

Parental Involvement and Academic Achievement: Keys to Translating No Poverty and Quality Education SDGs in Philippine Peripheral Communities

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Abstract

The Pantawid Pamilyang Pilipino Program (4Ps) is a conditional cash transfer (CCT) program to alleviate socio-economic conditions in the Philippines, addressing Sustainable Development Goals (SDGs) 1 (No Poverty) and 4 (Quality Education). It attempts to address poverty, which is a risk factor to education among Filipinos. However, the program impact on education and economy remains understudied. This paper investigated the recipients of the CCT and analyzed parental involvement and its influence on students' academic achievement. In this study, parental involvement refers to parenting, learning at home, volunteering, school decision-making, collaborating, and communicating, while academic achievement pertains to the students' academic performance in the core learning areas: Science, Mathematics, English, and Filipino. Using a descriptive-correlation method, the respondents were randomly selected comprising 306 parents and 306 students in Tarragona District, Davao Oriental, Philippines. The data were analyzed using Spearman Rho Correlation and Confirmatory Factor Analysis (CFA). The results showed there was no statistical correlation between parental involvement and student's academic achievement. Parents had low involvement in learning at home, volunteering, and school decision-making. On the other hand, the students demonstrated high academic achievement in the core learning areas. The significant step of the Philippine government for education through the CCT is an effective approach to keeping children in school. Emphasis must be placed on strengthening parental involvement in children's education to ensure academic success.

Keywords: Academic achievement, conditional cash transfer, educational management, parental involvement, sustainable development goals, the Pantawid Pamilyang Pilipino Program.

Introduction

Education plays an indispensable role in sustainable development and is considered the primordial step for human agency (Fedosejeva et al., 2018; Berhanu et al., 2011). In the Anthropocene era, it plays an important role in increasing human capital and individual development for better living (Salite et al., 2020). However, for poverty-stricken communities, the concern about access to quality education becomes evident and governments are challenged to enact programs that would keep children in school. Considering the unsustainability of the age as described by Salite et al. (2021), efforts should be strengthened to advance Sustainable Development Goals 1 (No Poverty) and 4 (Quality Education).

In developing economies like the Philippines, poverty is considered one of the hindrances to educational success. It has been one of the major societal challenges in the country, especially in the education sector (Dube, 2019). Over recent years, the Philippines ranked low in international competency assessments, especially in Science, Technology, Engineering, and Mathematics (STEM) (Sison, 2022). Some studies suggest this could be attributed to language competency (Racca & Lasaten, 2016; Nuñez, 2021). Conditions in peripheral communities in Mindanao, where government intervention and support are scarce, are even more alarming.

Social problem is one factor that modifies changes in the student's performance (Bersanov et al., 2018). In 2018, the Organization for Economic Cooperation and Development (OECD) examined around 600,000 junior high school students coming from 79 countries using the Program for International Student Assessment (Schleicher, 2018). According to the survey, there is a strong relationship between a student's socio-economic condition and scholastic achievement among Filipino students; hence, interventions should be done for them. Such interventions hold the keys to achieving "no poverty" and "quality education" in the Philippines, which is strongly emphasized in the first and fourth Sustainable Development Goals (SDGs).

The Asian Development Bank reported that as of 2014, about 25.2 % of Filipinos live below the national poverty line (Albert et al., 2015). The country ranked second after Myanmar as compared to the rest of Southeast Asia. The gap between the richest and poorest of the population explains, among other reasons, the slow-pacing poverty reduction in the Philippines compared to its neighboring ASEAN countries (Briones, 2017). In turn, poverty becomes a risk factor for education, being considered one of the top barriers to access to quality education.

The Philippine government initiated a Conditional Cash Transfer (CCT), the Pantawid Pamilyang Pilipino Program (4Ps) implemented by the Department of Social Welfare and Development (Guevara & Martinez, 2017). One of the program's key intentions is to provide financial means to support children's education. The program started to earn positive results since its implementation but despite the optimistic results, there are critiques and questions about whether the program will result in academic achievement, completion of education, and eventually gainful employment (Reyes et al., 2015). The teachers recognize the same problems and are even confused about opportunities for children and youth from the 4Ps households. While Salite et al. (2023) reported that parents form part of the stakeholders of the children's education, it is interesting to look at how this translates to academic achievement in the local context.

Using Confirmatory Factor Analysis (CFA), this research aimed to determine the influence of parental involvement in terms of parenting, learning at home, volunteering, school decision-making and advocacy, collaborating with the community, and communicating on the academic performance of their students. This research also intended to determine the academic performance of the 4Ps recipients in the core learning areas: English, Mathematics, Science, and Filipino.

