# Integrating Intervention Theory and Strategy in Culture-Sensitive Health Promotion Programs

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One of the tasks of psychology is to promote positive changes in individual health behavior. Interventions to bring about these changes should be directed at skills, knowledge, and beliefs pertinent to specific situations. Maintenance of change is facilitated by a conducive context. A conceptual framework is presented that reflects these concerns. A systematic strategy is also outlined that includes needs analysis, development and piloting of programs, as well as advocacy and dissemination for large-scale implementation. A program aimed at enhancing the role of pharmacy sales staff in HIV/AIDS prevention in Mexico is presented to illustrate how the framework and strategy are used.

How can shop assistants in Mexican pharmacies become involved in promoting condom use with their customers as a means toward HIV/AIDS prevention? In this article, we focus on interventions aimed at the prevention of behaviors and social conditions that put health at risk. Our aim is to demonstrate how intervention programs can simultaneously be (a) rooted in the everyday context of a target population, (b) informed by psychological theory and method, and (c) open to critical evaluation.

The following points are central to our approach. First, intervention programs have to be need driven. Important parameters for intervention have to be identified, and psychologists' knowledge

process. At the same time, much of the necessary context-specific knowledge is with other stakeholders, in particular the (potential) clients of the program. The combination of real-life expertise and academic perspectives is a potentially powerful way to create interventions that have a positive impact on individuals and communities (Kagitcibasi, 1996). Repucci, Woolard, and Fried (1999) stressed this point when referring to the importance of extending the role of psychology in "social action while emphasizing the critical importance of rigorous research as a component of future interventions" (p. 387). The integration of theory and experiential knowledge, however, is not easy and straightforward. Much of the available research is Western-based and conducted with easily accessible and articulate samples, such as students, rather than with underprivileged populations (e.g., Berry, Poortinga, Segall, & Dasen, 2002; Kato & Mann, 1996).

of previous findings, theory, and methodology can help in this

Second, interventions tend to be directed either at the individual or at the social and cultural context in which people live, but they rarely integrate these two levels (cf. Lerner & Galambos, 1998; McLeroy, Bibeau, Steckler, & Glanz, 1988). In general, successful interventions do not only require changes in the behavior of the person but also an environment that facilitates the maintenance of newly acquired patterns of behavior. The promotion of such conditions is part of an integral intervention project.

Third, many interventions are meant to bring about change in characteristic features of the person. An alternative approach is to focus interventions more on communication and decision-making skills, as well as on beliefs and knowledge. These can be seen as tools that enable the person to deal adequately with situations that are experienced as problematic. In such an approach, changes in broader characteristics of the person, like self-esteem and self-efficacy (Bandura, 1986, 1997), are seen as resulting from (rather than being antecedent to) an accumulation of experiences of competence in a wide range of situations (Pick, Givaudan, & Poortinga, 2003). In a meta-analysis of 177 primary prevention

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programs directed at skills and knowledge, Durlak and Wells (1997) confirmed the success of such programs in health prevention. In short, we are in agreement with the view of Hamburg (1997) that opportunities for healthy practices (e.g., grounds for exercising) must be combined with skills building (communication skills, nonviolent problem solving, how to take advantage of opportunities), acquisition of knowledge (how to prevent an unwanted pregnancy), social supports (health care providers, family, and peers), and a healthy environment (e.g., a smoke-free school).

Fourth, interventions require advocacy and dissemination, particularly at the context level. Advocacy is directed at policymakers and community leaders whose positive attitudes help in gaining permission to carry out a program, in creating a receptive atmosphere with health workers and teachers, and in procuring financial support from government agencies. Dissemination (i.e., extending public knowledge about interventions and their results) takes place primarily through campaigns in the (local) media but also includes pamphlets and posters. Both advocacy and dissemination are needed in order to gain support for further distribution and implementation and ultimately for the "upscaling" of a program so that it becomes available to large numbers of participants.

Finally, adequate information about the effectiveness of programs (or lack thereof) can be obtained if each step in program development, from initial needs identification to large-scale implementation, is carefully evaluated. Recent approaches to evaluation that require accountability in all phases of a program as well as objective data on key target outcomes can help to diagnose the program's strong and weak points and, ultimately, its effectiveness (Shadish, Cook, & Leviton, 1991; Wholey, Hatry, & Newcomer, 1994).

