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IN A PERUVIAN CLINIC

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ABSTRACT

Family planning organizations such as INPPARES have incorporated reproductive health services but have not as yet advertised them effectively. Accordingly, part of their clinic infrastructure remains idle. To increase the demand for such services INPPARES developed an interactive threefold pamphlet that asked questions about the client's health and informed her about the various services at its Patres clinic in Lima, Peru. In a posttest-only true experiment conducted to evaluate the impact of the folder on client behavior, 20 calendar days were randomly assigned to the interactive IEC condition ($n = 10$) or to a control group ($n = 10$), and the cohorts of new clients on those days (with ns ranging from 15 to 39) were used as units of analysis. The group under interactive IEC showed significantly higher values than the control group for the four dependent variables in the study: number of services purchased on the day of the first visit, amount in Peruvian soles paid on that day, number of services purchased over the following 30 days, and amount in soles paid during that period. INPPARES could attain yearly revenues amounting to $40,000 as a direct effect of using the interactive pamphlet at its Patres clinic.

INTRODUCTION

Over the past few years, well-established family planning organizations in developing countries such as INPPARES, the IPPF affiliate in Peru, have strived to implement the Cairo Agenda (United Nations, 1995). In the process of including reproductive health in family planning care, they have dedicated human resources and infrastructure to provide reproductive health services that in the past were seldom offered. The problems these organizations now face is to increase utilization of the newly available reproductive health care. Currently, clients seeking family planning services may leave clinics unaware of the other reproductive health care provided. At the main INPPARES clinic, for instance, when clients were asked to name new services they would like to see the clinic offer, 34% mentioned treatment of STDs, cancer screening, antenatal control and other reproductive health services already offered by the clinic (Velásquez *et al*., 1996).

Lack of knowledge and the consequent underutilization of newly installed capacity have serious financial implications for nongovernmental organizations in the process of becoming independent of external support. At a time when international donors are phasing out their financial assistance, the partially idle infrastructure that these NGOs maintain is a needless drain of their scant resources.

Interactive IEC as a Solution

Velásquez *et al*. (1997) proposed a solution to the underutilization of reproductive health services offered by Patres, the main INPPARES clinic in Lima. They developed an interactive threefold pamphlet that visitors to the clinic could use to help decide if they needed some of the reproductive health services available on site. Based on an algorithm developed for use in Mexico and Guatemala by providers (Vernon & Ottolenghi, 1996), the pamphlet asked the client (1) whether she had been screened for cancer in the past year; (2) she or her partner showed symptoms of STDs; and (3) if she had other reproductive health problems. The folder informed the client about the appropriate services offered by Patres. Clinic receptionists were trained to give

the threefold to each new client and explain its contents using a flipchart.

Velásquez *et al.* (1997) applied this approach over 10 days chosen at random from March 6 through April 4, 1997 and used the other 10 working days of this period as a control. The purpose of the study was to determine if the interactive IEC would increase utilization and clinic revenues. Unfortunately, the results were confounded by a concomitant price reduction of the promoted services. Given the contamination, it was impossible to isolate the impact of the interactive IEC from the impact of the reduced prices. Thus, INPPARES decided to repeat the study once again, this time avoiding contamination, to test the hypothesis that the interactive IEC would (a) increase service demand; and (b) increase clinic income.

METHODOLOGY

Like in the original study, 20 calendar days were randomly assigned to the interactive IEC condition and the control group. However, in contrast to the previous approach, prices were left unchanged and the study utilized a true experimental design in which cohort data (the aggregate of clients coming to Patres on a given day) were the units of analysis.

Assignment to Treatments

The working days of four contiguous weeks from October 13th through November 7th, 1997 were chosen as the randomization units of study. A stratified random assignment of calendar days to experimental conditions was conducted to insure that the days of the week were equally represented in the experimental and control groups (e.g., two Mondays under interactive IEC and two Mondays as controls, etc.).

On the days chosen for the intervention, each new client entering the Patres clinic was directed to the Admissions counter, where a trained receptionist handed her the threefold pamphlet and explained its contents using a flipchart. The pamphlet offered early detection of gynecological cancers, diagnosis and treatment of STDs, as well as general medical, pediatric, and psychological counseling. Once the client asked for the service(s) she wanted, the receptionist entered her personal data in the Clinic Administration System and directed the client to the Cashier to pay for

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the services. The Cashier, in turn, entered the amount paid per service item.

The procedure was the same on control days, with the difference that no threefold pamphlet was given to the patient. The price of each reproductive health, family planning, or other health consultation was kept at 19 soles (about $7) both on the intervention and control days. Similar was the case of the more expensive services (ecography, IUD insertion, etc.).

