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AN EXAMINATION OF THE PERFORMANCE AND MOTIVATION OF INDONESIAN VILLAGE HEALTH VOLUNTEERS*

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ABSTRACT

Indonesian "kader Posyandu" or village health post volunteers are a key link in the provision of primary health care services and health education to this country's 170,000,000 inhabitants. Yet little is known about the quality of service that they actually provide, with most existing data being derived from their own self-reports or from those of the mothers they serve. Moreover, it is widely acknowledged that inadequate kader motivation and subsequent high rates of dropout are a chronic problem for the Indonesian primary health care strategy, creating frequent disruptions in service as well as the necessity for

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continual recruitment and training efforts. The present study was conducted to shed further light on these issues through observations of kader behavior during village health post clinic days. These observations emphasized the amount and type of health education related to child survival that was performed by the kader. Subsequent interviews with kader, mothers, and village leaders complemented these observational data and provided further information on present and potential motivators for kader. The observations indicated that while kader performed growth monitoring, immunization, and other village health post clinic activities appropriately, they failed to take advantage of opportunities to educate mothers in nutrition, oral rehydration, and other important skill areas. In turn, interviews indicated that while money for services rendered could be an ideal motivator for these volunteers, they felt that even more important, given limited resources, was an expression of appreciation on the part of the community being served. These data have proved critical for the design of a health communication campaign seeking to improve kader performance and lengthen their term of service.

The ideal of global "Health for All by the Year 2000" is proving to be elusive, especially considering the declining resources being allocated to health services. Indeed, only the most cost-efficient primary health care and health education hold any potential for countries and populations with modest or minimal health resources. One approach to maximizing cost-efficiency is to make optimal use of auxiliary or volunteer health personnel [1-4]. In the United States, community volunteers have been used in heart health promotion [5], smoking prevention [6], and community mental health programs [7]. In developing countries, health auxiliaries and volunteers have assisted in or even borne primary responsibility for child survival and other primary health care programs [8-10]. As money for health services and education for those most in need has become increasingly scarce, not only in developing but also in developed countries, these low-cost resources may prove even more critical for any health promotion effort. Thus, the "care and feeding" of health volunteers may prove an essential element of most, if not all, future health promotion strategies.

Like other community development projects in Indonesia, health promotion efforts rely on village health volunteers known as "kader" (used in the Indonesian language as either the singular or plural form of cadre, and pronounced kah-der) [11]. Kader have been called upon for village service in Indonesia for three decades, consistent with the national traditions of mutual and community self-help [11].

In Indonesia since 1983, primary health care and family planning programs have been used to help reduce infant and child mortality. The strategy consists of nutrition improvement by means of child growth monitoring, immunization, oral rehydration therapy, mother and child health, and family planning programs. At the community level, the programs are conducted in village health and family planning posts ("Posyandu") staffed by volunteers ("kader").

The Indonesian government hopes to have a total of 1,678,000 trained kader by 1990, or approximately one kader for every 100 people [11]. In an extensive

review of the literature pertaining to health kader, Judd described their major duties as including the encouragement of villager participation in health services events, the collection and recording of basic health service data, some provision of direct services, and actually conducting health education activities [11]. She goes on to note that kader are most likely to perform data recording and reporting functions while least likely to carry out educational activities. The majority of health kader are females between twenty and forty years of age and come from a wide variety of socio-economic backgrounds. Most are employed, at least on a part-time basis, and are appointed by village heads for this volunteer activity. They generally receive only a few days' training and subsequently little or no supervision [11]. While some regions provide kader with uniforms, a small amount of remuneration, or revolving credit loans, financial or other material incentives have not been employed systematically or extensively [11, 13]. Thus, less-than-optimal and high dropout rates, estimated to be as high as 70 percent within the first year and a half following training [11, 13], should not be unexpected.

The innovative integration of electronic, print, and interpersonal channels of communication in health promotion programs holds perhaps the greatest potential for reducing preventable infant and child morbidity and mortality in developing countries [14]. In spite of the many problems attending the use of kader or their counterparts in other countries, no other resource can provide mothers with frequent and effective interpersonal communication about health issues which can complement the information they may receive through impersonal media. The present study was conducted to complement the data summarized by Judd through the use of direct observation of kader performance in a north coast area of Central Java during days of health post operation. We felt that these observational data would be less biased and more reliable than self-reports by kader or reports by others describing their health activities. Moreover, we sought to assess directly the potential for designing low cost motivational systems which hopefully could be applied to improving the performance of kader as well as reducing their dropout rates.

METHODS

Setting

This study was conducted in thirteen villages in the regencies of Jepara and Demak of the province of Central Java, Indonesia. The total population of these two regencies is approximately 1.5 million, with an estimated 230,000 children under five years of age. The major livelihood of this region is farming. The average educational level is five to six years of primary school. Although most know the official national Indonesian language, almost all people use Javanese.