In this article, we describe an approach to health intervention that is based on the points mentioned previously and that has been guiding the development and implementation of preventive programs by the Mexican Institute of Family and Population Research (Instituto Mexicano de Investigación de Familia y Población [IMIFAP]), a nongovernment organization in Mexico devoted to research and educational programs promoting the empowerment of individuals through the provision of knowledge and life skills (IMIFAP, 2000; www.imifap.org.mx). First a conceptual framework is presented that provides a rationale for the approach. Next, a strategy is outlined consisting of a series of steps going from the initial exploration of needs via the construction of a program to its large-scale implementation. To illustrate how the framework and strategy work out in practice, we briefly describe the development and implementation of a training program aimed at enhancing the role of the sales staff of pharmacies in Mexico City in HIV/AIDS prevention through the promotion of condom sales.

## A Heuristic Framework

Figure 1 presents a framework that illustrates the concerns summarized in the previous section. The framework is not meant to be inclusive or overarching (see, e.g., Berry et al., 2002; Stokols, 1992), nor should it be seen as a cohesive and testable theory. Interventions tend to address complex needs for which there are multiple approaches; such complexities are difficult to capture in a falsifiable theory. Rather, the onus is on the program developer to demonstrate the effectiveness of a specific program and its rationale through evaluation (Rossi & Freeman, 1993; Shadish et al.,

1991). In Figure 1 there are four frames, labeled *context, person, situation*, and *behavior*, which we present in some more detail in the following sections.

#### Context

The term *context* refers to the circumstances in which people are living. Central to the context are economic factors (Berry et al., 2002). The members of a wealthy group or society have access to all kinds of material and nonmaterial resources that simply are not available in a poor society, such as reliable sources of food, fresh water, good medical care, as well as information and education. In many societies, problems are enhanced by unequal distribution of resources between different social groups. In the "majority world" (i.e., the low-income countries where the majority of the world's population is living), men typically have the main access to income, ownership of land, and credit, and women depend on them. A recent report stated that of the 1.3 billion people surviving on less than US\$1 a day in 1995, women made up the vast majority (World Bank, 2001).

Education is closely related to a country's economy. In poor societies the financial resources for formal education are limited, both because of the actual costs of schooling and the economic loss of the time children spend in school and are not available for work (Alan Guttmacher Institute, 1998). Education does not only provide factual knowledge but also know-how and skills, ultimately enhancing control over wider areas of life. In many respects, intervention programs are complementary to formal schooling, in that they are directed at target groups that fall outside the education system and/or address issues insufficiently represented in the curriculum.

Context also refers to sociocultural variables that are (largely) shared within a society, such as values, norms, and beliefs. Through socialization and enculturation, individuals acquire the rules that are prevalent in their social environment (Segall, Dasen, Berry, & Poortinga, 1999). For example, pervasive traditional gender role expectations and messages have an important effect on sexual behavior among both adolescents and adults (Pick, Givaudan, & Aldaz, 1996). One has to understand the rules that govern behavior, especially those rules with a normative character, in order to grasp the possible constraints on behavior changes and thus the scope for intervention (Marín, 1993).

#### Person

The second frame in Figure 1 refers to characteristics that provide permanence to the individual person. In psychology the person is usually considered to possess dispositions that have continuity over time and situations. These can be conceptualized as trait dimensions, like the "Big Five" dimensions (McCrae & Costa, 1996). There are also formulations of dispositions resulting from self-development and external influences, notably in social-cognitive theory. In Figure 1, we have included self-efficacy (Bandura, 1986, 1997) and self-esteem (Baumeister, 1993).

In this frame (individual) attitudes are also mentioned (Fishbein & Ajzen, 1975). We have included these because they tend to be stable over time, unless the person is given reason to question them. In addition, we have added individual norms, which especially in cohesive or "tight" societies (Berry et al., 2002) tend to be

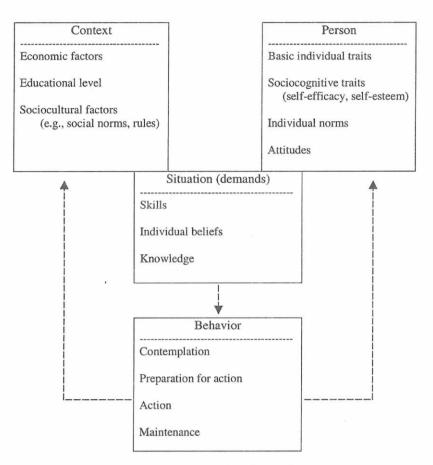


Figure 1. A heuristic framework for intervention programs.

consistent with those of important groups like one's village, church, and so forth.

