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Towards the Sustainability of Information Campaigns: Training *Promotores* to Increase the Psychosis Literacy of Spanish-Speaking Communities

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Abstract

Purpose—To assess the acceptability and efficacy of training community health workers (*promotores*) in Mexico to both recognize psychosis and to teach others to recognize psychosis.

Method—Two studies were carried out utilizing a single-group design. In Study 1, *promotores* watched a DVD-based psychosis literacy training. In Study 2, *promotores* were trained to administer a flip-chart version of the program and they then administered it to community residents.

Results—Significant increases in the post-training assessment of psychosis literacy were observed.

Conclusion—*Promotores* can be an important resource in identifying psychosis early and enhancing the sustainability of psychosis literacy information campaigns.

Keywords

psychosis literacy; Spanish language; community lay workers; *promotores*

Duration of untreated psychosis (DUP) is associated with negative clinical and social outcomes [1,2]. Although the early Treatment and Intervention in Psychosis Study (TIPS) demonstrated that DUP of persons with first-episode psychosis can be reduced, and in turn, their functioning improve [3], the overall success of informational campaigns (ICs) has been variable. One limitation of many ICs is their reliance on temporary funding. When the funding and campaign ends, DUP rises to pre-campaign levels [4]. Drawing on existing community resources has the potential to sustain campaigns beyond the time-limited funding.

There is great need for DUP reduction programs in Spanish-speaking countries and immigrant communities. Spanish-speaking immigrants in the U.S., particularly those of Mexican origin [5,6], tend not to use mental health services, placing them at high-risk for prolonged DUP. In both Latin America and the U.S., community health workers or *promotores* may be particularly effective in delivering ICs to these communities and referring community residents for needed health care [7]. *Promotores* live in the same neighborhoods in which they work, making them credible and capable of influencing hard-to-reach communities [8].

In the current report we build on prior efforts to develop a scientific base for ICs for Spanish-speaking individuals in the U.S. and Mexico by employing *promotores* to educate hard-to-reach communities. Consistent with Noar's principle of successful campaigns [9], we developed a conceptual framework for the educational message and have conducted formative research to evaluate the key message's acceptability, feasibility, efficacy, and effectiveness [10].

Study 1

We assessed whether we could train *promotores* to recognize psychosis. Eighty-two *promotores* from a health district in Puebla, Mexico, participated in a daylong training. Nearly all were female (97.5%) with an average age of 44 years and 9 years of education. They were shown a brief video of Olga, a fictional character with various symptoms of psychosis. They were then shown the *La CLAVE*-DVD, a 35-minute video paralleling a previous PowerPoint version [10,11]. It reviews the mnemonic device “*CLAVE*” as a technique to recognize the major symptoms of psychosis and uses culturally relevant songs, video clips, and artwork as examples of each symptom.

Identical questionnaires assessing psychosis literacy were administered before and after the DVD presentation. For responses to open-ended questions, two raters were trained to reliability (Kappas = .80) using responses from a prior study [11], attaining very good to excellent reliability (Ks = .84 – 1.0).

Psychosis literacy was defined by (a) knowledge of psychosis, (b) efficacy beliefs that one can identify psychosis in others, (c) mental illness attributions, and (d) recommendations to seek professional help or provide social support. *T*-tests and McNemar tests revealed a significant increase in all four areas (see Table 1). Additionally, participants liked the presentation and found it engaging.

Study 2

After increasing the psychosis literacy among *promotores*, we pursued our primary aim, to train *promotores* to teach their communities to recognize psychosis in others. Due to limited access to electronic equipment and limited reading/writing skills of some *promotores* and community members, we developed *La CLave sin luz* (without electricity). Drawing on prior research that emphasizes the value of illustrations over text in health promotion campaigns [12] the administration of *La CLave sin luz* uses a set of drawings to teach participants the symptoms of serious mental illness (see Figure 1 for a sample drawing). We evaluated the acceptability and efficacy of this new version.

Methods

Participants

Ten female *promotoras* between the ages of 45-75 and with a wide range of educational backgrounds (from 3rd grade to some college) attended the training. The *promotoras* recruited 141 residents for the subsequent community-based training. Residents were mostly unemployed (71%) women (94%) with an average age of 42 years and 5 years of education.