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These particular regencies were chosen as study sites due to this being the ROVITA Project target area. The ROVITA Project for oral rehydration and vitamin A is a department of health intersectoral cooperative effort of collaborative work among various nongovernmental partners. With the Indonesian Department of Health as implementor the project relies additionally upon the expertise of Diponegoro University (Central Java) as internal evaluator, and Helen Keller International as management facilitator. ROVITA is also receiving technical assistance in the area of social marketing from USAID's HEALTHCOM Project. Through the use of various social marketing techniques, ROVITA staff attempt to promote the appropriate use of ORT and vitamin A supplements to prevent dehydration secondary to diarrhea and blindness due to insufficient consumption of vitamin A. The present effort was a part of the planning for the interpersonal component of this marketing campaign.

All observations and interviews were conducted during once-a-month sessions at village health posts. During these monthly events, mothers proceed through a series of stations for child growth monitoring and other primary health care interventions staffed primarily by kader. These kader are supervised by a head kader who, in turn, is supervised by a paid staff member of the regional health center. Typically, the village head or another village official is present at any given village health post clinic days.

Procedure

Four trained observers, divided into two teams of two each, drove to each selected village for the scheduled village health post session. Their tasks were to note in a binary checklist format which of the services were delivered and whether any health education accompanied the services. The observers positioned themselves inside the village health posts and began their observations when the first mother/child patient pair entered. They checked whether the child was weighed, whether the weight was recorded, and whether there was health education regarding good nutrition, birth spacing, breast feeding, oral rehydration, and/or vitamin A consumption. The observers subsequently noted whether the mother reported being provided with vitamin A capsules (by chance, the observation days were in the semiannual schedule of vitamin A distribution), and oral rehydration salts. Next the observers checked the health card and noted whether the child was severely malnourished and, if so, whether a referral was made. Finally, the observers noted what, if any, health education was conducted.

At the end of the village health post activities, each kader was interviewed. Variables assessed included general personal information, training experiences, supervision received, ratings of the difficulty of various tasks, and the potential reinforcing value of hypothetical rewards kader could receive for work. Described one-by-one to the kader, these hypothetical rewards included uniforms, badges, tablecloths, or glasses with the ROVITA Project logo on them, praise from the

village, revolving loans, and lottery tickets. They were then asked about their workloads, why and how kader quit, the issues involved in promoting vitamin A and ORS, and their experiences in health education.

Finally, a parallel set of questions was asked of each village chief. Each was asked first to describe the characteristics of good kader and how to best persuade them to continue in their work. Then each was asked to give approximate rates of turnover for kader and general comments about the kader system.

RESULTS

In all, a total of eleven village health posts were observed over the course of eight weeks in the final three and initial four months of 1988-89. While we originally hoped to visit sixteen village health posts, some of the posts were not open according to their schedules, perhaps due to low motivation of kader. A total of forty-four kader were interviewed, eleven of those being head kader. Twenty village officials and four health professionals/supervisors were also interviewed. Given the small number in the latter category and the similarity of their data to those of the village officials, their sets of responses were combined for analytical purposes.

Observational Data

In the eleven village health posts observed, there was a median of five (range: 2 to 10) kader present, keeping the village health post open for a mean of two hours and fifteen minutes (range: 60-200 minutes). A mean of thirty-two (range: 6 to 43) of children under five years (accompanied by their mothers) were provided service. Five of the village health posts were conducting growth monitoring, while ten provided immunizations and family planning information, and five gave out oral rehydration packets. Seven village health posts included a summary table where attendance records were updated and necessary referrals were made.

In all, only four efforts at health education were noted, two of which were in one health post. All four were addressed to the general group of mothers as they were being processed through the village health post, and were an average of fifteen minutes long. Two of these attempts emphasized vitamin A, diarrhea, and other nutrition-related issues, while two others involved family planning. No other interactions of a health education nature were noted.

Interview Data

Perceptions of the difficulties of each of the various tasks associated with kader work are presented in Table 1. Originally, a 3-point scale of difficulty was used, with alternatives representing "easy," "somewhat difficult," and "very difficult." As fewer than 20 percent of the responses represented the last category, this and the "somewhat difficult" ratings were collapsed for analytical purposes.