#### Situation

The third frame in Figure 1 refers to situations that an individual faces, especially with regard to demands to which one is required to respond. Appropriate skills allow the person to react optimally according to his or her own standards and desired outcomes. Examples of skills relevant to behavior change in preventive health are the ability to make one's own decisions; the use of direct, open, and assertive communication; and the expression of feelings. These are among the "life skills" that the World Health Organization (1999) has identified as a priority.

Also placed in this frame are knowledge and individual beliefs. Knowledge concerns, for example, the long-term effects of substance abuse, sexual and reproductive rights, self-hygiene, or how to prevent HIV/AIDS and unwanted pregnancies. Beliefs include items of knowledge for which there is no empirical basis and that may even be demonstrably incorrect—for example, believing that women who enjoy having sex are less good wives and mothers (Pick, Givaudan, & Aldaz, 1996).

# Behavior

The main outcomes of intervention programs at the individual level are changes in intentions and in actual behavior (Middlestadt et al., 1995). The distinctions made in this frame are meant to reflect that target behaviors do not occur suddenly. We have borrowed from an earlier study (Prochaska & DiClemente, 1982) to emphasize that behavior changes occur in steps: from contemplating change, to preparing for change, to making the change, and finally, to maintaining the new behavior. This view is compatible with the recommendations of the World Bank (1997) on how to provide essential health, nutrition, and population preventive services, including raising awareness, identifying and overcoming barriers, motivating for change, providing information and skills, and providing the necessary reminders and social support to ensure sustainability.

Finally, there are two feedback arrows in Figure 1, indicating that changes in behavior patterns over time lead to changes in more permanent characteristics of the person, as well as to changes in the context level, which becomes more conducive to the new patterns when more people are changing their behavior.

# Stages in Program Development and Implementation

To structure the design and implementation of intervention programs, we distinguish various, partly overlapping, stages: from an initial plan to address certain needs in a target population to the upscaling of the final program. In most stages there are activities at both the context level and the individual level. At each stage there are three aspects that are to be addressed explicitly: goals; methods and activities; and evaluation (see Table 1).

Table 1
A Strategy for the Development and Implementation of Intervention Programs

Goals	Method and activities	Evaluation
Stage 1:	Identification of needs and definition of	of problem
Definition of problem domain	Context level Demographic information	Is the definition of need (domains to be addressed)
Establishing scope for	Surveys	comprehensive?
intervention (individual level and community)	Ethnographic information Individual level	Is there a clear definition of the client population?
Establishing target behaviors for	Focus groups	What is the quality of the
change (constraints and	Interviews	background data?
opportunities)	Questionnaires	Psychometric quality of exploratory research (focus groups, etc.)?
Stag	ge 2: Development of intervention prog	gram
Preparation of preliminary version of all program items ,	Context level Planning advocacy Construction of media	Is there good content validity (in terms of defined needs and domain description)?
	messages Individual level	
	Selection of program topics	
	and contents	
	Selection of didactic methods	
	Stage 3: Program piloting	
Establishing applicability of	Context level	Are clients open to the program?
contents and methods of	Tryouts	Is there good attendance?
delivery	Revisions	A
Preparation of final program version	Individual level Tryouts	Are there observable effects (e.g., assessment with control
TOLDION	Revisions	group)?
,	Stage 4: Advocacy and dissemination	
Facilitating contextual conditions	Context level (mainly)	Have the important stakeholder
for behavior change	Addressing institutions and	groups all been addressed?
Facilitating program distribution	administrative authorities Mass media campaigns	Were advocacy and dissemination sufficient and successful?
	Stage 5: Upscaling	
Maximizing the reach of the program	Setting up a system for distribution of materials Training for trainers	Are there long-term changes in behavior? Is the program efficient and
	framing for trainers	effective?

