networks and community dynamics were major factors in determining how people saw health care. Personal experiences from friends, neighbors, and community organizations had a significant impact on how each person viewed the quality and accessibility of healthcare. While bad experiences could catch on fast and discourage entire populations from using particular healthcare services, positive ones might have inspired others to seek care (Laranjo et al., 2015). Improving public opinion of healthcare could have been achieved by utilizing these social networks for community-based interventions and health education.

The community's view of healthcare had been shaped by the historical background of healthcare delivery in Tondo, which included previous public health campaigns, vaccination programs, and medical emergencies. The system's successes and failures had influenced degrees of faith in the healthcare system's ability to handle prior health emergencies, based on research by Foster et al. (2016). In order to address residual issues or distrust and improve current attitudes while building on past triumphs, politicians and healthcare practitioners needed to have a thorough understanding of this historical backdrop.

Lastly, it was impossible to ignore how technology and information availability had shaped Tondo residents' perceptions of healthcare. Even with digital gaps, people's perceptions of healthcare alternatives and how to acquire health information had shifted as more people gained access to smartphones and the internet. Positive effects, like increased health awareness, had resulted from this digital access, but there were drawbacks, such as the dissemination of false information (Feldman et al., 2018). Using technology to enhance health literacy and make correct health information more accessible presented an opportunity to improve Tondo residents' perceptions of healthcare.



### Synthesis and Research Gap

Several studies on the Pantawid Pamilyang Pilipino Program (4Ps) underscored its role in improving healthcare access, particularly for prenatal care (Olapane et al., 2021). However, research on the utilization of postnatal services remained limited, which was critical for understanding the program's full impact on maternal and child health. Mixed outcomes in child health were also been observed, with increasing concerns about the prevalence of severe stunting among children, even with the 4Ps' benefits (Ulep, 2023). Further analysis showed that while social networks and familial support significantly influenced healthcare access, challenges like indirect healthcare costs and geographical barriers still hindered optimal service utilization (Vohra-Gupta et al., 2022). This was particularly pronounced in urban settings such as Tondo, Manila, where the urban poor faced heightened access issues. Although the 4Ps program facilitated better healthcare utilization, its impact on postnatal care and child health outcomes remained underexplored (Canlas et al., 2022). Additionally, rising cases of child stunting despite improved healthcare facilities signaled a need for targeted interventions (Haruna & Gorah, 2020).

The research gap focused on the underutilization of postnatal care, the persistent child health issues despite the 4Ps, and the unclear role of social networks in health-seeking behavior. These areas warranted further investigation to enhance maternal and child health in urban poor areas like Tondo (Ambong et al., 2021). Addressing these gaps provided a more holistic understanding of how 4Ps beneficiaries could better access healthcare and improve maternal and child health outcomes in marginalized urban settings.

### Statement of the Problem

This study aimed to determine the significant correlation between the 4Ps (Pantawid Pamilyang Pilipino Program) Health Grant and the perceived improvement of maternal and child health among women of reproductive age in four barangays in Tondo, Manila. To address this central problem, the following specific questions were posed:

1. What was the frequency distribution of women benefiting from the 4Ps maternal and child health in the four barangays in Tondo, Manila?
  - Number of women receiving health benefits
  - Number of women attending regular health check-ups
  - Frequency of health education and awareness programs attended
2. Is there a significant correlation between avilment of maternal care and receiving of regular health services through 4Ps Health Grant with the perceived improvement in maternal and child health among women of reproductive age?

### Significance of the Study

The main goal of the study was to determine the significant correlation between the implementation of the 4Ps (Pantawid Pamilyang Pilipino Program) and the perceived improvement in maternal and child health among women of reproductive age in four barangays in Tondo, Manila. Policymakers and recipients alike found great value in this study on the relationship between the 4Ps initiatives and the perceptions of women of reproductive age regarding advances in child and maternal health care in Tondo, Manila. The goal of the research was to identify areas of success and potential areas for improvement in program implementation by examining this relationship.

The results of this study pointed to possible ways to improve the effects of the 4Ps program on maternal

and child health. As supported by Orbeta and Pacqueo (2016), these included suggestions for targeted interventions, more efficient allocation of resources, and modifications to program components specifically addressing health-related outcomes. These findings were deemed beneficial for policymakers and program managers in enhancing the 4Ps initiative and in better addressing the needs of its intended beneficiaries. The primary beneficiaries of this research were women of reproductive age and their children living in urban poor communities—not only in Tondo but potentially throughout the Philippines. By identifying effective strategies and areas for improvement, the study contributed to the development of the quality and accessibility of maternal and child health services for this vulnerable population. Furthermore, the findings were expected to support legislators, healthcare professionals, and social welfare administrators in evidence-based decision-making and program planning.

The amount of information about conditional cash transfer schemes and their effects on health outcomes in underdeveloped nations was expanded by this study. The research closed a gap in the literature and offered useful data for comparative studies by concentrating primarily on the urban poor populations and the Philippine context. The results also had consequences for comparable initiatives in other nations, providing information on how well conditional cash transfers worked to enhance mother and child health in metropolitan environments. Additionally, the study had wider effects on social welfare initiatives and public health policies in the Philippines. The study provided insight into the wider social and economic effects of the 4Ps program by analyzing the perceived gains in health care. This helped guide future policy choices and program extensions. The ultimate goal of this research was to support existing initiatives in the Philippines to enhance the health and welfare of marginalized communities by implementing evidence-based policies and programs.