Subjects and Measures

INPPARES defines a new client as any person for whom a new clinical history is opened - either a first-time visitor to the clinic or someone returning after a period of five years or longer. Upon completion of the intervention period, four sets of new client data were retrieved from the Clinic Administration System: (a) number of services purchased the day on which the clinic history was opened, (b) total amount paid in soles on that day, (c) number of services purchased over the following 30 days, and (d) total amount paid in soles during this follow-up period.

RESULTS

Table 1 shows the number of new clients and mean number of services purchased and amount paid, both on the first visit and during the 30-day follow-up period, by cohort and treatment group. Owing to the markedly non-normal distributions, a non-parametric statistic, Mann-Whitney's U-test, was selected for hypothesis-testing.

First Visit

Figure 1 shows the means and medians computed across cohorts in the first-visit data of Table 1. In each of the four comparisons, the experimental group shows larger values than the control group. The Mann-Whitney Us were 19.5 for services and 20.0 for soles, significant at the $p < .01$ and .02 levels (one-tailed), respectively.
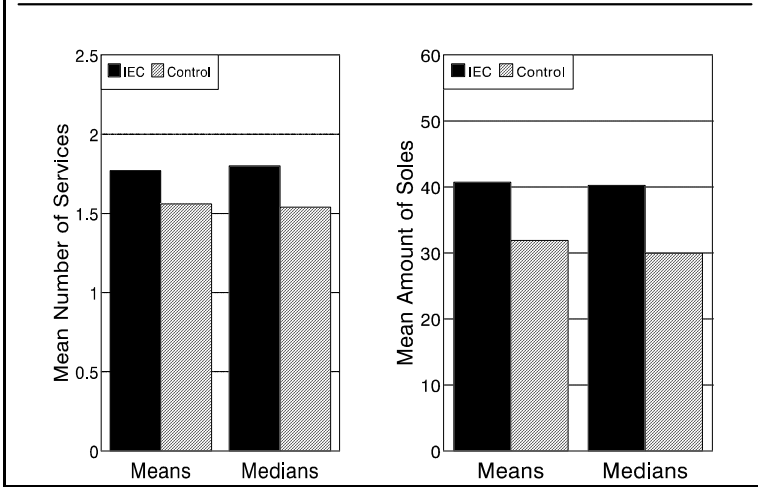
Follow-Up

Figure 2 shows the means and medians computed across cohorts on the follow-up data of

Table 1. Again, in each of the four comparisons, the experimental group showed higher **Table 1** Number of new clients and mean number of services purchased and amount paid in soles per case on the first visit and during the 30-day follow-up period, per cohort and treatment condition, INPPARES Patres clinic, Lima, Peru

Cohort and Treatment	New Clients	First Visit		Follow-Up	
		Services	Soles	Services	Soles
Interactive IEC (n = 10)					
Tuesday, Oct. 14	22	1.864	36.840	0.954	21.770
Wednesday, Oct. 15	32	1.719	33.375	1.375	34.969
Monday, Oct. 20	28	1.821	36.893	1.286	36.215
Thursday, Oct. 23	23	1.950	62.435	0.609	18.130
Friday, Oct. 24	15	1.467	29.600	0.933	24.267
Wednesday, Oct. 29	23	1.696	43.783	0.956	27.217
Monday, Nov. 3	33	1.788	43.545	0.636	20.182
Tuesday, Nov. 4	39	2.026	47.846	0.744	22.590
Thursday, Nov. 6	23	1.909	44.091	0.591	22.954
Friday, Nov. 7	24	1.458	28.875	1.167	81.167
Control (n = 10)					
Monday, Oct. 13	30	1.800	33.433	0.500	12.800
Thursday, Oct. 16	19	1.500	27.333	0.833	21.333
Friday, Oct. 17	31	1.677	45.161	1.064	15.129
Tuesday, Oct. 21	20	1.500	31.250	0.350	17.500
Wednesday, Oct. 22	24	1.458	26.542	0.708	21.625
Monday, Oct. 27	19	1.579	28.684	0.210	4.210
Tuesday, Oct. 28	17	1.412	26.941	0.647	34.176
Thursday, Oct. 30	29	1.552	27.137	0.379	27.483
Friday, Oct. 31	32	1.562	33.219	0.719	18.531
Wednesday, Nov. 5	30	1.533	39.267	0.233	12.000

Figure 1 First Visit: Means and Medians for Services and Soles for Cohorts, by Treatment Condition (n = 10)

values. The Mann-Whitney Us were 20.0 for services and 19.0 for soles, significant, respectively, at the $p <$ .02 and .01 levels (one-tailed).

