



# **Effectiveness of the Interdepartmental Pediatric Ambulatory Care (IPAC) Strategy in Increasing the Level of Satisfaction of the Pediatric Patients at the Outpatient Department in a Government Hospital in Marinduque: A Quasi-Experimental Research**

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## **ABSTRACT:**

Children's illnesses are especially challenging because their course and prognosis differ from the adults as their physical and mental maturation has not been fully reached. This study shall focus on the sick children at the outpatient department in a government hospital in Marinduque where long waiting lines are commonly observed leading to anxiety and stress. We are introducing the Interdepartmental Ambulatory Care or IPAC Strategy to improve the level of satisfaction of these pediatric patients. The IPAC strategy is the participation of other departments optimizing the waiting time at the outpatient department. In this study, the nutritionist, dentist, and general doctor gave a 15-minute lecture on proper nutrition, oral care, and hygiene and the approach to common signs and symptoms of common illnesses. The study had 30 participants who had previous consultations with the department in the past 6 months. Using the Paired T-test, the results of the study showed a statistical significance of the increased level of satisfaction after the IPAC strategy with an effect size of fair determined by the Pearson Correlation Test. The lectures were taken positively. The IPAC strategy is based on the principle of collaboration. It is flexible and does not entail costs but can be applied using the institution's existing strengths and resources. It is recommended that the IPAC strategy be applied to a wider coverage of patients to enhance its mechanics and cover more beneficiaries both patients and health workers. With its advantages discussed, institutionalization after adequate policy-making is also a good direction to take in the near future.

**Keywords:** *Ambulatory, IPAC Strategy, Outpatient, Pediatric*

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## **Introduction**

The Sustainable Development Goals (SDGs) are a worldwide plan to make the world better and fairer for everyone by the year 2030. These 17 goals, agreed upon by the United Nations in 2015, are designed to tackle big global issues like poverty, unfairness, climate change, and environmental damage. One of the goals is to lower the number of women who die during pregnancy and childbirth and also to reduce the number of children who die before they turn five (United Nations, 2015). How does our country respond to the challenges of the SDGs? The Philippines is characterized by the Philippine Statistic Authority (2023) as a country with a growing population. It encounters substantial obstacles in delivering fair and easily obtainable healthcare services. Being overpopulated with limited resources and unequal allocation of different healthcare facilities including medicines and medical supplies, the need for public healthcare services is increased especially in outpatient departments (World Health Organization, 2023).

This research shall tackle the children, specifically when they are brought to the outpatient department during illnesses. World Health Organization, (2023) states that efficient pediatric ambulatory care provides crucial significance in guaranteeing that children receive prompt and suitable medical attention, providing enhanced overall health outcomes. It has been mentioned that the issue of extended waiting periods at public outpatient departments (OPDs) has a negative effect, thus the likelihood of multiple factors that contribute to this must be reduced. Inclined to this Beck et al, (2016) recommend addressing the following: education and access to resources and poverty as it significantly impacts health outcomes. Shaw et al., (2013) promoted collaboration called Improvement Partnerships (IPs) to improve children's health. IPs focus on a scientific approach to quality improvement of its system by providing human resources and infrastructure. This research shall look into the concept of education and collaboration. This study will use the (IPAC) strategy or Interdepartmental Pediatric Ambulatory Care, a collaborative educational approach, to improve the satisfaction of the pediatric patients at the outpatient department in a government hospital in Marinduque. An efficient healthcare system has a shorter waiting time in providing its services in general resulting in enhanced patient satisfaction and optimum healthcare delivery (Li et al., 2021). The IPAC strategy would like to improve the patient experience measured by increasing their level of satisfaction by enhancing health information promotion, optimizing waiting times, and improving communication between healthcare providers and patients. By integrating different departments, the IPAC strategy seeks to provide holistic and patient-centered care to children accessing outpatient services in government hospitals. This strategy will be most useful to its research locale, Marinduque. The

public healthcare system of the province is struggling to keep up with the increasing demand for services, particularly in the area of pediatric care (Department of Health, 2023). Marinduque mirrors the same challenges of the country in general as the other regions, like a growing population, a high number of vulnerable individuals, and limited resources especially in healthcare (Philippine Statistics Authority, 2023) One of the main agendas of the provincial government is to improve the healthcare system as it is very much aware of the increasing demand of the health needs of its constituents. The study is important to understand the potential benefits of implementing an IPAC strategy in a resource-constrained setting like Marinduque. The findings may serve as baseline data to provide perspective to policymakers, healthcare providers, and administrators in developing effective strategies to improve the quality of pediatric care.