### **Scope and Delimitation**

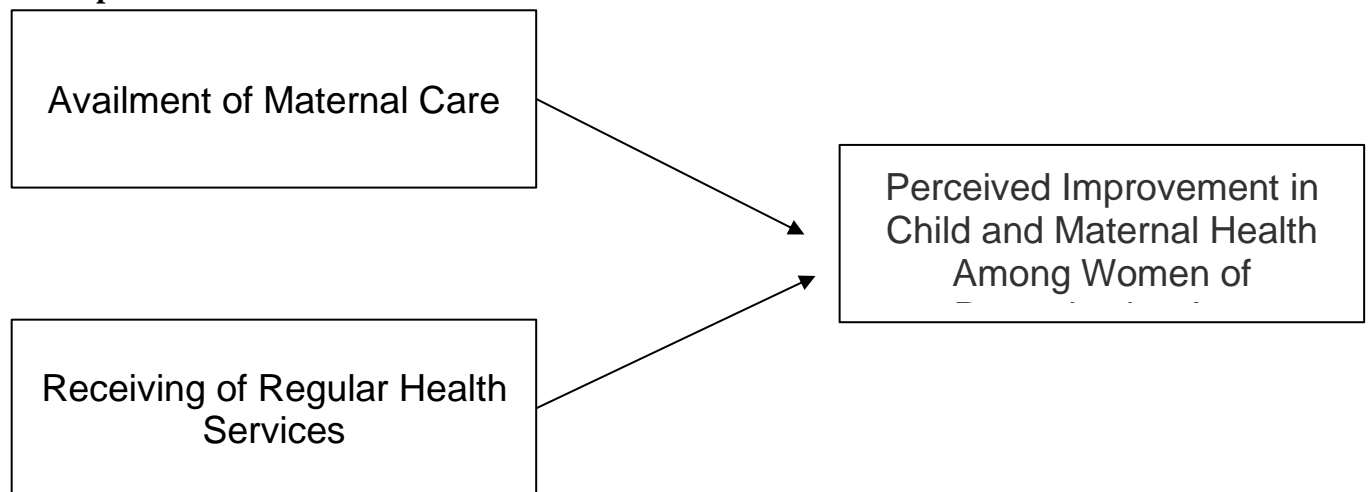
The purpose of this study was to look at the significant relationship between the adoption of the Pantawid Pamilyang Pilipino Program (4P's) and the perception of women of reproductive age in four chosen barangays in Tondo, Manila, regarding the quality of child and maternal health. The study concentrated on how the 4Ps initiatives affected a range of factors related to maternal and child health, such as nutrition, vaccination rates, prenatal care, and access to medical facilities (Acupido et al., 2020).

The research took place in four barangays in Tondo, Manila, which were selected based on shared demographics and 4Ps program participation. Because these barangays were representative of a variety of Manila's urban poor communities, a thorough examination of the program's impact in crowded, underdeveloped regions was possible. Women of reproductive age (20–80 years old) who lived in the designated barangays and were beneficiaries of the 4Ps program made up the target group for this study. This population was ideally suited to evaluate the perceived advancements in both domains as they were directly involved with both the 4Ps program and child and maternal health. The weeks that data collecting for this study took place, from January 11 to January 30, 2025, were planned. Within the confines of the study period, this timeframe was chosen to allow for comprehensive data collection and analysis while capturing a representative sample of experiences and perspectives. The study took a quantitative approach, measuring the relationship between 4Ps program participation and perceived advancements in maternity and child health care using statistical analysis and questionnaires. Numerical data and statistical insights into the relationship between the variables under research were provided by this technique (Sadan, 2017). Though the goal of this study was to provide light on how the 4Ps program affected mother and child health care, it must be recognized that it had limitations. The study's findings could not be entirely

indicative of the program's benefits in other Philippine cities or rural regions because it was limited to four barangays in Tondo, Manila. Furthermore, there may have been subjectivity in the results due to the emphasis on perceived changes rather than actual health outcomes. According to the words of Nayak and Narayan (2019), because the study relied on program respondents' self-reported data via forms, it may have been susceptible to recall or social desirability biases, which might have skewed the findings. Moreover, the study did not take into consideration extraneous variables that might have affected the health of mothers and children, such as modifications to regional healthcare regulations or advancements in non-4Ps program-related infrastructure. It was difficult to verify a causal relationship between the 4Ps program and reported improvements in health care because the study was cross-sectional. To ascertain the program's long-term impact on maternal and child health outcomes with more certainty, a longitudinal research would have been required (Kehr & Kowatsch, 2015). Finally, a control group of non-beneficiaries was not included in the study, which would have allowed for a more accurate comparison of health views between those taking part in the 4Ps program and those who were not. This constraint resulted from both the program's extensive deployment in the target region and ethical issues.

Not with standing these drawbacks, the study intended to offer insightful information about the perceived efficacy of the 4Ps program in enhancing maternal and child health care in urban impoverished neighborhoods, supporting the continuous assessment and improvement of social welfare initiatives in the Philippines.

### Conceptual Framework



**Figure 1. Independent/Dependent Variable Conceptual Framework**

The conceptual framework investigated the relationship between the availment of maternal care and receiving of regular health services through the 4Ps Health Grant with the perceived improvements in maternal and child health among women of reproductive age in four barangays in Tondo, Manila. The relationships between two independent variables—availment of maternal care and receiving of regular health services—and the dependent variable—perceived improvement in maternal and child health among women of reproductive age—were illustrated in the conceptual framework. The two independent variables represented factors that may have contributed to the perceived improvement in child and maternal health among women of reproductive age. Specifically, the availment of maternal care and the receiving of regular health services were hypothesized to have had a direct influence on the perceived improvement in

child and maternal health. The arrows in the diagram indicated the directionality of the relationships, suggesting that the independent variables were expected to have a causal impact on the dependent variable. Thus, the study hypothesized the following:

**Hypothesis 1 (H<sub>1</sub>):** The availment of maternal care was positively associated with the perceived improvement in child and maternal health among women of reproductive age.