Impact on Clinic Revenues

During the month of the intervention and the 30-day follow-up period, the Patres clinic earned a total of 18,384.48 soles from the experimental group and 12,920.37 soles from the control group.[1] The difference (5,464.41 soles) can be attributed to effects of the interactive IEC. We can assume that, had the pamphlet been given to both groups, this increase in revenue to the Patres clinic would have doubled (10,928.22 soles). Counting the number of copies of the pamphlet made and the time taken by the Admissions clerk to explain its use, total expenses would come to less than 1,928.22 soles. This means a net gain of at least 9,000 soles

Figure 2 Follow-Up: Means and Medians for Services and Soles for Cohorts, by Treatment Condition (n = 10)
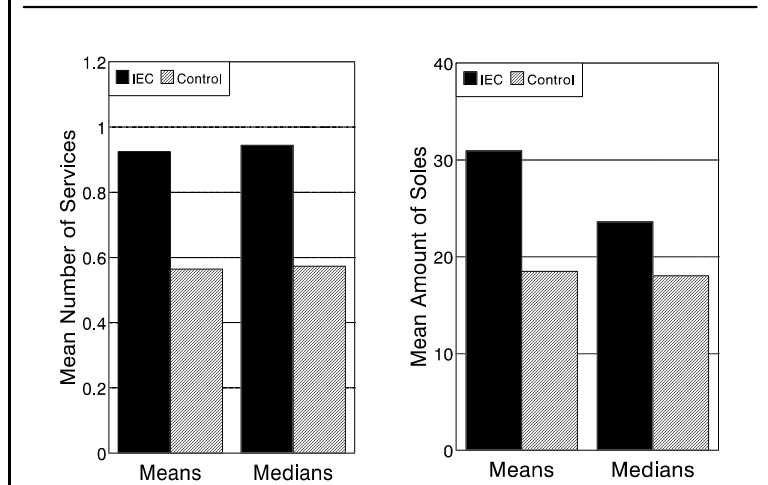
could have been obtained. If this trend were maintained throughout one year, INPPARES would stand to gain 108,000 soles or about $40,000 from the use of a simple threefold material. This is a considerable return on the investment. A more encompassing evaluation would consider the contribution of the pamphlet to the possible change of INPPARES' image from a family planning provider to a provider of family planning and reproductive health services.

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DISCUSSION

Shrinking donor contributions to family planning in Latin America are forcing NGOs to become more self-sufficient financially. Three strategies are available to improve a program's financial sustainability. Cost control seeks to improve financial status by making better use of existing resources, cost recovery consists of charging fees for existing services, and income generation seeks to identify market niches that a program can exploit. INPPARES sought an IEC solution to a situation in which resources were not being fully used, and it had cost recovery and income generation components. The study showed how program management can use simple solutions creatively to cause important improvements. Furthermore, the solution tested here could transcend the physical limits of the clinic and be used in outreach efforts.

This study has some implications for the institutionalization of operations research in family planning/reproductive health programs. Whereas operations research is being increasingly used to test new solutions to improve the financial sustainability of programs (e.g., Bratt *et al*, 1998), most operations research studies still are dependent on external funding. The costs of the present study, however, were financed by INPPARES and thus this represents a pioneering effort to invest in operations research. Second, the simplicity of the methodological approach reinforced the staff's commitment to using data for decisionmaking. By employing modern software and high speed computers, researchers may be tempted to select complicated multivariate analyses to test simple relationships between variables, the cost being the loss of contact with the *datum*. In contrast, the rather small database used in this study (Table 1) allowed both researchers and administrators to have close contact with the data and fully understand their meaning and practical implications. As a consequence, INPPARES decided to maintain the use of the interactive pamphlet on a permanent basis.

Finally, this study demonstrated that an NGO may find programmatic solutions that integrate institutional ends usually viewed as opposite courses of action. Generally, efforts to improve access to services are viewed as antagonistic with those to increase the financial sustainability of programs. In this study, an interactive pamphlet improved clinic revenues and at the same time facilitated access to reproductive health services usually ignored by the family

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planning clients of Patres.

NOTES

ACKNOWLEDGMENTS

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DATA POINTS FOR FIGURES

Figure 1: First Visit

Mean Number of Services   **Means Medians**

	Means	Medians
IEC	1.77	1.56
Control	1.80	1.54

Mean Amount in Soles   **Means Medians**

	Means	Medians
IEC	40.73	40.22
Control	31.90	29.97

Figure 2: Follow-up

Mean Number of Services   **Means Medians**

	Means	Medians
IEC	.925	.944
Control	.564	.573

Mean Amount in Soles   **Means Medians**

	Means	Medians
IEC	30.946	23.610
Control	18.479	18.016