The research hypotheses were stated as follows: 1) There is no effect between parental involvement and performance of the 4Ps recipients in core learning areas; 2) There is no significant difference between parental involvement and performance of the 4Ps recipients in core learning areas when grouped according to age, gender, and educational attainment of parents; 3) There is no model that fit for parental involvement and performance of the 4Ps recipients in core learning areas.

Research Design

This research used the descriptive-correlational method employing quantitative approaches in data collection. This method includes data collection to establish the relationship between variables (Gray et al., 2011; Mantzoukas, 2009). Specifically, this method was used to establish the relationship between parental involvement and academic performance in core learning areas of the 4Ps recipients from Tarragona District, Davao Oriental Division for School Year 2019–2020. Tarragona is a third-class municipality with a population of 26 996 people (Philippine Statistics Authority, 2020). Being a peripheral community in Mindanao, Tarragona cradles 60 youth dependents to every 100 of the working age group (PhilAtlas, 2023). Such dependency ratio projects the number of school children in the community, who are most likely recipients of 4Ps.

Data Gathering Method

The data were gathered among the 4Ps beneficiaries, specifically the parents and students in secondary schools of Tarragona District under the Department of Education (DepEd) Schools Division of Davao Oriental. A stratified proportionate allocation using Cochran's Sampling Technique with one student per parent was used. A total of 306 parents and 306 students were surveyed in this study.

A request letter was submitted to the Office of the Schools Division Superintendent, which issued the permit to conduct this research. After getting an endorsement, the letters were sent to the concerned School Heads to ask permission to survey with their 4Ps parents and students.

Before data gathering, informed consent was secured from the respondents as an indication of their voluntary and willful participation in the survey. The names of the respondents were not shown for security and confidentiality purposes. The respondents were briefed about the purpose of the study, and they were assured that all the information gathered would be kept confidential. All instructions were clearly stated and explained by the researchers to the respondents to obtain reliable and valid results. The survey questionnaires were administered in August 2019 and ensured that all items were answered. After the retrieval, the data were collated, tabulated, and tested using various statistical tools for analysis.

Research Instrument

A survey questionnaire was generated to gather personal information of the respondents such as their age, sex, and household income. A family involvement questionnaire was adapted from the study of Rover et al. (2016), investigating several indicators: parenting, learning at home, volunteering, school decision-making, collaborating, and communicating. The same were translated into Cebuano to be understood by the respondents. A cross-tabulation percentage was utilized to properly present the data. The multiple correspondence analyses were used to provide the general level of parental involvement and student's academic performance in core learning areas. In the interpretation of the output, the membership categorization technique was used (Kent, 2015). The Spearman rho correlation was used to define the relationship between the variables. The test of significance was also observed as the basis of rejecting or accepting the null hypothesis of the study. For the interpretation of results, this study used Cohen's (1988) categorical criteria of correlation interpretation as a guide. Kruskal-Wallis statistics were used in the statistical analysis of the impact of moderating factors such as age, sex, and educational level. Structural equations modeling (SEM) using Confirmatory Factor Analysis (CFA) was employed to determine the extent of influence of parental involvement on student's academic achievement.

Results

The socio-demographic profile of the respondents is shown in Table 1. A majority (84 %) were female and mostly belonged to the middle age category (39–49). These 4Ps parents barely attained a formal tertiary education. This implies that these parents relied on less stable jobs whether contractual or part-time work as house help, farm laborers, and product re-sellers (Casimiro et al., 2019; Guevara & Martinez, 2017). The 4Ps parents were identified as indigent individuals whose families had very low or no income at all. Parents who belonged to this social level usually focused their daily activities on the survival of food for the family members.

Table 1

Socio-Demographic Profile of 4Ps Parents in Tarragona, Davao Oriental, Philippines

Socio-demographic Profile		Sex	Total	Percentage
Age Category		Male	Female	
17–27	0	3	3	1 %
28–38	9	60	69	23 %
39–49	29	127	156	51 %
50–60	10	57	67	22 %
61–71	1	10	11	4 %
Education Level				
Elementary	22	103	125	41 %
Secondary	23	135	158	52 %
College	4	19	23	8 %
Total	49 (16 %)	257 (84 %)	306	100 %

There were six indicators of parental involvement established in this research such as parenting, learning at home, volunteering, school decision-making, collaborating, and communicating. The level of the 4Ps parents’ involvement in home learning, volunteering, and school decision-making was categorically low. This finding can be due to the limited schooling of the parents, personal school experiences, language obstructions, and inability to write (Zhao et al., 2018; Hong et al., 2009).