Maternal care included prenatal checks, vaccinations, and nutritional assistance, among other comprehensive healthcare services that were given to women during pregnancy, delivery, and the postpartum period to protect their health and the health of their unborn children (Flores et al., 2021). Maternal and child health outcomes had been positively impacted by the Philippines' Pantawid Pamilyang Pilipino Program (4Ps) Health Grant, a conditional cash transfer program. Research had shown that beneficiaries had better health habits, used healthcare facilities more frequently, and were more aware of health concerns (Peñalba, 2019). Through initiatives like the Pantawid Pamilyang Pilipino Program (4Ps) Health Grant, maternal care services—such as vitamins, immunizations, and prenatal checkups—had greatly improved mother and child health outcomes in the Philippines. Research indicated that 4Ps recipients were more likely to obtain necessary maternal health care, such as iron supplements and tetanus toxoid vaccinations, which lowered maternal morbidity and improved pregnancy outcomes (Frufonga, 2015). Low birth weight and stunting rates among children in urban impoverished populations had been linked to regular prenatal visits and nutritional support offered under maternal care programs (Bustos et al., 2023). Despite a decline in mother and infant death rates and a rise in facility-based births, implementation issues still existed (Rosaldó et al., 2020). In addition to supply-side characteristics such as service accessibility and availability, maternal healthcare use was influenced by the mother's education, age at first pregnancy, and prenatal care visits (Valera & Silfverberg, 2015). Beneficiaries' age, income, and level of education had all been favorably connected with their adherence to program requirements, such as attending family development workshops and prenatal and postnatal checkups (Mendoza, 2023). These results implied that the 4Ps program had improved mother and child health, but more work was required to resolve the issues that still existed.

**Hypothesis 2 (H<sub>2</sub>):** The regular receipt of health services was positively associated with the perceived improvement in child and maternal health among women of reproductive age.

Regular health service receipt referred to the consistent use of healthcare interventions such as routine checkups, vaccinations, and nutritional counseling to monitor and maintain an individual's health status, particularly for preventive care and early disease detection (Frufonga, 2015). Women of reproductive age who regularly received health care reported feeling that their maternal and child health had improved. According to earlier research, women of reproductive age's views of improvements in mother and child health could be greatly impacted by frequent participation in nutrition and health programs. The provision of health education, surveillance, and services by community health professionals could enhance women's trust and health literacy (Khalid et al., 2022). Maternal health education and family planning had been shown to improve the health of mothers and children, reduce the frequency of high-risk pregnancies, and raise women's satisfaction with healthcare (Adegbite & Adenuga, 2020). Nutrition education programs that used a range of community-level intervention strategies had demonstrated efficacy in altering behavior and improving health outcomes (Dunneram and Jeewon, 2015). These interventions were particularly important because of the long-term consequences of female malnutrition, which included low birth weight, maternal death, and reproductive hazards (Baker et al., n.d.). Nutrition initiatives should have

been linked with pre-existing health services and tailored to local conditions for maximum impact.

## **METHODS**

### **Research Design**

The research established the relationship of the Pantawid Pamilyang Pilipino Program (4Ps) to the perceived improvement of maternal and child health among women of reproductive age in selected barangays in Tondo, Manila. It applied a correlational research design to evaluate the relationship between participation in the 4Ps program and the perceived improvement in health. The correlational research design allowed the investigation of associations between variables without their manipulation (Sadan, 2017). This was an appropriate design since it showed significant patterns and relationships between the independent variable (4Ps participation) and the dependent variables (perceptions of health service improvement), as these were based on the actual experiences of the beneficiaries. Choosing a correlational design was essential to understanding the impact of 4Ps on health perceptions, which provided insights for policy adjustments and targeted program improvements.

### **Setting**

This study focused on the implementation of the Pantawid Pamilyang Pilipino Program (4Ps) in four selected barangays in Tondo, Manila. Chosen for their shared demographics and high program participation, these barangays represented urban poor communities in the city. The research aimed to assess the perceived improvements in maternal and child health among women of reproductive age (20–80 years old) who benefited from the 4Ps program (Acupido et al., 2020). Using a quantitative research design, data were collected through statistical analysis and questionnaires from January to March 2025. The study focused on key aspects such as prenatal care, vaccination rates, and access to healthcare facilities to measure the program's impact.

Despite its strengths, the study acknowledged limitations. Findings might not have reflected the program's effects in other regions, such as rural areas. The reliance on self-reported data introduced potential biases, including recall errors and social desirability effects (Kehr & Kowatsch, 2015). Additionally, the absence of a control group restricted comparisons between beneficiaries and non-beneficiaries. These constraints, coupled with the study's cross-sectional nature, highlighted the need for longitudinal research to better understand the 4Ps program's long-term impact. Nonetheless, the study provided valuable insights into the program's role in enhancing healthcare for urban poor communities (Deluna Jr. & Peralta, 2014; Hardoy & Satterthwaite, 2014).

### **Respondents and Sampling Technique**

Women were the respondents in this study—current beneficiaries of 4Ps, aged between 20–80 years, and residing within four barangays of Tondo, Manila. They were selected since they were directly involved with maternal and child health and, most importantly, were the primary beneficiaries of the 4Ps program's conditional cash transfer benefits, which aimed to improve the health and education outcomes for poor families (Pañares & Rapista, 2023). This population study was significant to gather firsthand information on how the 4Ps affected perceptions of and access to maternal and child healthcare, clarifying the effectiveness of the program in urban impoverished neighborhoods such as Tondo (Balacuit, 2018).

The study employed snowball sampling, a form of non-probability sampling technique wherein the initial respondents helped identify and recruit more participants through their social networks (Goodman, 1961). Snowball sampling was useful in reaching hard-to-reach populations and in studies where participants

shared certain characteristics or experiences, such as being 4Ps beneficiaries involved in maternal and child health programs. This method allowed researchers to access a larger portion of the required sample while keeping the focus on women in Tondo actively participating in the 4Ps program.

This was the approach that made it possible for the study to collect significant and directly relevant data, especially given the time and budget constraints. The use of snowball sampling enabled the recruitment of participants who were most likely to provide detailed insights into the program's perceived impacts on maternal and child healthcare access (Parker et al., 2019). While this technique may have limited generalizability due to its reliance on participant referrals, it allowed for a more in-depth exploration of the phenomena under study by focusing on individuals with firsthand experience of the 4Ps program (Palinkas et al., 2015).