Procedures

La CLave sin luz is comprised of 15 (2 ft. × 3 ft.) page flip-chart hung from a tripod. The first 6 pages present unique drawings depicting the story of Olga and her psychotic symptoms. Other pages include a chart of *La CLave* represented in cartoon form, labeled drawings of Olga's psychotic symptoms, and a chart reviewing barriers to Olga obtaining care (e.g., her parents attributing her behavior strictly to her divorce). The final pages include a drawing depicting Olga getting worse with time, charts guiding participants to distinguish between general life problems and symptoms of psychosis, and a drawing encouraging participants to use *La CLave* to identify symptoms of psychosis.

Training the promotoras—Three trainers delivered six 2-hour sessions consisting of (a) read ministering the *La CLave*-DVD and discussing the importance of early recognition and treatment of persons with psychosis, (b) modeling and teaching *La CLave sin luz*, and (c) observing *promotoras* practice the workshop and giving them feedback.

Administration and evaluation of La CLave sin luz—One to three trainers and a public health representative attended the workshops. Using the flip-chart as a guide, the *promotoras* narrated the story of Olga, administered the pre-training questionnaire, presented the core of *La CLave sin luz*, and narrated a second story paralleling Olga's but with a novel character, Javier. A different case was used to rule out the possibility that increases in psychosis literacy were due to familiarity with the same case used before and after the training. To evaluate the comparability of the two cases, twenty-four Mexican psychiatry residents unfamiliar with the research were randomly assigned to rate one of the cases. An independent-samples *t*-test revealed similar illness severity ratings [$t(21) = 0.18$, $p = .86$], and Fisher's exact tests demonstrated no significant differences in residents' recognition of psychosis between the vignettes ($ps = .22 - .67$).

After the story, *promotoras* administered the post-training questionnaire. They then distributed pamphlets summarizing the workshop and providing information about local mental health resources.

Measures

The same measures used in study 1 were used in study 2 with two changes: (a) we added two questions to assess the *promotoras'* presentation, and (b) Javier was the subject of the post-workshop questions. Raters achieved good to excellent ($K = .80 - 1.0$) reliability on all responses to the open-ended questions.

Results

We excluded data from participants under 15 years old and from those who did not participate in both the pre- and post-training evaluations reducing the sample size to 103. Like in study 1, paired-sample *t*-tests and McNemar tests demonstrated significant increases in all psychosis literacy domains after the presentation. With regard to *knowledge of psychosis*, participants included significantly more symptoms of psychosis in their conceptions of serious mental illness, their reports of individual psychotic symptoms significantly increased, and 51% of participants recalled at least three symptoms of psychosis using the mnemonic device *CLAVE*. With Bonferroni adjustments ($p < .0125$), the number of psychotic symptoms in participants' conception of serious mental illness and the inclusion of hallucinations remained statistically significant.

Participants reported significantly greater *self-efficacy beliefs* in their ability to detect serious mental illness after the workshop. Significant increases were also observed in participants' attributions to psychosis and in the endorsement of mental illness for the open-ended recognition question. All illness attribution differences remain significant with Bonferroni corrections ($p = .01$) except for attributions to depression. There was also a significant increase in participants' recommendations for professional help. (See Table 1).

Discussion

La CLAVE sin luz extends the reach of the Spanish-language psychosis literacy program. We demonstrated that we can train *promotores* to not only to recognize psychosis but also to teach community residents to recognize psychosis in others. *Promotores* represent an existing community resource with the potential to strengthen the sustainability of ICs and reduce DUP by augmenting awareness and treatment-seeking. However, it is worth noting that this is only one step in ensuring that individuals obtain treatment in a timely manner. Delays in obtaining mental health services have been found to constitute a significant percentage of DUP [13]. Ensuring that secondary services are equipped to detect and treat patients is critical.