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## Methodology

### Study and Sampling Design

The study used a quasi-experimental design to determine the effectiveness of the IPAC Strategy or Interdepartmental Pediatric Ambulatory Care Strategy in increasing the level of satisfaction among pediatric patients at the outpatient department in a government hospital in Marinduque. Participants were chosen using a purposive, non-probability method.

### Research Local

The research was conducted in the heart of the Philippines Marinduque, with a total population of 239, 207 as determined by the 2020 Census during the last census in 2020 and a land area of 921.5 square kilometers (PhilAtlas, 2020). There are no private hospitals in Marinduque. The province has only one licensed functional level one hospital located in Boac as stated by CHD MIMAROPA (2022).

### Participants

The participants of the study consisted of the first 30 pediatric patients who arrived at the outpatient department in the selected government hospital in Marinduque last June 25, and July 8, 2024.

### Inclusion Criteria

The pediatric patients included in the study are patients 18 years old and below and had a previous consultation at the pediatric outpatient department at least once within the past 6 months. The pediatric patients may have any reason for consulting like fever, cough, animal bite, diarrhea, etc.

### Instruments

A survey form was used in this study. It was made by the researcher and duly validated. The survey was used to determine the level of satisfaction of the pediatric patients in the outpatient department. The survey covered 5 major areas. Each area or topic consisted of specific questions. The questions were answered by choosing from numbers 1-5 according to their level of satisfaction, with 1 as Very Dissatisfied and 5 as Very Satisfied.

### Data Collection

The researcher secured consent from the provincial government to perform the study in the selected government hospital. The researcher selected the first 30 pediatric patients who arrived at the outpatient department and had a previous consultation in the department at least once for the past 6 months in the selected government hospital in Marinduque last June 25, 2024, and July 8, 2024. The researcher discussed the nature, purpose, and mechanics of the study with the selected pediatric patients. The Consent Form was signed after the discussion with assurance of volunteerism, anonymity, and data privacy. The participants answered the survey form based on their past experience. The IPAC strategy was conducted at 10 am. The participants again answered another survey form after their consultation with the Pediatrician. The survey had additional questions on their reaction to the lectures on the IPAC strategy.

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## Data Analysis

To determine the level of satisfaction before and after the IPAC strategy, statistical tools used were Mean, Average of Means, and Mean Percentage. While on the statistical significance of the level of satisfaction before and IPAC strategy, the statistical tool used was the Paired T-test using  $P < .05$  as the significant level. Lastly, to determine the effect size of the IPAC strategy, the statistical tool used was the Pearson Correlation test.

## Results

**Table 1**

### Overall Level of Satisfaction

	Mean	N	Std. Deviation	Std. Error Mean
Mean before IPAC	3.33	30	.603	.110
Mean after IPAC	3.60	30	.634	.115

### Overall Level of Satisfaction

Table 1 shows the mean rating of 3.3 this implies that the overall satisfaction of the pediatric patients was NEUTRAL before the IPAC strategy. A mean rating of 3.6 indicates that the overall satisfaction of the pediatric patients was SATISFIED after the IPAC strategy. The level of satisfaction of the pediatric patients at the outpatient department in a government hospital in Marinduque before the IPAC Strategy was neutral and they were satisfied after the IPAC strategy. Without the intervention, the pediatric patient just waited for their turn to be seen. Their reaction was neutral, feeling the social inequality with the long waiting time according to Galvao et al. (2020). The assistance of the other departments while the patients were waiting at the outpatient department was appreciated, resulting in an increased level of satisfaction compared to the time that they simply waited for their turn to be seen by the specialist. This is supported by Zhang et al., (2023) stating that the satisfaction of patients with the subjective waiting time can be improved despite the fact that there was no modification in the actual waiting time. The satisfied reaction of the pediatric patients after the strategy may be attributable to the appreciation of the patients for the time, attention, and lecture shared with them by the hospital staff from the other departments giving them a positive outlook on health in general. The pediatric patient with a satisfied reaction develops a positive attitude towards his present ailment. They may also gain confidence in observing a healthy lifestyle by trying preventive measures. They may also look forward to coming back to the outpatient department at an early stage of a disease. The IPAC strategy may improve health outcomes, solving the claim of Moscelli et al. (2016) that a long waiting time may worsen the condition of a sick patient.