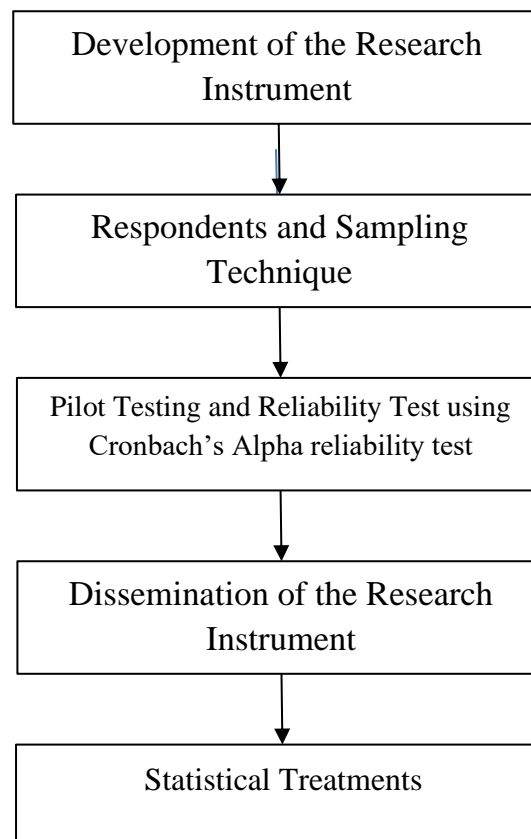
Targeted recruitment through snowball sampling ensured that the study focused on a specific set of respondents whose experiences with the 4Ps program were needed to assess whether the program was perceived as effective in improving health outcomes in similar urban impoverished settings like Tondo. This approach was necessary for capturing nuanced, context-specific knowledge that could inform improvements in policy and program development for comparable communities.

#### **Data Gathering Tools**

The primary data gathering tool for this study was a self-made survey questionnaire. It was designed to assess the relationship between the Pantawid Pamilyang Pilipino Program (4Ps) and perceived improvements in maternal and child health outcomes. The tool measured key variables, such as maternal care utilization and perceived health improvements, and captured respondents' experiences with 4Ps. The survey included questions focusing on specific aspects, such as participation in prenatal and postnatal care, frequency of immunizations, and satisfaction with healthcare services. A 4-point Likert scale was used for closed-ended questions. Demographic questions were also included to provide context for the analysis.

The tool was reviewed by experts to ensure clarity, relevance, and alignment with the study's objectives. A pilot test was conducted with 10% of the sample size to collect feedback and refine the questionnaire. The reliability of the tool was tested using Cronbach's alpha. A value of 0.70 or higher confirmed acceptable internal consistency. These steps ensured that the tool was valid, reliable, and capable of gathering meaningful data on the impact of the 4Ps program on maternal and child health outcomes.

### Flowchart of the Study



**Figure 2: Flow Chart of the Study**

### Research Procedures

#### Development of the Research Instrument

The development of the survey questionnaire was carried out through several structured steps to ensure its validity and reliability. To begin, an introductory section was prepared, which included an informed consent form. The purpose of the study was explained, the voluntary nature of participation was emphasized, and the confidentiality of the respondents' answers was assured. Respondents were also informed of their right to withdraw from the study at any time without consequences. The consent form was signed by the respondents to confirm their understanding and agreement.

Demographic information such as age, educational attainment, employment status, number of children, and marital status was collected. This information provided context for the analysis while maintaining the privacy of the respondents.

The core section of the questionnaire focused on assessing the respondents' perceptions and experiences. Likert scale questions, ranging from 1 (Strongly Disagree) to 4 (Strongly Agree), evaluated topics such as the accessibility and quality of maternal and child healthcare, as well as the impact of the Pantawid Pamilyang Pilipino Program (4Ps) on healthcare access and outcomes.

A non-probability sampling approach called snowball sampling was employed. Researchers identified a small group of respondents who met the study's criteria. These initial respondents were then asked to refer to other potential respondents who also met the criteria. Although this approach limited the control of the

researchers, it was effective in accessing harder-to-reach populations (Pasikowski, 2023). Snowball sampling ensured that the sample included respondents with relevant characteristics or experiences critical to the study's focus. This method was particularly valuable in studies requiring targeted recruitment and the inclusion of participants with shared experiences or perspectives (Naderifar et al., 2017).

### **Respondents and Sampling Technique**

A pilot test was conducted to validate and check the reliability of the study instrument. Respondents for this pilot stage were selected through snowball sampling, where initial participants recruited others from their personal social networks. This method was particularly suitable for gaining access to populations with specific characteristics or experiences, such as women aged 20–80 years who had benefited from the Pantawid Pamilyang Pilipino Program (4Ps) and received maternity and child health services. Feedback was collected during the pilot phase on respondents' comprehension, relevance, and clarity of the administered questions. The instrument was then refined to better meet research objectives and enhance usability for respondents.

Snowball sampling also guided the identification of respondents for the larger study, ensuring that participants met the precise criteria for inclusion. The study focused on women who were active 4Ps beneficiaries and participants in maternity and child health programs. Recruitment was concentrated in four barangays in Tondo, Manila. This method efficiently accessed participants through their social networks, creating a respondent pool aligned with the study's goals while maintaining a manageable scope (Johnson, 2014). Demographic data collected included age, educational attainment, employment status, number of children, and marital status to provide an in-depth understanding of the target population.

To determine the appropriate sample size, the Central Limit Theorem (CLT) was employed as the basis for the sampling methodology. At least 30 respondents were included in the pilot testing to ensure reliable results and meaningful analysis. Sample sizes of 30 or more were generally considered sufficient for the CLT to apply, which ensured that the sampling distribution of the sample mean approximated a normal distribution, regardless of the shape of the population distribution (Ganti, 2024). This principle supported the use of at least 30 respondents for robust pilot testing.