Table 2
Level of Involvement of Parents in Tarragona, Davao Oriental, Philippines

Level of Parents’ Involvement	Centroid Coordinates			Categorical Description
	Dimension		Mean (Mass)	
	1	2		
Parenting	.331	.575	.453	Moderate
Learning at Home	.625	.073	.349	Low
Volunteering	.748	.049	.398	Low
School Decision Making	.484	.118	.301	Low
Collaborating	.902	.030	.466	Moderate
Communicating	.902	.030	.466	Moderate
General	.665	.146	.406	Moderate
Cronbach’s Alpha	.898	-.268	.950	Very High

In terms of parenting, collaborating, and communicating, the results showed that the 4Ps parents were moderately involved. This implies positive academic outcomes on the part of their children since parental involvement has significant benefits from early childhood years and even beyond their adolescence stage (Loomans, 2014).

Several factors have attributed to either low or high academic performance of students. The data gathered were extensively analyzed to provide an accurate categorical description of 4Ps students’ performance. The results of the analysis are summarized in Table 3. The 4Ps students have high performance in all the core learning areas: English, Mathematics, Science and Filipino. This means that the 4Ps students in this study were motivated to perform well even though their parents’ involvement was either low or moderate level in the duration of their academic engagement.

Based on the information on the level of involvement among parents, it was shown that the level of their involvement was generally moderate while the students’ academic achievement in the core learning areas was generally high. Based on this information, a significant relationship between parental involvement and academic achievement cannot be established based on the Spearman rho correlation value of 0.019, which indicates a very low correlation. The probability generated from computation was 0.739 which was greater than the confidence level of 0.05. This indicates that there is no significant relationship between parental involvement and academic performance in the core learning areas.

Table 3

Students' Academic Achievement in the Core Learning Areas

Core Learning Areas	Centroid Coordinates		Categorical Description	
	Dimension	Mean		
	1	2		
English	.758	.464	.611	High
Mathematics	.772	.433	.603	High
Science	.802	.551	.677	High
Filipino	.820	.544	.682	High
General	.788	.498	.643	High
Cronbach's Alpha	.910	.664	.815	High

Table 4

The Relationship Between Parents' Involvement and Students' Academic Achievement

Spearman Rho		Students' Academic Achievement
	Correlation Coefficient	.019
Parental Involvement	Sig. (2-tailed)	.739

The data generated from parental involvement and students' academic achievement in core learning areas were analyzed to define a significant difference when grouped according to age, sex, and educational level. The results of the computation are presented in Table 5. When grouped according to the age of parents, the comparison suggests that there was no significant difference in parental involvement and academic performance in core learning areas. This comparison yielded a corresponding Chi-square value for parental involvement and for students' academic achievement. The asymptotic significant value is 0.610 and 0.214, respectively. These asymptotic significant levels are greater than the confidence level of 0.05.

Table 5

The Difference Between Parental Involvement and Students' Academic Achievement

Factors	Age	Number of Cases	Mean Rank	Chi-square	Degree of Freedom	Asymp. Sig
Parental involvement	17-27	3	126.17	2.694	4	0.610
	28-38	69	164.64			
	39-49	156	153.24			
	50-60	67	145.41			
	61-71	11	144.05			
Students'	17-27	3	143.50			
	28-38	69	172.60			

See next page for continuation of table

Continuation of Table 5

Factors	Age	Number of Cases	Mean Rank	Chi-square	Degree of Freedom	Asymp. Sig.
Academic Achievement	39–49	156	148.88	5.808	4	0.214
	50–60	67	150.57			
	61–71	11	119.77			
Sex						
Parental Involvement	Male	49	162.96	0.869	1	0.351
	Female	257	151.70			
Students' Academic Achievement	Male	49	128.66	0.351	1	0.026
	Female	257	158.24			
Educational Level						
Parental Involvement	Elementary	125	146.71	1.643	2	0.440
	High School	158	157.87			
	College	23	160.37			
Students' Academic Achievement	Elementary	125	152.68	0.171	2	0.918
	High School	158	153.13			
	College	23	160.50			