**Table 2**

### Mean Rating for the Level of Satisfaction per Lecture

Mean Value	Lecture		
	Lecture 1	Lecture 2	Lecture 3
a. Kaayusan ng panayam	3.93	4	4.13
b. Kapakinabangan ng lecture/Gamit sa pang araw-araw kong gawain	4.13	4.13	4.27
c. Kaalaman na natutunan	4.1	4.07	4.23
d. Pakiramdam sa panayam na ito	4.07	4.1	4.2

### Mean Rating for the Level of Satisfaction per Lecture

The lectures were positively accepted, statistically supported by a mean rating equivalent to 4 (satisfied) in all variables measured for the 3 lectures. Huber C., (2022) verifies the outcome believing that when several healthcare professionals work together in providing healthcare, excellent service is seen and he termed this as interprofessional collaboration. Different fields share their expertise promoting shared knowledge and interaction and responding to the health needs of the patients.

**Table 3****Overall Statistical Significance**

		Paired Differences						t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
					Lower	Upper				
Pair 1	mean before & mean after	-.2666666666	.6852518217	.125109293454	-.52254390214	-.010789431	-2.13	29	.042	

**Overall Statistical Significance**

At a significant level P value  $< .05$ , the Paired T-test showed a P value of .042 which is less than .05, the null hypothesis is rejected. Therefore, there is a significant difference in the overall level of satisfaction among pediatric patients at the outpatient department of a government hospital in Marinduque before and after the IPAC strategy. Basta et al. (2016) mentioned the importance of managing expectations. In this study, without the IPAC strategy, pediatric patients are expected to be seen by the doctor after the process of registration and interview. The duration of waiting may vary depending on different factors. With a long waiting time, the patients expressed a neutral level of satisfaction with the outpatient department service. With a long waiting time, Reichert et al. (2018) mention that waiting time must be shortened if a poor health outcome is to be avoided. With the IPAC strategy, the waiting period was optimized by listening and participating in relevant health lectures. This was not part of the expectations of the pediatric patients in the outpatient department. The added knowledge and the extra attention provided to them provided a significant increase in their level of satisfaction at the outpatient department in the selected government hospital. Mangione-Smith et al. (1998) said that a person's quality of life and longevity is likely to be improved by the health care that the person received during his childhood. The statistical significance of the improved level of satisfaction is something to look forward to in achieving better health amidst limited resources and increasing demand for service.

**Table 4****Overall Effect Size of the IPAC Strategy**

		N	Correlation	Sig.
Pair 1	meanbefore & meanafter	30	.388	.034

**Overall Effect Size of the IPAC Strategy**

Using the Scale of correlation coefficient, the value of .0388 corresponds to a FAIR degree of practical significance of the IPAC strategy. A better way of understanding problems is to determine the client's actual experience of the health system through surveys and in so doing gain trust from the public (Eke, C.B., Ibekwe, et al, 2014). According to Markow C. et al, (2019), quality improvement efforts involve good collaboration by engaging many disciplines participating in coaching and assisting peers and co-workers in the delivery of healthcare service. Like any other program, strategies have to be tried and evaluated to fit specific needs. Devers K.J, et al (2013) stated that complementary strategies may improve collaboration when programs and activities with regular evaluation are undertaken. These are the advantages of collaboration especially if regularly monitored and adjusted. The IPAC strategy can be applied with ease as it does not entail extra costs. It utilizes the spare time of other departments to cover the long waiting time at the outpatient department improving the level of satisfaction. The IPAC strategy is practical and very applicable as any other collaborative strategies.

**Conclusion**

The level of satisfaction of the pediatric patients at the outpatient department in a government hospital in Marinduque before the Interdepartmental Ambulatory Care (IPAC) Strategy was neutral and satisfied after the IPAC strategy. The difference in the level of satisfaction among the Pediatric Patients at the Outpatient Department in a Government Hospital in Marinduque before and after the IPAC strategy was statistically significant. The overall effect size of the Interdepartmental Pediatric Ambulatory Care or IPAC strategy is fair in increasing the level of satisfaction of the pediatric patients at the outpatient department in the selected government hospital in Marinduque.

## Recommendation

The IPAC strategy is an original concept. Further studies are recommended to researchers to check its effectiveness. The backbone of the IPAC strategy is collaboration. The principle of collaboration has been frequently described as beneficial. A broader range of participants may be taken to strengthen statistical significance. The IPAC strategy may also be applied to specialty fields like mental health and other mental conditions, oncologic cases, frail adults, or other sensitive fields. The study recommends its implementation and institutionalization, especially in government facilities like our selected facility that provides primary health care through its outpatient department, having challenges that include a high volume of patients amidst limited resources.

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