### **Pilot Testing, Feedback Collection, and Reliability Test (Cronbach's Alpha)**

Cronbach's Alpha was used to measure internal consistency, which evaluates how closely related a set of items were to each other. This method assessed the reliability of the survey instrument by determining how well each question measured a single unidimensional latent variable. A higher Cronbach's Alpha value, generally above 0.70, indicated strong internal consistency, while lower values suggested that the items might not consistently assess the same construct. This reliability test helped confirm the quality of the scales and questionnaires used in assessing healthcare outcomes and social science research (Taber, 2018).

To calculate Cronbach's Alpha in Excel, the dataset was organized with each column representing an item and each row representing a respondent's answer. The researchers computed the average score for each respondent and calculated variances for horizontal and vertical sums using Excel's statistical functions. The total variance of the sum of scores across respondents was then calculated using the formula:  $\alpha = (k / (k - 1)) \times (1 - (\sum \text{item variances} / \text{total variance}))$ , where  $k$  is the number of items. Excel functions such as VAR.P for variance, and SUM and AVERAGE were utilized for the calculations.

A pilot test was conducted to ensure the reliability and appropriateness of the survey instrument, particularly in evaluating the relationship between participation in the Pantawid Pamilyang Pilipino



Program (4Ps) and perceived improvements in maternal and child health. Approximately 10% of the total sample size was included in the pilot test, based on Slovin's formula, which aligned with standard survey research practices (Andrade, 2020). The internal consistency of the survey was verified by calculating Cronbach's Alpha, with a target value of 0.70 or higher to confirm the instrument's reliability and readiness for the larger study.

### **Dissemination of Research Instrument**

Distributing surveys through face-to-face interactions or using referral methods was an effective strategy for reaching specific target groups, especially when studying niche populations. This approach allowed researchers to rely on personal connections or social networks, which increased trust and engagement with respondents (Escobar et al., 2021). Referral-based distribution, where respondents were encouraged to invite others to complete the survey, was also a powerful method for expanding sample size without extensive recruitment efforts.

The researchers distributed face-to-face survey questionnaires to women of reproductive age across four barangays in Tondo, Manila, to examine the correlation between participation in the Pantawid Pamilyang Pilipino Program (4Ps) and perceived improvements in maternal and child health. The survey focused on four key parameters: access to healthcare such as check-ups and immunizations, the quality of healthcare received including doctor availability and treatment quality, health outcomes such as maternal mortality and child immunization rates, perceived satisfaction with healthcare in terms of convenience and affordability, and the impact of community health initiatives like nutrition programs and family planning. This direct engagement ensured researchers could clarify any questions and collect detailed, accurate data that reflected respondents' experiences across these critical dimensions of healthcare.

For the final analysis, the research team used a rank-biserial correlation to examine the relationship between the utilization of the 4Ps Health Grant and perceived improvements in maternal and child health. This statistical method measured the strength and direction of the association between program participation and respondents' perceptions of healthcare access, service quality, and personal health outcomes. By combining reliability testing and statistical analysis, the study validated the survey as a robust tool for assessing the 4Ps program's impact on health in Tondo, Manila.

### **Statistical Treatments**

The questionnaire that was used in this study utilized a 4-point Likert scale, which was ordinal and non-normally distributed; hence the data it collected was discontinuous. Non-parametric statistical tests were therefore appropriate for analysis since they did not make any assumptions about the distribution of the data (Field, 2018). To determine the degree and direction of the link, the study used Rank Biserial Correlation to analyze the relationship between dichotomous variables (such as Yes/No answers in the last section of the questionnaire) and ordinal data (age, educational attainment, employment status, number of children, and marital status). This approach was especially helpful when parametric test assumptions, such as normality, were not fulfilled. In order to effectively handle the data and compute the correlation coefficient, Microsoft Excel was utilized for data analysis.

To calculate Rank Biserial Correlation using Excel, the first step was to assign ranks to the continuous data, and then group the dichotomous data (e.g., Yes = 1, No = 0). The Rank Biserial Correlation was calculated by determining the difference in ranks between the two groups and applying the formula:  $r_b = 2(R_1 - R_2) / (n_1 \times n_2)$ , where  $R_1$  and  $R_2$  were the sum of ranks for each group, and  $n_1$  and  $n_2$  were the number of respondents in each group. Excel's functions like RANK.AVG and COUNTIF helped

with ranking and summing the data. After computing the correlation, the significance level was assessed to determine if the relationship between the variables was statistically meaningful (Field, 2018) using Statistical Package for the Social Sciences (SPSS).

### **Data Analysis**

The Rank Biserial Correlation is a nonparametric statistical test applied to determine the strength and direction of the association between an ordinal variable and a binary categorical variable. It is particularly helpful in the case of ordinal data or when the conditions of normality necessary for parametric tests cannot be fulfilled. By ordering the continuous data and comparing two groups' rank distributions, the rank biserial correlation coefficient gives a measure of the way one variable increases or decreases with respect to the other (Nikitina & Chernukha, 2023). Since the Rank Biserial Correlation is not directly provided in SPSS, the Spearman Rank-Order Correlation was utilized instead. Spearman's rho plays an analogous function in the analysis of relationships between ordinal or not-normally distributed variables and provides an analogous interpretation to the rank biserial coefficient.

Rank Biserial correlation was calculated using Spearman's Rho method. SPSS's user-friendly graphical interface also allowed for easy visualization of the data, aiding both interpretation and presentation of results (Field, 2018). In practice, the correlation coefficient was used in research that measured associations between a dichotomous variable and an ordinal or continuous outcome. The coefficient scores between -1 and 1, with higher scores near the extremes showing that there is a stronger association and lower scores nearing 0 revealing little to no relationship between variables (Nikitina & Chernukha, 2023).

### **Ethical Considerations**

Research with vulnerable groups must take ethics into account since it may affect the rights and welfare of respondents. It is necessary to be mindful of the privacy and autonomy of respondents while examining the effects of the Pantawid Pamilyang Pilipino Program (4Ps) on mother and child health in Tondo, Manila. Respondents' autonomy is protected by ensuring informed consent, which calls for them to be properly informed about the objectives, risks, and advantages of the study before participating (Reyes et al., 2020). Respondents' socio economic condition necessitates taking steps to guarantee that agreement is understandable and freely, reducing the possibility of perceived pressure brought on by their financial dependence on initiatives such as the 4Ps (Ambong, 2024).