Asymp. Sig asymptotic significance level

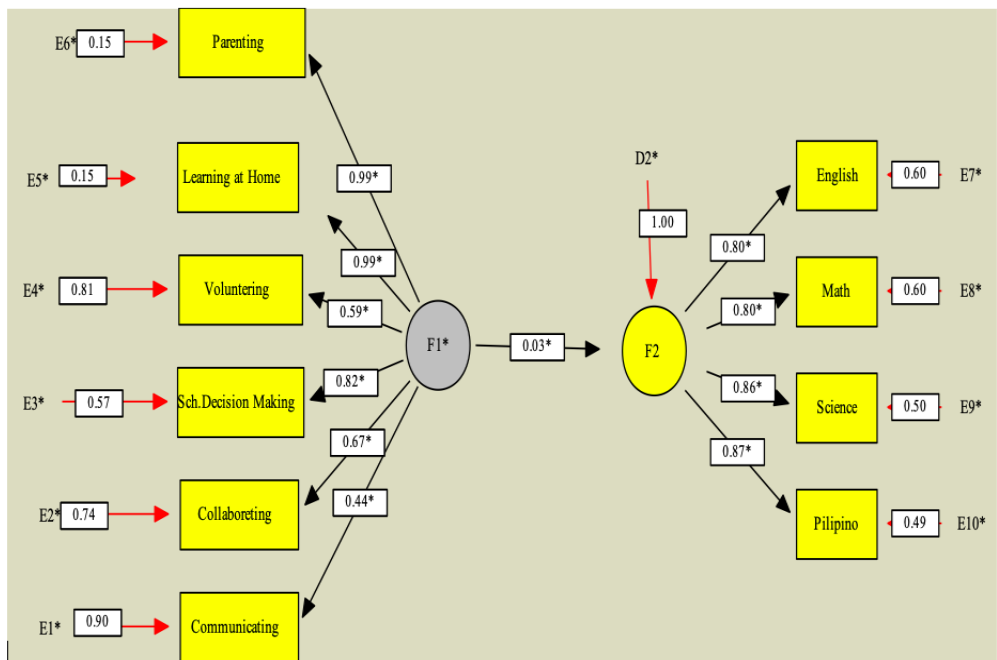
The comparison of parental involvement and academic achievement in core learning areas when grouped according to sex has the following measures. The Chi-square values obtained from computation are 0.869 and 0.531, respectively, for parental involvement and students' academic achievement. The corresponding asymptotic significant level is 0.351 for parental involvement and 0.026 for students' academic achievement. The probability value from the students' academic achievement (0.026) was less than the confidence level of 0.05. This indicates that there was a significant difference in academic achievement in core learning areas when grouped according to sex.

The last comparison is on parental involvement and academic achievement in core learning areas when grouped according to the education level. The Chi-square statistics (1.643 and 0.171, respectively) did not generate a desirable value for a significant difference. Hence, there was no significant difference in parental involvement and academic achievement when grouped according to the education level.

There were six observable factors of parental involvement (F1*) and four (4) observable factors of students' academic achievement (F2*). The independent variables include parenting, learning at home, volunteering, school decision-making and advocacy, collaborating with the community, and communicating. On the other hand, the dependent variables for students' academic achievement refer to English, Mathematics, Science, and Filipino. These variables were analyzed to create a model that best fits the data. As shown in Figure 1 above, the numbers on the right side and left side represent the errors. These were generated from the corresponding factor loadings of each parental involvement indicator. These factor loadings generate an effect size of 0.03 towards students' academic achievement with corresponding factor loadings among the observed variables such as English, Mathematics, Science, and Filipino. Based on the Confirmatory Factor Analysis (CFA), the effect size of parental involvement was categorically small on the student's academic achievement in core learning areas.

Figure 1

Confirmatory Factor Analysis



Discussion

The present study explored the relationship between parental involvement and students' academic achievement from the context of the recipients of the Philippine conditional cash transfer, the Pantawid Pamilyang Pilipino Program (4Ps). This program provides financial support to poor Filipino families with an allocation for the education of children. As a flagship program of the Philippine government, 4Ps is an important strategy to reduce poverty and enhance access to quality education, contributing to SDGs 1 – No Poverty, and 4 – Quality Education.

Over the years, the program has been seen as a crucial strategy to address the financial challenges narrowing access to quality education. Flores et al. (2019) reported that 4Ps instilled the value of education among students. Meanwhile, Utami (2022) reported that socioeconomic and household problems significantly influenced academic achievement. The educational provision provides external pressure for parents to send their children to school, especially in peripheral communities where livelihood is of topmost concern. As the findings suggest, low parental involvement in home learning, volunteering, and decision-making poses the risk of deprioritizing children's education. Wilder's (2014) study confirmed that parenting was found to be a determinant of student achievement. The same was reported by Alba et al. (2011), pointing out that children of participative parents tended to exhibit higher educational aspirations. In the study locale, the parents' low-income profile means having to choose to spend more time in livelihood activities than in facilitating their children's studies.