One limitation of our research is the single-group design. Increases in psychosis literacy could be a function of factors other than the educational program, such as the increased familiarity with the evaluation procedures. Although this is a possibility, a prior experimental study in which we applied *La Clave*-DVD versus a control condition

demonstrated increases in psychosis literacy only in the *La CLave* condition [10] suggests that the increases can be attributed to the *La Clave* training. Another possible limitation is that differences in the pre- and post-test ratings could be a function of the different cases. However, the available evidence does not support this explanation since both stories were matched on plot elements and symptom expression and were evaluated by third-party raters.

It is worth noting that despite significant increases in psychosis literacy after the *La CLave sin luz* training, recognition of false beliefs and disorganized language symptoms only reached 19.4% and 23.3% respectively. We propose that these concepts may be more abstract than hallucinations, thus future implementations would benefit from giving them additional attention.

La CLave sin luz is a “low-tech” psychosis literacy program that can be delivered by trained *promotores*. The program's effectiveness in increasing psychosis literacy highlights its viability as an interactive tool for hard-to-reach communities.

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“Olga habla sin sentido”

Figure 1.
Drawing from *La CLave sin luz* illustrating disorganized speech.

Table 1

	Study 1					Study 2				
	Pre-training	Post-Training	N	t	d	Pre-training	Post-Training	N	t	d
Knowledge of Psychosis										
<i>Symptoms of serious mental illness?</i>										
<i>Creencias falsas (False beliefs)</i>	8.2%	50.7% **	73			8.7%	19.4% *	103		
<i>Lenguaje desorganizado (Disorganized speech)</i>	2.7%	38.4% **	73			9.7%	23.3% *	103		
<i>Alucinaciones (Hallucinations)</i>	42.5%	84.9% **	73			26.2%	66.0% **	103		
Recall meaning of CLAVE		$M = 4.43$ ($SD = 1.13$)	79				$M = 2.59$ ($SD = 2.05$)	102		
Total number of symptoms recognized	$M = 0.53$ ($SD = 0.65$)	$M = 1.74$ ** ($SD = 1.05$)	73	8.83	1.03	$M = 0.45$ ($SD = 0.65$)	$M = 1.09$ ** ($SD = 0.88$)	103	7.09	0.70
Efficacy Beliefs										
<i>How sure are you that you can identify someone with a serious mental illness?</i>	$M = 2.73$ ($SD = 1.26$)	$M = 3.58$ ** ($SD = 1.26$)	77	4.87	0.55	$M = 2.09$ ($SD = 1.23$)	$M = 2.63$ ** ($SD = 1.26$)	81	3.75	0.42
Illness Attribution										
<i>What is happening to Olga/Javier?#</i>										
Psychosis	10.0%	31.2%	80			6.9%	26.5%	10		
Mental health	21.2%	36.2% *	80			17.5%	14.6%	103		
Depression	58.8%	32.5% **	80			65.0%	49.5% *	103		
Social world	63.7%	26.2% **	80			79.6%	49.5% **	103		
<i>Do you think Olga/Javier has a serious mental illness?</i>	48.1%	70.1% **	77			58.2%	74.5% *	98		
Recommended Help-Seeking										
<i>What should Olga's/Javier's parents do to help her/him? #</i>										
Professional help	78.8%	90.0% *	80			52.4%	76.7% **	103		
Social support	48.8%	20.0% **	80			63.1%	33.0% **	103		
Acceptability										
<i>How much did you like the presentation?</i>		$M = 9.33$ ($SD = 1.12$)	80				$M = 8.50$ ($SD = 1.90$)	102		
<i>How engaging was the presentation?</i>		$M = 9.28$ ($SD = 0.97$)	80				$M = 8.01$ ($SD = 2.13$)	101		
<i>How clear was the presenter?</i>							$M = 8.34$ ($SD = 1.55$)	100		

Study 2					Study 1				
<i>d</i>	<i>t</i>	<i>N</i>	Post-Training	Pre-training	<i>d</i>	<i>t</i>	<i>N</i>	Post-Training	Pre-training
<i>M</i> = 8.61 (<i>SD</i> = 1.67)									

How well did the presenter ask/answer questions?

Notes: McNemar tests were conducted for proportions.
Multiple codes were allowed when coding these responses.
* *p* < .05
** *p* < .001.