Given the private health data used in maternal and child health research, confidentiality and data security are additional ethical considerations. Data protection procedures are essential to avoid unwanted access as respondents could divulge private information about medical problems and access (Flores et al., 2021). Anonymizing data can lower the risks of personal information disclosure, and using secure data storage systems helps to protect respondent privacy and ensure that findings improve public health without jeopardizing individual confidentiality (Republic of the Philippines, 2012).

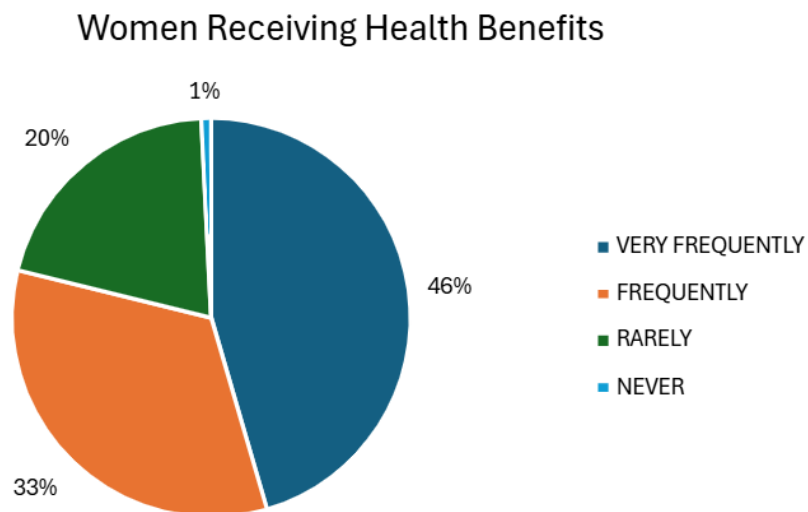
In order to accurately depict respondent experiences and account for both positive and negative program outcomes, researchers need lastly address any potential biases. This involves acknowledging healthcare infrastructure constraints that might affect program benefits seen without exaggerating the effectiveness of the 4Ps because of systemic health inequities (Cho et al., 2020). Advocating for systemic reforms that might improve healthcare access in urban poor areas based on findings and appropriately conveying study results to stakeholders are additional aspects of ethical duty (Cagayan et al., 2022).

**RESULTS and DISCUSSIONS**

This part presented the frequency distribution and correlation analysis of mothers who had received the 4Ps maternal and child health program in four barangays in Tondo, Manila. The data clearly indicated the utilization of health services, including health benefits, routine health check-ups, and health education programs. It examined the correlation between the use of services and perceived change in maternal and child health outcomes. The discussion revolved around how to frame these results within the context of the existing literature, the program's positive impact and the structural problems with the potential to limit its success. By examination of statistical correlations between service use and health outcomes, this section sought to provide some indication of aggregate success of the 4Ps program in promoting health-seeking behavior among poor urban women.

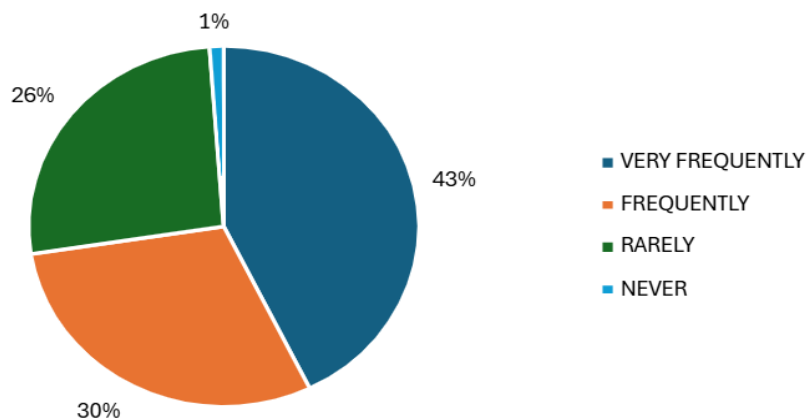
**1. What was the frequency distribution of women benefiting from the 4Ps maternal and child health in the four barangays in Tondo, Manila?**

Frequency Distribution of Women Benefiting from the 4Ps Maternal and Child Health Program



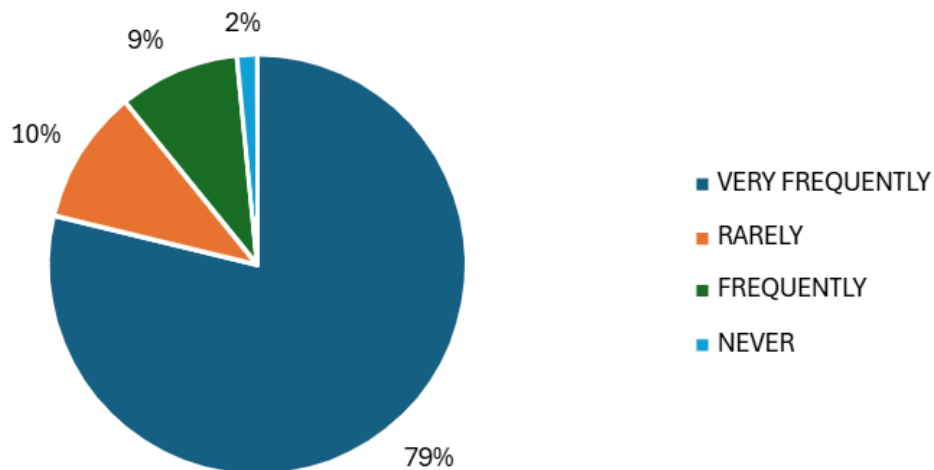
**Figure 3: Women Receiving Health Benefits**