Most of the parents interviewed were females, middle-aged, and with low levels of educational attainment. The study found a significant relationship between parental involvement and sex, while none for age and educational attainment. Parenting gender roles are evident with female parents more involved while the males primarily being responsible for financial provision. The same was documented in other studies that male parents were less involved, and had more pressuring behaviors as compared to females who were more encouraging and motivating to their children (Brannen et al., 2013; Mutodi & Ngirande, 2014). Appropriate analysis involving sex-disaggregated data in parenting is deemed essential.

Although not evident in the present study, parents' educational attainment is also relevant. The findings of Li and Qiu (2018) suggested that the children's success in school had something to do with the educational attainment of their parents, who could provide conducive learning environment for their children. They can understand the lessons being taught at school and can communicate with their children better about school-related work and activities (Martinsone et al., 2023). The same is true with the study of Berhanu et al. (2011), which shows that the academic achievement of students was influenced by the parental education level. According to Salite et al. (2021a), there is a need to understand individual roles as key players in sustainability. Therefore, it is important to enforce policies (e.g., 4Ps) that encourage parents to get more involved in their children's education.

It is worth noting that the students have high academic achievement in core learning areas: Science, Mathematics, English, and Filipino. This presents a tangible opportunity for curricular integration. Limited efforts have been undertaken to mainstream Education for Sustainable Development (ESD) in the Philippines. Valencia (2018) asserted that ESD had to be integrated into the school system, particularly in environmental education, disaster risk reduction, and climate change education. In the context of basic education, such important concepts may be mainstreamed in the core learning areas, particularly in the Science curriculum. This is an important strategy for learners and their parents to determine the impacts of conditional cash transfer programs on poverty reduction and enhanced access to quality education.

Interestingly, the achievement in Mathematics is high in this study contrary to several studies on the subject's difficulty. Velez et al. (2023) reported the need to address difficulty in learning Mathematics concepts. Further studies need to be undertaken to investigate learning difficulties, especially in Science, Technology, Engineering, and Mathematics (STEM) as these are crucial points for global learning assessments. The paper of Racca and Lasaten (2016) also pointed out that language competency and performance in Science and Mathematics were statistically related. This information needs to be considered in designing programs to increase parental involvement and mainstreaming the same into an ESD curriculum.

The Spearman rho correlation and the Confirmatory Factor Analysis (CFA) revealed that the effect size of parental involvement towards the student's academic achievement in core learning areas was categorically small. This underscores that parental involvement is not the sole determinant of academic achievement. Other variables not included in this study may be explored, including motivation, intelligence, and study habits (Steinmayr et al., 2019; Jafari et al., 2019). The findings of this study could be applied to ESD by ensuring high levels of parental involvement and enhancing students' academic achievement.

Based on the findings, the researchers argue that parental involvement and students' academic achievement are important considerations in ensuring that 4Ps

contribute to global SDGs. Although no statistical correlation has been found between the two variables, the results imply the need to increase parental involvement in education. The policy of requiring parents to report their children's educational milestones is an effective strategy. However, there should be methods of intrinsically inculcating the value of education among them for sustainability. While students' academic achievement in the core learning areas is high, the curricular integration of ESD appears to be strategic. Overall, the study results may be used as a benchmark to investigate the impacts of the 4Ps on the global SDGs.

Conclusions

This study revealed valuable information about parental involvement and students' academic achievement among recipients of the Pantawid Pamilyang Pilipino Program (4Ps) in a peripheral community in Davao Oriental, Philippines. It was found that the parents had moderate involvement, except in terms of home learning, volunteering, and decision-making which were at low levels. Female parents were also found to be more involved than their male counterparts, which necessitated an intervention to ensure their active engagement in their children's education. This information uncovers the priority of increasing parental involvement by inculcating the importance of education in uplifting socio-economic conditions. There is also a need to maintain the high academic achievement of secondary school students in the core learning areas. The possibility of integrating ESD into the curriculum, particularly in Science, may be explored. However, parental involvement and students' academic achievement are not statistically related based on the Spearman rho correlation and Confirmatory Factor Analysis (CFA). This implies that other factors, such as motivation, intelligence, and study habits, among others may be investigated in further studies. The contributions and impacts of the 4Ps program towards the global Sustainable Development Goals (SDGs) 1 (No Poverty) and 4 (Quality Education) must be assessed. This will further elaborate on the importance of the program and could lead to propositions for improving parental involvement and academic achievement across the country.

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