The first stage is the identification of needs and the definition of the problem. Both the context and personal resources must be explored in order to arrive at an inclusive description of the problems to be addressed (see Figure 1). The target population at which the intervention will be directed must also be defined. The main goal of this phase is to identify constraints that limit readiness for change and opportunities for intervention (Hawkins, Arthur, & Olson, 1997). At the context level, the methods of gaining information include the collection of statistics from government reports, surveys, and so on, as well as consultation of ethnographic sources, if available. Collection of information at the individual level by means of focus groups or interviews adapted to local circumstances (Enriquez, 1990) follows from the basic requirement that program contents should be compatible with the experiential world of the target group (Wholey et al., 1994). This

also helps to assure that the clients of the program feel that the program is their own. A critical evaluation of this stage examines the quality of data collection methods and the scope of the program. Lead questions for evaluation might be whether a critical outsider (e.g., a funding agency) would be convinced that relevant needs will be addressed, whether the domain of behavior at which intervention is targeted has been properly mapped, and whether the target population has been adequately defined. Such questions may be difficult to answer in a strict sense, but some answers are distinctly more convincing than others.

The second stage noted in Table 1 is the development of an actual intervention program (i.e., the information gathered in the first stage has to be transferred into program modules or units). Program development is not limited to intervention at the individual level but can also include messages for public media cam-

paigns that will be used for dissemination at a later point in time (see below). At this stage, consideration has to be given to the selection of didactic methods. For example, the lack of success of earlier knowledge-based information programs for sexuality education (López, Yunes, Solís, & Omran, 1992) in Latin America has led to the adoption of participatory methods (discussion, simulations, etc.) in IMIFAP's programs. Evaluation at this stage includes accountability for the didactic method chosen (also considering expected costs per person) and evidence as to the inclusion of needs identified in the first stage (content validity). At the end of this stage, the program developers should be able to describe in concrete terms what a client is expected to gain from the program.

In the third stage, the pilot program is tried out and revised. The objective here is to have a final version of the program ready for application. For a comprehensive program that addresses a range of practices, various tryouts and changes may be required (Pick de Weiss et al., 2000). In this phase, objective assessment is needed to evaluate whether a program is effective. A typical exit questionnaire, which asks participants whether they liked the program and learned something, is insufficient, as it does not demonstrate whether intended changes in knowledge, skills, and actual behavior patterns have indeed been realized.

As shown in Table 1, the fourth stage of program development entails advocacy and dissemination (i.e., attempts to enhance conditions for acceptance of a program and its contents). The distinction between the two terms mainly has to do with the target group addressed. Advocacy is directed at policymakers in the broadest sense; it includes local authorities, the medical profession, and ultimately, members of parliament and senior civil servants. Advocacy is important in two ways. The first objective is to make known the existence of the program and the results obtained with it. The second objective is to "advocate" (changes in) contextual conditions that facilitate a broader acceptance of the program and related ideas. Dissemination is directed at the general public. It includes the wide distribution of messages through press conferences, articles in newspapers and periodicals, and radio and TV programs.

The final stage of the development of an intervention program is upscaling. The objective is to have the largest possible participation in an intervention. Upscaling relates to the earlier program development and implementation in the same way that bulk manufacturing of a product in the chemical industry relates to a laboratory experiment; the product is often less pure or precise, and the methods used may vary from the original ones. For a successful program to be delivered to large numbers of people, an organization has to be in place to instruct trainers, who in turn can train others in the local administration. Such "cascades" require the development, piloting, and distribution of educational and promotional materials that are attractive and in tune with the educational level of those who deliver the program to the target group.

When an intervention has reached a certain level of penetration in the population, it will die of its own success. The promoted forms of behavior will be familiar to everyone, even if not followed in practice (e.g., everyone knows that smoking is unhealthy). Often program issues will appear in school teachings and in the mass media. As the ideas spread, it becomes more and more difficult to evaluate program success. When a program is disseminated more widely and reaches more participants after upscaling, the ideas are also distributed in a community through other

sources, and it becomes virtually impossible to attribute change to the original program.

# An Example: Pharmacy Workers as Educators in HIV/AIDS Prevention

In this section we illustrate how the theoretical approach and strategy outlined previously are manifested in the development and implementation of an actual intervention program—in this case, a program for employees of pharmacies in Mexico City. These employees can be instrumental in the distribution of condoms, and the goal of the program was to enhance their interactions with customers regarding condom use. In Mexico 60% of contraceptives are provided directly through pharmacy workers without the mediation of other kinds of health care providers such as physicians (López et al., 1992). A needs-assessment study pointed to pharmacists as a low-cost source, not only for providing condoms but also for advice. Moreover, they were seen as more easily accessible than physicians (Pick de Weiss, Reyes, & Vargas, 1992). Hence, we decided to construct an educational program geared to pharmacy employees in two districts of Mexico City (Venustiano Carranza and Cuauhtemoc) with a socioeconomically mixed population.1

# Context Analysis and the Detection of Needs

Condoms are widely available, and although the costs are not negligible, the large majority of urban Mexicans can afford to buy them if they so desire. Hence, economic factors did not appear to form a serious constraint and were not further considered.