Women Attending Regular Health Checkups



**Figure 4: Women Attending Regular Health Check-ups**

Frequency of Health Education and Awareness Programs Attended



**Figure 5: Frequency of Health Education and Awareness Programs Attended**

The frequency distribution results indicated that the 193 female 4Ps beneficiaries in 4 barangays in Tondo, Manila utilized intensively the maternal and child health services of the program. Specifically, 46% (116) of the respondents used very frequently the health benefits, and 33% (85) utilized them frequently, which means that almost four out of five women benefited continuously from the program. Fewer, 20% (52) rarely and 1% (2) never had used the benefits, showing virtually zero dropout from subjects. Likewise, for health check-ups, 43% (109) reported going very frequently and 30% (76) frequently, showing healthy monitoring as a large part of their medical behavior. By comparison, together only 27% (70) had registered rarely or never visits, suggesting rather high utilization of clinical services. In addition, participation in health education and awareness meetings was also highly high at 79% (152) with very frequent attendance by the participants, an indicator that uptake of health literacy programs was high in the community. The impressive attendance rate in learning activities was a sign that the 4Ps health grant was not just ensuring access to the service economically but also doing its share in improving knowledge and women's empowerment. These results aligned with Malinao et al. (2022) and Organo (2023) that conditional cash transfer schemes like 4Ps can truly contribute to improving the quality and usage of services and health-seeking behavior, particularly among the poor marginalized urban communities. The consistent patterns of usage revealed in the results may have suggested that the program had already done a lot of work to get urban poor mothers to highly value maternal and child health interventions. However, the presence of a minority that rarely used services suggested that there remained underlying structural or individual barriers to be overcome.

The high utilization rates of maternal and child health services observed among 4Ps beneficiaries in Tondo, Manila, were consistent with results from more extensive studies on conditional cash transfer (CCT) programs in the Philippines. For example, Olapane et al. (2021) indicated that the 4Ps program effectively enhanced health compliance among the region's beneficiaries, reflecting a good direction in health-seeking behavior. Likewise, a mixed-method research by Herrera et al. (2023) in the Caraga Region underscored that beneficiaries of 4Ps had high adherence to health conditionalities such as frequent health check-ups

and attendance at family development sessions, which helped improve the health literacy and empowerment of women. In addition, a national survey conducted by Bautista et al. (2023) highlighted that the 4Ps program was highly effective in stimulating the demand and use of maternal and family planning services in many parts of the Philippines. The studies altogether implied that the 4Ps program was important for encouraging regular interaction with health care, which may have ultimately resulted in better maternal and child health.

The frequency distribution in the pie chart gave a basic insight into the level of utilization of maternal and child health services by 4Ps beneficiaries in Tondo, Manila. The high utilization rates in health benefits, check-ups, and educational programs implied a high take-up of the program's services, which meant that the majority of participants were actively utilizing the healthcare services provided by the 4Ps. Such broad involvement created an important context for further investigating whether such participation related to reported health improvements among maternities and children. As a result, Table 1 explored the statistical associations between service utilization and service beneficiaries' reports of improved health, employing non-parametric methods appropriate to the ordinal quality of the data.

**2. Is there a significant correlation between availment of maternal care and receiving of regular health services through 4Ps Health Grant with the perceived improvement in maternal and child health among women of reproductive age?**

<b>Table 1.</b> Correlation between Availment of Maternal Care and Receiving Regular Health Services with Perceived Improvement in Maternal and Child Health			
Variables	Perceived Improvement in Maternal and Child Health		Correlation
Strength	Correlation Coefficient	p-value	
Availment of Maternal Care	.199	.006	Weak Significant
Receiving of Regular Health Services	.214	.003	Weak Significant

**Correlation is significant at the 0.01 level (2-tailed).**

According to the Spearman's rho correlation analysis outcomes, there was a statistically significant correlation between the availment of maternal care and perceived improvement in maternal and child health ( $r = .199$ ,  $p = .006$ ), and between the regular receipt of health services and perceived improvement

in maternal and child health ( $r = .214$ ,  $p = .003$ ). Since both of the  $p$ -values were less than the significance value of 0.01, the results contained enough evidence against the null hypotheses. This inferred that maternal care availment and the receipt of health care services on regular basis were each positively and significantly related to good perceived outcomes on maternal and child health among the women of childbearing age and hence supported of the articulated research hypotheses. The  $p$ -values ( $< 0.05$  in both instances) suggested that these correlations were statistically significant, in that the probability of these correlations happening by chance was low. Statistical significance, however, did not mean strong effect. Both of these relationships are weak correlations, which indicates that the 4Ps program affected perceived health outcomes but that there might have been more influential factors. The significance values, as determined by the absolute magnitude of the observed correlation coefficients, provided a better understanding of the relationship between 4Ps Health Grant utilization and maternal and child health outcomes. The correlation coefficient recorded on the utilization of maternal care was .199, which fell between 0.10 and 0.39, indicating a weak but statistically significant relationship. This finding implied that, while maternal care utilization improved the health outcomes of women beneficiaries, its impact was limited, possibly due to obstacles such as irregular service delivery, differences in health literacy, or logistical issues common in urban poor communities such as Tondo. On the other hand, receiving regular health services had a slightly higher coefficient of .214, which was also within the range of weak correlation. Although this also indicated a limited effect, the marginally higher value may have reflected increased access to general health services; however, these might not have been directly aligned with maternal and child health needs, reducing their overall impact. When combined, these findings revealed that both variables had statistically significant but practically weak effects on improving health, emphasizing the need to strengthen service delivery, ensure consistency, and tailor interventions more closely to the specific health needs of women and children under the 4Ps program.