Table 1. Percentage of Respondents Rating Each Kader Task as "Easy"

Task	Overall % (N = 100)	Respondent: Officials (N = 24)	Kader (N = 44)	Mothers (N = 32)	χ^2	p Value
Child weighing	76	65	75	92	4.89	ns
Weight recording	55	78	51	46	6.95	.05
Advice on:						
Growth	34	55	34	25	5.19	ns
Immunization	40	65	42	29	8.45	.05
Family planning	36	55	34	32	3.56	ns
Diarrhea	48	55	48	48	0.34	ns
Referrals[a]	30	60	51	40	1.75	ns
Vitamin A distribution	81	75	82	80	4.80	ns
Paramedical service	43	93	39	48	18.54	.01
Records/reports	44	80	65	22	21.97	.01
Home visits[b]	32	82	45	38	12.89	.01
General Advice	32	78	42	18	20.56	.01
Communication-based treatment[c]	55	78	75	31	17.51	.01
Amount of responsibility	65	65	57	81	4.93	ns
Number of work days	91	100	95	81	7.88	.05
Time per clinic	90	100	93	81	6.34	.05
Number of patients/ village health post	84	100	82	80	5.15	ns
Interaction with:						
Village leaders	78	91	84	61	8.26	.05
Supervisors	70	77	84	48	12.59	.01

[a] Seven officials, fifteen kader, and fourteen mothers said that referrals were not ever made.
[b] Eight officials, eleven kader, and fourteen mothers reported that home visits never occur.
[c] Five officials, seven kader, and ten mothers reported that community-based never occurs.

As can be seen, officials generally ranked various kader tasks as "easier" than did kader themselves and mothers. This differential led to statistically significant differences in ratings of the difficulty of weight recording, family planning advice, paramedical service, record-keeping and report-writing, home visits, and general advice. Mothers' differential ratings of difficulty led to differences in ratings of the ease of community-based treatment, amount of work (time and number of days), and interactions with superiors. Generally, health education-related activities (shown as giving advice) were rated as more difficult, while overall amount of work and responsibility were rated as easier aspects of kader work.

Table 2. Opinions about Potentially Most Effective Rewards by Respondent Category

Type of Reward	Overall (Percent)	Respondent		
		Officials (Percent)	Kader (Percent)	Mother (Percent)
Non-Material Rewards		*(N = 24)*	*(N = 44)*	*(N = 29)*
Compliments from community	56	0	72	75
Compliments from supervisors	34	70	25	17
Visits by district officials	7	20	0	0
Material Rewards		*(N = 26)*	*(N = 44)*	*(N = 30)*
Monetary	52	53	43	63
Signs/symbols	9	0	15	6
Uniform	39	46	40	30

Table 2 presents ratings of the potential effectiveness of various rewards from the points of view of the officials, kader, and mothers. An even stronger lack of agreement between officials on the one hand and kader and mothers on the other was apparent in their rankings of non-material rewards. Kader and mothers tended to rate "compliments from the community" as their most favored category, while officials perceived "compliments from supervisors" as the most potentially effective reinforcer. These differences were statistically significant ($x^2 = 41.51$, $df = 6$, $p < .01$). In contrast, all three types of respondents saw money and uniforms as effective and "symbols" (e.g., shoulder patches) as ineffective forms of material rewards.

[greek chi]

DISCUSSION

The results of the current study suggest that the village health volunteers observed were more likely to carry out routine health post activities and to perceive these activities to be manageable than to carry out health education and attendant patient counseling tasks. Kader perceptions about the difficulty of their job were supported by the mothers whose children are the recipients of the health services, while village officials and supervisors agreed with each other on the relative ease of difficulty of the various tasks.

From a psychological perspective, less-than-optimal levels of behavior may result from either a "skill" or "performance" deficit. In the former case, additional training with appropriate supervision would be indicated, while in the latter case the appropriate use of rewards could improve the performance when behavioral skills actually were adequate. With respect to the type of appropriate reward

should this avenue be pursued, kader and mothers again agreed that some expression of gratitude on the part of the *community* they serve could prove effective, supplemented by money or work uniforms should resources exist.

In the current phase of our health promotion efforts, we are utilizing the results of the above study to plan further for a kader motivational strategy. Specifically, focus group interviews with kader, village officials, and mothers are being conducted to elicit specific reactions to prototypes of the various motivational tools listed in the surveys. Additionally, mock-ups of newsletters describing health promotion techniques and related health information as well as personal interest stories are being shown to the kader in order to determine the potential efficacy and reinforcement value of this direct mail strategy. This strategy was added due to its potential as both a retraining and motivational intervention, especially in a country where mail delivery is reliable but typically the receipt of mail is rare and, therefore, a special event.

As it would be difficult if not impossible to get each community to show its gratitude for the efforts of kader, we have also developed several radio spots emphasizing this theme of community gratitude. The spots depict mothers and village officials discussing the value of kader and their intentions to thank them for their work. We are currently determining which of these spots would be most effective from the point of view of mothers and village chiefs as well as the kader themselves.

Volunteers and health auxiliaries offer a tremendous human resource for efforts which could provide health care and education services for everyone. Without appropriate and ongoing training and supervision, however, the work performed by these individuals may prove to be of questionable quality. Without sufficient reinforcement for their work, volunteers may serve only a minimal amount of time, further decreasing their effectiveness and increasing the costs of recruitment and training. The present study is part of an effort which seeks to make optimal use of health volunteers in a cost-efficient manner.

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