Much information about the educational and sociocultural context was already available from previous work (cf. Pick, Givaudan, & Aldaz, 1996). Sexuality education in Mexico has long been controversial and is often not included in the school curriculum due to pressure from conservative minority groups. There is an intricate pattern of sociocultural norms, values, and traditions regarding sexuality, and here we mention only a few salient points.

A man who has many children and sexual partners is generally admired, and this negatively affects condom and contraceptive use. Women are trapped by widespread double messages regarding sexuality. A woman's taking initiative sexually or displaying pleasure in sex is seen as a sign of loose morals, but modesty or restraint in sexual matters is an alleged reason for her husband to seek more pleasurable sex outside the home. Premarital sexual intercourse is a grave transgression of the norms but at the same time is encouraged implicitly as a way in which a woman can get a man to marry her. After all, a woman without a male partner is the subject of pity if not contempt (Pick, Fawcett, Venguer, & Gamboa, 1998; Pick, Givaudan, & Aldaz, 1996; Pick, Reyes, et al., 1996).

At the individual level, initial data were collected in a randomly selected sample of 20% of the pharmacies in the two districts. There were six focus groups, 12 in-depth interviews, and 166 open-ended questionnaires (ns = 103 men 63 women). Most

<sup>&</sup>lt;sup>1</sup> Ricardo Vernon of the Population Council office in Mexico City provided technical support in the development of this program. Funding was obtained from the Population Council, which was involved in various stages of the work.

participants (71%) had at least some secondary education, and most (70%) had worked in pharmacies for more than 3 years.

The results showed that the employees felt rather unsure of themselves in a general sense and definitely felt unsure of themselves as providers of information. They displayed uneasiness in their role as sexual health educators, and 67% reported to be unwilling to give information on condoms to just any customer asking for this. They saw themselves as sales people, not as teachers. They were, however, interested in learning more in order to sell more condoms and also in learning about sexuality for their own personal development. They reported to be willing to use and hand out pamphlets, posters, and plastic bags and indicated an interest in attending courses. They were found to have a low level of knowledge regarding HIV transmission and ways of preventing it (Pick, Reyes, et al., 1996; Pick de Weiss et al., 1992).

Thus, the first part of the study served as an inventory of needs. It was useful in establishing the level of knowledge, the willingness and reasons to learn more, and what kinds of contents should be included in educational and promotional materials that pharmacy staff wanted for themselves and for their clients. An evaluation of the various aspects of this stage would probably note that the problem domain and the (urban) target group were examined in sufficient detail to provide a basis for the following phase of the project.

# Development of an Intervention Program

Having identified relevant factors at both the community and the individual level, we developed a set of materials that focused on the concrete situation in which behavior was to be changed (in line with the theoretical approach discussed before). There were five components: (a) knowledge and beliefs concerning HIV/AIDS transmission and prevention, (b) correct use of condoms, (c) attitudes regarding HIV and AIDS, (d) verbal and nonverbal communication skills and showing empathy, and (e) myths and mistaken beliefs regarding HIV, AIDS, and condom use. A training manual for sales staff and a manual enabling them to provide information to their clients were developed. In addition, two pamphlets were written and piloted, one explaining to men how to put on a condom, and one explaining to women how to put a condom on a male partner. Also, a series of promotional posters were designed on the basis of information gained from the focus groups and in-depth interviews. These posters focused on prevailing norms and could be seen as addressing the context.

In various trials with small groups (often conducted in an ad hoc fashion), we gathered information to determine which educational and promotional materials should be retained. The program was administered through highly participatory discussion groups involving interaction and feedback; this method, chosen on the basis of previous research findings (Pick, Andrade-Palos, Townsend, & Givaudan, 1994), appeared to be satisfactory. Participants were assigned homework after each session (they were asked to conduct active role-playing). For example, they were to talk about issues of which they had not previously spoken, address people they had not approached before, and buy condoms themselves.