These findings aligned with the findings of Frufonga (2015) and Peñalba (2019), who reported that intervention alone, i.e., on maternal health, was found to have a greater impact on health status than was the situation with general access to health service. The moderate association was a reflection that the 4Ps health grant succeeded in prompting health-seeking behavior and enhancing health perceptions among poor women but, with this, that complementing interventions, like investment in infrastructural development, capacity-building among health workers, and enhanced postnatal care, needed to be added if the greatest benefits of the program were to be reaped. Unless such loopholes in the system were plugged, the full potential of the 4Ps health grant to deliver long-term maternal and child health gains would be only partially realized.

The relationships presented in Table 1 captured more general empirical patterns in earlier conditional cash transfer program research. 4Ps participation, as noted by Araos et al. (2022), had been linked to enhanced uptake of maternal services, albeit outcomes were influenced by external service quality and health system capacity. In the same vein, Orbeta and Paqueo (2016) stressed that although the program was able to induce behavioral compliance, e.g., showing up for prenatal check-ups, its impact in bringing about sustainable health effects relied extensively on institutional reinforcement and consistency in service delivery. Further, cross-country research has validated that low but meaningful statistical correlations between utilization of services and self-reported improvement in health were prevalent in community-based health financing schemes (Bastagli et al., 2016).

On top of the substantial but weak significant correlations evident in Table 1, it became necessary to better

contextualize the strength and significance of these relations. Although the preliminary findings reinforced the fact that maternal care usage and frequent reception of regular health services were positively related to health perceptions, the low correlation coefficients highlighted the need to investigate the magnitude and direction of these associations further. Table 1 hence enhanced the analysis by accurately quantifying the association of each independent variable with perceived health improvement, giving a clearer view of which areas of the 4Ps health grant had a greater impact on the health perceptions of the beneficiaries.

## CONCLUSION

This study aimed to investigate how the Pantawid Pamilyang Pilipino Program (4Ps) Health Grant influences maternal and child health service utilization and outcomes among women of reproductive age in four barangays in Tondo, Manila. The findings revealed a weak but significant positive correlation between the utilization of maternal care and routine health services through the 4Ps and the perceived improvement in maternal and child health. The results highlighted that conditionally targeted financial assistance could induce greater utilization of critical services like prenatal visits, immunization, and postnatal visits. The 4Ps Health Grant functioned not only as a financial assistance program but also as a behavioral intervention that encouraged positive health-seeking behaviors among urban poor women. Nonetheless, the program's effect was tempered by overcrowded facilities, uneven medical staffing, and unmet postnatal and nutritional needs. Although the 4Ps demonstrated its potential in reducing healthcare access barriers, additional structural enhancements in healthcare delivery were needed to optimize its long-term impact. Essentially, this research contributed to the body of knowledge on how focused social welfare programs intersected with public health objectives, especially in under-resourced urban settings.

## RECOMMENDATIONS

### Recommendations for Future Research

Based on the findings of this research, future researchers are encouraged to explore the long-term effects of the 4Ps Health Grant on maternal and child health outcomes in urban poor communities. Although the present study centered on perceived improvement, future research would have been well advised to employ longitudinal designs that followed actual health data over longer periods. This might have given a broader perspective on the effectiveness and sustainability of the program, especially in preventing malnutrition, lowering maternal complications, and decreasing child mortality rates.

Future research would have also been useful in examining a comparative analysis in different geographic locations, including rural settings, to determine whether the outcomes of the program differ depending on local healthcare infrastructure and access to care. Comparing regions could help identify contextual factors that both enhanced and diminished the effectiveness of the program. Furthermore, examining the effects of social support networks and health education on program impact could have provided more nuanced insights into how behavior and community-level phenomena both affected and were affected by policy implementation. This line of inquiry could have elucidated how social interactions impacted healthcare-seeking behavior and program compliance.

Additionally, involving the health professionals' as well as implementers' outlook might provide an enriched understanding of barriers and enablers pertinent to the execution of the 4Ps. The mixed-methods study design can reveal undertones in the implementation of services, program perception, and operational setbacks which could have potentially gone unnoticed through quantifiable questionnaires.

Lastly, as economic cycles keep varying, subsequent enquiries also needed to focus on the implications of inflationary pressure, policy changes and fiscal reorganisations on ongoing usefulness and adequacy of the program.

Lastly, future research should have increased the sample size substantially and, where possible, employed total population sampling within specific communities to provide more representative and inclusive results. Through this process, there would have been no relevant subgroups inadvertently omitted, and more complete insight could have been gained into program impacts among a diverse range of demographic and socioeconomic backgrounds. In so doing, researchers would have been able to increase the statistical power of the results and provide more generalized conclusions to the 4Ps' effectiveness and implementation equity.

### **Recommendations for Practice**

Given the findings, real changes to the current structure of the 4Ps Health Grant could really maximized its potential. Perhaps one of the most critical issues was the insufficiency of the grant amount for big families, which tended to spread the meager resources too thin over competing priorities like food, education, and health. Solving this problem would have meant recalibrating the financial assistance to properly capture family size and living expenses, particularly in metropolitan areas such as Tondo, where financial stresses were extreme and ongoing.

Service delivery under healthcare should have also been improved to complement the accomplishments through economic incentives. Overcrowding of clinics, waiting periods, and the lack of medical personnel undercut the capacity of recipients to receive prompt and quality care. Strengthening local health infrastructure, capacity-building investments for health workers, and the availability of necessary supplies are realistic measures that would supported the program's desired outcomes. Furthermore, community outreach and education programs could have enhanced beneficiaries' knowledge about the services provided to them, minimized misinformation, and establish institutional care trust.

Monitoring and evaluation mechanisms needed to be perfected to capture not only program conditions compliance but the beneficiary actual health impacts as well. Such a feedback mechanism would have maintained accountability as well as feed back information capable of informing evidence-based policy improvements. Incorporating assistance services such as mental counseling, nutrition guidance, and post-delivery care more comprehensively into the program might have filled service gaps that still went unserved, particularly for new mothers.

Through synchronizing the program's implementation with the lived experiences of its beneficiaries, and ensuring that services remained accessible and responsive, the 4Ps could have better fulfilled its mandate of lifting the health and well-being of the country's most vulnerable families.

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