An evaluation of this stage should note that the training was mainly targeted at the situational aspects described in Figure 1 and provided elements for the development of communication skills, decision-making skills, and knowledge of the individual participants. It is important to consider that the ultimate behavior changes were to take place in a group other than the one to which the intervention was directed (i.e., pharmacy clients).

# Piloting of the Program

The complete version of the program required 8 hr of training. Four groups were formed in order to assess the impact of the training: The first group (n = 44) received only the materials, the second (n = 26) received only the training course, the third (n =66) received both the training and the materials, and the fourth (n = 38) served as a control group and was given a tour of a pharmaceutical company. Results showed an increase in knowledge and a reduction of mistaken beliefs regarding HIV/AIDS and its prevention in the second and third groups, as well as more positive attitudes and personal norms regarding their role as educators. The third group, which had received both the training and the materials, showed a greater increase than the others in condom sales and in information provided to clients regarding HIV/AIDS and its prevention. This was the case both shortly after the course and in a 3-month follow-up with "mystery shoppers" (interviewers who visited the pharmacies and tested actual behavior in the workplace). Of all the pharmacy workers who had taken the training, 15.2% volunteered some information to a client buying condoms, compared with 5.7% of those who had not. In later focus groups, participants mentioned that they needed maintenance training so that they would feel more comfortable taking the initiative with clients on issues regarding HIV/AIDS prevention and condom use (for more information, see Pick, Reyes, et al., 1996).

An evaluation of this phase should note that the success of the intervention program was limited in two ways: The percentage of customers who were given information when asking was not large, and customers who did not specifically ask questions were hardly given any information at all. The need for more extensive training or follow-up clearly emerged. However, it should be noted that a single pharmacy worker has hundreds of customer contacts per week, leading to substantial potential impact. It should also be noted that the impact assessment was carried out by means of a double-blind quasi-experimental study. The mystery shoppers posing as customers were able to check knowledge and actual behavior changes, unaware whether or not the employees they were asked to approach had participated in the course.

# Advocacy and Dissemination

Throughout the study, research staff communicated frequently with both state and federal health authorities at different levels and invited them to participate and comment, in this way making advocacy an ongoing process rather than an activity at the end of the project. The development of the program and its results were presented at scientific meetings, to other nongovernment organizations, and to the coordinator of the National AIDS Agency (CONASIDA) in Mexico. Dissemination was promoted through the pamphlets and posters that had been designed as part of the program. Moreover, findings were reported through a press conference and to pharmacy associations.

## Upscaling

On the basis of the advocacy efforts, IMIFAP was hired to train over 1,000 pharmacy workers in six states of Mexico. In addition,

over 100,000 posters and pamphlets were distributed nationwide. However, a search for funding for a follow-up program providing pharmacy workers with the necessary skills for initiating communications with clients was unsuccessful.

In an evaluation of later stages of the program, we can mention some success in advocacy and dissemination. Involving officials at every stage was instrumental for the upscaling of the program and the distribution of posters. The main problem was that due to limited funding, the program was useful only to the small proportion of the public who took the initiative to inquire about HIV prevention or condom use. The opportunity to serve a larger part of the population requires more time and funding but continues to seem relevant.

#### Conclusions

Often interventions are developed independently of research and not in unison with evaluation. This article has outlined a framework and a strategy for an integrated approach. We also presented an example of how this approach can inform intervention projects. On the one hand, programs that focus on aspects of the individual behavior repertoire have to be rooted in the cultural context; on the other hand, they have to be promoted in such a way that they bring about changes in this context. Another important feature of our approach is the focus on skills and knowledge in concrete situations.

In our view, going step-by-step through a theoretical framework and strategy such as those proposed here enhances the quality of interventions. Moreover, a structured scheme provides guidance not only for the planning of the various steps but also for evaluation. It is the task of program providers to demonstrate that a program is effective and efficient. For this purpose, subjective impressions and convictions of program staff and clients do not provide sufficiently valid evidence.

Advocacy and dissemination are the areas of intervention programming where we have relied most on the accumulation of experience within IMIFAP and least on existing literature. Psychologists tend to limit the horizon of their work to the individual level. Undoubtedly, this is the focus of their expertise, but behavior is taking place in a cultural and a political context, and so are the professional activities of psychologists. We would like to make an appeal for the importance of advocacy and dissemination.

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Received December 13, 2001
Revision received September 4, 2002
Accepted March 10, 2003

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